



## DISCUSSION PAPER PI-0004

# Two Decades of Pension Reform in the UK: What Are the Implications for Occupational Pension Schemes?

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# Two decades of pension reform in the UK

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## What are the implications for occupational pension schemes?

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**Keywords** *Pensions, United Kingdom*

**Abstract** *The UK is one of the few countries in Europe that is not facing a serious pensions crisis. The reasons for this are straightforward: state pensions are among the lowest in Europe, the UK has a long-standing funded private pension sector, its population is ageing less rapidly than elsewhere in Europe and its governments have, since the beginning of the 1980s, taken measures to prevent a pension crisis developing. This article reviews the policies that have been implemented over the last two decades. It describes and analyses the defects in the Thatcher-Major governments' reforms that brought us to the current system, examines and assesses the reforms of the Blair government, and then identifies the problems that remain unresolved and how they might be addressed. Concludes with an examination of the implications of these reforms for the future of occupational pension schemes.*

### 1. Introduction

The UK is one of the few countries in Europe that is not facing a serious pensions crisis. The reasons for this are straightforward: state pensions (both in terms of the replacement ratio and as a proportion of average earnings) are among the lowest in Europe, the UK has a long-standing funded private pension sector, its population is ageing less rapidly than elsewhere in Europe and its governments have, since the beginning of the 1980s, taken measures to prevent a pension crisis developing. These measures have involved making systematic cuts in unfunded state pension provision and increasingly transferring the burden of providing pensions to the funded private sector, principally on a defined contribution basis.

This paper reviews the policies that have been implemented over the last two decades: it describes and analyses the defects in the Thatcher-Major governments' reforms that brought us to the current system, examines and assesses the reforms of the Blair government, and then identifies the problems that remain unresolved and how they might be addressed. We end with an examination of the implications of these reforms for the future of occupational pension schemes.

### 2. The current system of pension provision

A flat-rate first-tier pension is provided by the state and is known as the basic state pension (BSP). Second-tier or supplementary pensions are provided by the state, employers and private sector financial institutions, the so-called three

pillars of support in old age. The main choices are between: a state system that offers a relatively low level of pension that is fully indexed to prices after retirement; an occupational system that offers a relatively high level of pension (indexed to prices after retirement according to the rules of Limited Price Indexation[1] or better), but, as a result of poor transfer values between schemes[2], only to workers who spend most of their working lives with the same company; and a personal pension system that offers fully portable (and LPI-indexed) pensions, but these are based on uncertain investment returns and are subject to very high set-up and administration charges, often inappropriate sales tactics, and very low paid-up values if contributions into the plans lapse prematurely.

Employees in the UK in receipt of earnings subject to National Insurance Contributions (NICs) will build up entitlement[3] both to the flat-rate Basic State Pension (BSP)[4] and, on “band earnings” between the lower earnings limit (LEL) and the upper earnings limit (UEL)[5], to the pension provided by the State-Earnings-Related Pension Scheme (SERPS). These pensions are paid by the Department of Social Security (DSS) from state pension age, which is 65 for men and 60 for women. The self-employed are also entitled to a BSP, but not to a SERPS pension. Employees with earnings in excess of the LEL will automatically be members of SERPS, unless they belong to an employer’s occupational pension scheme or to a personal pension scheme that has been contracted out of SERPS. In such cases both the individual and the employer contracting out receive a rebate on their NICs (1.6 per cent of earnings for the employee and 3.0 per cent for the employer, unless it operates a COMPS, in which case the employee rebate is 0.6 per cent) and the individual forgoes the right to receive a SERPS pension. However, there is no obligation on employers to operate their own pension scheme, nor, since 1988, has there been any contractual requirement for an employee to join the employer’s scheme if it has one.

There is a wide range of private sector pension schemes open to individuals. They can join their employer’s occupational pension scheme (if it has one), which can be any one of the following:

- contracted-in salary-related scheme (CISRS);
- contracted-in money purchase scheme (CIMPS);
- contracted-out salary-related scheme (COSRS);
- contracted-out money purchase scheme (COMPS);
- contracted-out mixed benefit scheme (COMBS);
- contracted-out hybrid scheme (COHS).

A CISRS is a defined benefit scheme that has not been contracted out of SERPS and so provides a salary-related pension in addition to the SERPS pension, while CIMPS provide a defined contribution supplement to the SERPS pension. COSRS must provide “requisite benefits” in order to contract out of SERPS,

namely a salary-related pension that is at least as good as the SERPS pension replaced, while COMPS must have contributions no lower than the contracted-out rebate. COMBS can use a mixture of the requisite benefits and minimum contributions tests to contract out of SERPS, while COHS can provide pensions using a combination of salary-related and money purchase elements. Individuals can also top up their schemes with additional voluntary contributions (AVCs) or free-standing additional voluntary contributions (FSAVCs) up to limits permitted by the Inland Revenue.

As an alternative, individuals have the following personal pension choices that are independent of the employer's scheme:

- personal pension scheme (PPS) (also the only type of scheme available to the self-employed);
- group personal pension scheme (GPPS).

A PPS is divided into two components. The first is an appropriate personal pension scheme (APPS) which is contracted out of SERPS and provides "protected rights" benefits that stand in place of SERPS benefits: they are also known as minimum contribution or rebate-only schemes since the only contributions permitted are the combined rebate on NICs with the employee's share of the rebate grossed up for basic rate tax relief. The second is an additional scheme, also contracted out, that receives any additional contributions up to Inland Revenue limits. A GPPS is a scheme that has been arranged by a small employer with only a few employees: it is essentially a collection of individual schemes, but with lower unit costs because of the savings on up-front marketing and administration costs.

In 1996, the UK workforce totalled 28.5 million people, of whom 3.3 million were self-employed[6]. The pension arrangements of these people were as follows[7]:

- 7.5 million employees in SERPS;
- 1.2 million employees in 110,000 contracted-in occupational schemes;
- 9.3 million employees in 40,000 contracted-out occupational schemes (85 per cent of such schemes are salary-related, although 85 per cent of new schemes started in 1998 were money purchase or hybrid);
- 5.5 million employees in personal pension schemes;
- 1.7 million employees without a pension scheme apart from the BSP;
- 1.5 million self-employed in personal pension schemes;
- 1.8 million self-employed without a pension scheme apart from the BSP.

These figures indicate that 72 per cent of supplementary pension scheme members in 1996 were in SERPS or an occupational scheme and 28 per cent were in personal pension schemes[8].

### 3. The Thatcher-Major reforms to the pension system

The Thatcher Conservative government that came into power in 1979 became the first government in the Western world to confront head-on the potential crisis in state pension provision. The reforms were continued by the succeeding Major government.

These governments introduced the following measures:

- (1) Linked the growth rate in state pensions to prices rather than national average earnings, thereby saving about 2 per cent p.a. (Social Security Act, 1980).
- (2) Raised the state pension age from 60 to 65 for women over a ten-year period beginning in 2010, thereby reducing the cost of state pensions by £3 billion p.a. (Pensions Act, 1995).
- (3) Reduced the benefits accruing under SERPS (which had only been set up in 1978) in a number of ways:
  - the pension was to be reduced (over a ten-year transitional period beginning in April 1999) from 25 per cent of average revalued band earnings over the best 20 years to 20 per cent of average revalued band earnings over the full career (Social Security Act, 1986);
  - the spouse's pension was cut from 100 per cent of the member's pension to 50 per cent from April 2000 (Social Security Act, 1986);
  - the revaluation factor for band earnings was reduced by about 2 per cent p.a. (Pensions Act, 1995); the combined effect of these changes was to reduce the value of SERPS benefits by around two-thirds.
- (4) Provided a "special bonus" in the form of an extra 2 per cent National Insurance rebate for all PPSs contracting out of SERPS between April 1988 and April 1993 (Social Security Act, 1986); provided an incentive from April 1993 in the form of a 1 per cent age-related National Insurance rebate to members of contracted-out PPSs aged 30 or more to discourage them from recontracting back into SERPS (Social Security Act, 1993).
- (5) Relaxed the restriction in PPSs that an annuity had to be purchased on the retirement date, by introducing an income drawdown facility which enabled an income (of between 35 and 100 per cent of a single life annuity) to be drawn from the pension fund (which otherwise remains invested in earning assets) and delaying the obligation to purchase an annuity until age 75 (Finance Act, 1995).
- (6) Enabled members of occupational pension plans to join personal pension plans (Social Security Act, 1986).
- (7) Simplified the arrangements for occupational schemes to contract out of SERPS by abolishing the requirement for occupational schemes to provide Guaranteed Minimum Pensions (GMPs): since April 1997, COSRSs had to demonstrate only that they offer requisite benefits that

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are broadly equivalent to those obtainable from SERPS (Pensions Act, 1995).

- (8) Ended its commitment to pay for part of the inflation indexation of occupational schemes (Pensions Act, 1995). Until April 1997, COSRSs had to index the GMP up to an inflation level of 3 per cent p.a. and any additional pension above the GMP up to an inflation level of 5 per cent p.a. Since the GMP replaced the SERPS pension which was itself fully indexed to inflation, the government increased an individual's BSP to compensate for any inflation on the GMP above 3 per cent. But the 1995 Act abolished the GMP altogether and required COSRSs to index the whole of the pension that they pay to a maximum of 5 per cent.
- (9) Improved the security of the assets in private sector schemes through the creation of a compensation fund, a Minimum Funding Requirement (MFR) and a Statement of Investment Principles (SIP) (Pensions Act, 1995).

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#### **4. Defects in the Thatcher-Major reforms**

The main defects of the Thatcher-Major reforms were as follows:

- (1) Removing the requirement that membership of an occupational pension scheme could be made a condition of employment. Membership was made voluntary and new employees had to take the active decision of joining their employer's scheme: fewer than 50 per cent of them did so.
- (2) No requirement to ensure that transferring from an occupational to a personal pension scheme was in the best interests of the employee, leading directly to the personal pensions mis-selling scandal that erupted in December 1993. Between 1988 and 1993, 500,000 members of occupational pension schemes had transferred their assets to personal pension schemes following high pressure sales tactics by agents of PPS providers. As many as 90 per cent of those who transferred had been given inappropriate advice. Miners, teachers, nurses and police officers were among the main targets of the sales agents. Many of these people remained working for the same employer, but they switched from a good occupational pension scheme offering an index-linked pension into a PPS towards which the employer did not contribute and which took 25 per cent of the transfer value in commissions and administration charges. An example reported in the press concerned a miner who transferred to a PPS in 1989 and retired in 1994 aged 60. He received a lump sum of £2,576 and a pension of £734 p.a. by his new scheme. Had he remained in his occupational scheme, he would have received a lump sum of £5,125 and a pension of £1,791 p.a. As a result of a public outcry, PPS providers have had to compensate those who had been given inappropriate advice to the tune of £11 billion.

- (3) No restriction on the charges that could be imposed in personal pension plans, hoping that market forces alone would ensure that PPSs were competitively provided.
- (4) Giving personal pension scheme members the right to recontract back into SERPS. This option has turned out to be extremely expensive for the government because of the back-loading of benefits in DB pension schemes such as SERPS: benefits accrue more heavily in the later years than the earlier years. Despite the financial incentives given to contract out of SERPS into PPSs, it turned out to be advantageous for men over 42 and women over 34 to contract back into SERPS once the period of the special bonus had ended in 1993. To discourage this from happening the government has been forced to offer additional age-related rebates to PPS members over 30 since 1993. Far from saving the government money, the net cost of PPSs during the first ten years was estimated by the National Audit Office to be about £10 billion.

### **5. The Blair reforms to the pension system**

The New Labour Blair government came into power in 1997 with a radical agenda for reforming the welfare state. In the event, Frank Field, appointed the first Minister for Welfare Reform at the Department of Social Security (DSS) and charged with the objective of “thinking the unthinkable”, proved to be too radical for the traditional Old Labour wing of the Labour Party and was soon replaced. The eventual DSS Green Paper proposals, *A New Contract for Welfare: Partnership in Pensions* (Department of Social Security, December 1998), turned out to be much less radical than initially anticipated, but nevertheless continued with the Thatcher government’s agenda of attempting to reduce the cost to the state of public pension provision and of transferring the burden of provision to the private sector through the introduction of Stakeholder Pension Schemes. Nevertheless, there was much greater emphasis on redistributing resources to poorer members of society than was the case with the Conservatives. Shortly after the publication of the Green Paper, the Treasury issued a consultation document on the type of investment vehicles in which stakeholder pension contributions might be invested. We will examine these proposals in turn.

#### *The Department of Social Security proposals*

The key objectives of the DSS Green Paper were to:

- (1) Reduce the complexity of the UK pension system, by abolishing SERPS.
- (2) Introduce a minimum income guarantee in retirement linked to increases in national average earnings on the grounds that people who work all their lives should not have to rely on means-tested benefits in retirement; the first pillar BSP will remain indexed to prices, however, and over time will become a relatively unimportant component of most people’s pensions.

- (3) Provide more state help for those who cannot save for retirement, e.g. the low-paid (those on less than half median earnings), carers and the disabled, via the unfunded state system.
- (4) Encourage those who are able to save what they can for retirement, via affordable and secure second pillar pensions:
  - provided by the state for those on modest incomes (via a new unfunded second state pension); and
  - provided by the private sector for middle- and high-income earners, with the option of new low-cost defined contribution stakeholder pensions which are likely to replace high-cost personal pensions. But there will be no extra compulsion to save for retirement at the second pillar and no additional incentives over those already existing at the second pillar.

The Green Paper proposals formed the basis of the Welfare Reform and Pensions Act which received the Royal Assent in November 1999. The Act deals with following issues:

*State pensions*

- (1) The BSP remains indexed to prices.
- (2) A Minimum Income Guarantee (MIG) of £75 per week was introduced for pensioners in April 1999 and will be means-tested and indexed to earnings.
- (3) SERPS to be replaced by a new State Second Pension (S2P) from April 2002 that will initially be earnings-related but from April 2007 will become a flat-rate benefit, even though contributions will be earnings-related, a feature that will provide strong incentives for middle- and high-income earners to contract out. The S2P will:
  - ensure that everyone with a complete work record receives combined pensions above the MIG;
  - give everyone earning below £9,000 p.a. (about half median earnings) twice the SERPS pension at £9,000 p.a. (implying that the accrual rate is 40 per cent of £9,000 rather than the 20 per cent under SERPS);
  - give a higher benefit than SERPS between £9,000 and £18,500 p.a. (median earnings) (the accrual rate is 10 per cent of career average revalued earnings in this tranche);
  - leave those earning over £18,500 p.a. unaffected (with an accrual rate of 20 per cent);
  - uprate these thresholds in line with national average earnings;
  - provide credits for carers (including parents with children under five) and the disabled.



*Stakeholder pensions*

- (1) New Stakeholder Pension Schemes (SPSs) will be introduced in October 2001, but are principally intended for middle-income earners (£9,000-£18,500) with no existing private pension provision. They can be used to contract out of S2P.
- (2) They will be collective arrangements, provided by:
  - an employer;
  - a representative or membership or affinity organisation;
  - a financial services company.
- (3) They will be on a money purchase basis, with the same restrictions as for personal pensions, namely that on the retirement date up to 25 per cent of the accumulated fund may be taken as a tax-free lump sum, while the remaining fund may be used to buy an annuity or to provide a pension income by way of a drawdown facility until age 75 when an annuity must be purchased with the remaining assets.
- (4) They will have to meet minimum standards, known as CAT marks (for charges-access-terms) concerning:
  - the charging structure and level of charges (1 per cent of fund value);
  - levels of contractual minimum contributions (£20);
  - contribution flexibility and transferability (no penalties if contributions cease temporarily (up to five years) or if the fund is transferred to another provider).
- (5) They will have to be established under trust law as with occupational schemes (although alternative governance structures may be introduced); personal pension schemes could not therefore be redesignated as stakeholder schemes although a COMPS could.
- (6) The main provisions of the Pensions Act, 1995 will apply to SPS, covering:
  - annual report and accounts;
  - appointment of professional advisers;
  - Statement of Investment Principles and Internal Dispute Resolution procedure.
- (7) They will be regulated principally by the Occupational Pensions Regulatory Authority (OPRA), with the Pensions Ombudsman for redress and the selling of schemes and supervision of their investment managers by the Financial Services Authority (FSA).
- (8) Employers without an occupational scheme will be required to offer access to one “nominated” SPS and to provide a payroll deduction facility.

- (9) There will be a new integrated tax regime for all defined contribution pension plans. SPS, personal pension plans and occupational DC plans will attract tax relief on contributions up to a maximum of 17.5 per cent of earnings (below age 36), rising to 40 per cent (above age 61). But contributions up to £3,600 p.a. can be made into any DC plan regardless of the size of net relevant earnings. Contributions in excess of £3,600 p.a. may continue for up to five years after relevant earnings have ceased. Thereafter, contributions may not exceed £3,600 p.a. All contributions into DC plans will be made net of basic rate tax, with providers recovering the tax from the Inland Revenue and with higher rate tax, if any, being recovered in the self-assessment tax return.

#### *Occupational pensions*

- (1) Occupational schemes will be able to contract out of the S2P.
- (2) Employers will again be able to make membership of an occupational scheme a condition of employment, and employees will only be allowed to opt out if they have signed a statement of rights being given up, certified that they have adequate alternative provision, and have taken advice that confirms that the alternative is at least as good as the S2P.
- (3) The actuarial profession will review the MFR and examine the costs and benefits of introducing a Central Discontinuance Fund to take over the liabilities of insolvent schemes.
- (4) One-third of trustees must be member-nominated (MNTs) and large schemes must appoint a pensioner trustee.
- (5) The compensation scheme established by the 1995 Pensions Act will be extended to cover 100 per cent of the liabilities of pensioners and those within ten years of normal pension age (NPA).
- (6) The late payment of contributions will become a civil rather than a criminal offence, other than in exceptional circumstances (also applies to PPS and SPS).
- (7) Pension payments can be drawn from age 50, independent of whether the member is retired.
- (8) Payments from AVCs and FSAVCs can be made from age 50 and decoupled from the main scheme pension.
- (9) Income drawdown for money purchase schemes will be permitted.

#### *Personal pensions*

- (1) PPS will be able to contract out of the S2P.
- (2) They will receive protection in cases of the bankruptcy of the member.

*Information*

- (1) An annual pensions forecast statement, which will combine all state and private pension benefits, will be introduced.
- (2) Money purchase schemes (of all types) will need to produce annual statements which show projected benefits in real terms.

*HM Treasury proposals*

The Treasury proposals were contained in *Helping to Deliver Stakeholder Pensions: Flexibility in Pension Investment* (HM Treasury, February 1999). They called for the introduction of more flexible investment vehicles for managing pension contributions, not only those in the new stakeholder pension schemes, but also those in occupational and personal pension schemes. These investment vehicles were given the name Pooled Pension Investments (PPIs). The main PPIs are authorised unit trusts (AUTs or open-ended mutual funds), investment trust companies (ITCs or closed-ended mutual funds), and open-ended investment companies (OEICs).

In comparison with the individual arrangements of existing personal pension schemes and the poor transferability of occupational pension schemes, PPIs offer:

- lower charges: since collective investment vehicles have much lower overheads than individual investments;
- greater flexibility: since PPIs are easy to value and transfer between different stakeholder, personal and occupational pension schemes, allowing employees to move jobs without having to change pension schemes, thereby encouraging greater labour market flexibility.

**6. Assessment of the Blair reforms**

The Welfare Reform and Pensions Act, while containing some important improvements on the existing system, does not fully meet the Green Paper's own objectives.

*Reforms to state pensions*

While the abolition of SERPS will help to simplify the UK's extremely complex pension system, the proposal to have a MIG (of £75 per week) that differs from the BSP (£67.50 per week) appears to introduce substantial complexity at the starting point for state pension provision, especially when the difference between the two amounts (£7.50 per week) is (currently) so small. It would have been far simpler to set the MIG equal to the BSP and to link the latter to earnings. Now the government explicitly rejected this on the grounds of both cost<sup>[9]</sup> and the fact that it would benefit the high paid as well as the low paid, whereas the government's emphasis is on helping the low paid. But the problem with keeping the BSP linked to prices rather than to earnings is that it will continue to fall relentlessly as a proportion of national average earnings (NAE): it is currently just 17 per cent of NAE and will fall to well below 10 per

cent by 2020. While the government admits that this will save substantial sums of money, it implies that the government is effectively abandoning the first pillar of support in old age and obliging everyone to rely on the second and third pillars. The Green Paper talked about building on the BSP, but this implies building on a sinking ship.

If the government is genuinely concerned about security at the minimum level for all, it should consider funding the first pillar appropriately by establishing an explicit fund (like the Social Security Trust Fund in the USA) into which it places the NICs of those who are in work, while the government itself funds the contributions of the low-paid, carers and the disabled[10]. The contribution rate could be actuarially set to deliver the MIG for all when they retire. It could be a hypothecated part of NICs. In other words, the contributions would accrue “interest” equal to the growth rate in NAE. The state could explicitly issue NAE-indexed bonds which the SSTF would buy. This is the only honest way of both preserving the value of and honouring the promises under the first pillar. The second and third pillars could then be formally integrated with the first pillar, i.e. the second pillar is used to deliver the tranche of pension between the MIG and the Inland Revenue limits, while the third pillar is used for voluntary arrangements above the IR limits. If the first pillar remains unfunded, there is nothing to prevent future generations renegeing on an agreement which they are expected to keep but did not enter into voluntarily.

The fact that membership of pension schemes at the second pillar remains voluntary is highly worrying for reasons of myopia and moral hazard. Compulsory contributions are seen as one way of dealing with individual myopia and the problem of moral hazard. Myopia arises because individuals do not recognise the need to make adequate provision for retirement when they are young, but regret this when they are old, by which time it is too late to do anything about it. Moral hazard arises when individuals deliberately avoid saving for retirement when they are young because they know the state will feel obliged not to let them live in dire poverty in retirement. Inevitably, this will lead to substantial means testing in retirement.

In short, while the Welfare Reform and Pensions Act has some good points, it fails three of Frank Field’s tests for a good pension system: it is not mandatory, it is not funded and it remains means-tested (Field, 1996a, 1996b).

### *Reforms to private pensions*

The government’s proposal to have a maximum charge of 1 per cent of fund value on SPSs will have two dramatic effects on defined contribution arrangements in the UK.

The first is that it will help to force economies of scale in DC pension provision. This is because stakeholder pensions will be a retail product with wholesale charges. To deliver this product effectively providers will need to exploit massive economies of scale. The current charges for personal pension schemes which average 1.4 per cent and rise to as much as 2.2 per cent of fund

value for 25-year policies[11] are much higher than the 1 per cent CAT-marked limit on SPS. There may be a range of providers of SPS to begin with, but the only way for a provider to survive in the long run will be if it operates at low unit cost on a large scale. This will inevitably lead to mergers among providers and a final equilibrium with a small number of very large providers.

Existing personal pension providers and distribution channels face these challenges:

- APPSs will face massive competition from SPSs for future NIC rebates;
- SPSs could be better than PPSs for middle-income groups, leaving PPSs as a choice only for those on high incomes who require and are willing to pay for a bespoke product;
- new affinity-based SPSs with gateway organisations linking up with pension providers (e.g. Amalgamated Engineering & Electrical Union with 720,000 members and Friends Provident);
- the Treasury's proposed PPIs will provide a low-cost alternative investment vehicle to the high-cost managed funds of most PPSs;
- Individual Savings Accounts (ISAs), introduced by the Treasury in April 1999 to encourage greater personal sector savings, will also provide an important alternative to PPSs. Contributions into ISAs of up to £5,000 per annum are permitted and the investment returns are free from income and capital gains tax. While not intended as pension savings vehicles (they do not attract tax relief on contributions, for example, unlike standard pension savings products), ISAs can be used in retirement income planning, since they enjoy the big advantage that they can be cashed in tax free at any time, thereby avoiding the need to purchase a pension annuity on the retirement date.

The second benefit is that it will effectively force stakeholder pension funds to be passively managed, since active management would result in a charge higher than 1 per cent. As demonstrated below, active fund managers have not demonstrated that they can systematically deliver the superior investment performance that justifies their higher charges. Further passively managed mutual funds in the USA, such as Vanguard (which are similar investment vehicles to those of SPSs), have charges below 0.3 per cent.

### **7. Unresolved issues in DC pension scheme design**

Led by the USA, there has been an enormous growth in defined contribution pension provision throughout the world. The UK has had more than a decade of experience of DC provision and much of this has been less than satisfactory. Various UK governments have attempted to deal with some of the problems that have been identified, but there are many issues that have not been resolved. It is worthwhile explaining the key problems that the UK has experienced with its DC provision.

*The accumulation phase of defined contribution pension schemes*

*Charges*[12]. The charging structures of most existing personal pension scheme providers are high, complex, disguised and front-loaded. Table I shows that the average personal pension scheme takes 19 per cent of the fund value in charges and the worst scheme takes nearly 30 per cent. On the one hand, such charging structures have the effect of confusing the consumer to such an extent that they are unable to assess whether the scheme they are being invited to participate in for a substantial period of time and with a substantial commitment of resources offers value for money.

On the other hand, they give little incentive to the provider to offer value for money on a long-term basis. An examination of *Money Management's* annual *Personal Pensions* publications[13] also reveals that providers change their charging structures on a regular basis. This makes it very difficult to compare schemes over time and raises the question as to whether particular charging structures and changes to them are used to conceal the impact of costs, and thereby confuse the customer even more.

Further, for consumers to compare products, it is important that they are aware of the full set of charges that they face. It is frequently the case that some charges are disguised or hidden. One illustration of this concerns the treatment of paid-up policies (or PUPs) (see Slade, 1999). When policy holders move to a new pension scheme, they have the choice of taking a transfer value with them or leaving their assets in the original scheme which is then converted into a PUP: the assets cannot be liquidated prior to retirement. Only 15 per cent of policy holders take transfer values, the rest leave paid-up policies. But the regulator requires that pension schemes quote only transfer values and full maturity values. There is no obligation to quote PUP maturity values and, although schemes can do so if they wish, few actually do.

	5	10	Years 15	20	25
<i>Charges as a percentage of fund value</i>					
Best overall <sup>a</sup>	3.1	4.1	7.2	8.5	9.8
Best commission-loaded fund	4.0	4.1	7.4	8.9	10.6
Industry average	11.6	13.0	14.8	17.7	19.0
Worst fund	19.2	22.0	24.6	28.2	27.8
<i>Reduction in yield (percentage)</i>					
Best overall <sup>a</sup>	1.26	0.79	0.90	0.76	0.68
Best commission-loaded fund	1.63	0.79	0.92	0.80	0.73
Industry average	4.91	2.65	1.93	1.68	1.39

**Notes:**

Regular premium personal pension plan (£200/month)

<sup>a</sup> lower of best commission-loaded and best commission-free

Worst fund	8.47	4.76	3.43	2.88	2.16
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**Source:** *Money Management* (October 1998)

**Table I.**  
Charges and reduction  
in yield in personal  
pensions plans  
(percentages)

There is clearly a trade-off between high transfer values and high full maturity values: schemes with front-loaded charges will quote low transfer values and high maturity values relative to schemes with level charges. Different providers compete on the basis of the transfer and full maturity values that they quote. However, PUP maturity values, which, in principle, should be related to transfer values, can turn out to be poor value for money. For example, Slade discusses the case of one provider which quotes the highest transfer value among 12 leading providers, but ranks 12th for its PUP maturity value quote. It appears that some schemes quote high transfer values to attract business, knowing that only 15 per cent of those policy holders not going to full term are likely to take transfers, while the remaining 85 per cent end up with low PUP maturity values.

Another example of hidden charges comes from a survey of fund management fees by Towers Perrin (1998): some fund managers did not report their full set of charges. The three key charges are for asset management, broking (i.e. transaction execution) and custody. There are also charges for reporting, accounting and performance measurement. Some fund managers report the asset management fee (as some proportion of the value of the net assets under management) only after deducting the broking and custody fee. Some fund managers justify this on the grounds that both the portfolio transactions and the safe keeping are conducted by a third party independent of the fund manager, typically the global custodian. Other fund managers operate full "clean fees", i.e. report full charges, including third-party fees which are merely passed through to the client. Yet other fund managers add a commission to third-party fees before passing them through. In some cases, however, the broker or custodian is related to the fund manager (e.g. is part of the same investment banking group). In such cases, it is more difficult to allocate charges appropriately.

The lack of transparency can also lead to incentive problems. Brokerage fees are related to turnover which provides an incentive to churn (i.e. overtrade) the portfolio; this is especially so if the transactions are executed by an in-house broker and the brokerage fee is hidden from the client. Some fund managers, in contrast, use discount brokers to reduce the cost to the client. Some clients impose turnover limits to reduce costs. However, the most effective means of keeping charges down is complete fee transparency and full disclosure for each fund management function and benchmark-related performance measurement (where the impact of hidden fees is exposed through poor performance).

*Low persistency with voluntary arrangements.* A regular premium pension scheme involves a substantial commitment of time and resources by both the scheme's sponsor and its members if the desired objectives are to be achieved. Any significant front-loading of charges in schemes means that members suffer a substantial detriment if their contributions lapse prematurely (as the discussion above of PUP maturity values indicates). As the Personal Investment Authority (1998) argues, "if investors buy policies on the basis of good advice, they would not normally be expected to cancel premiums to their

policies unless forced to do so by unexpected changes in their personal circumstances. This means that persistency is a powerful indicator of the quality of the selling process” (Personal Investment Authority, 1998, p. 3).

The PIA shows that persistency rates after just four years of membership are between 57 per cent and 68 per cent (Table II). The persistency rate is higher for schemes arranged by independent financial advisers than by company representatives, suggesting that the clients of the former are generally more satisfied with their policies than those of the latter. However, the one-year rates indicate a small improvement for the persistency rates for schemes arranged by company representatives since 1993 and a small decline in that for schemes arranged by IFAs. Nevertheless, although only four years of data are available, the evidence suggests that very few personal pension scheme members (only around 16 per cent) are likely to maintain their membership of the scheme for long enough to build up an adequate pension.

The PIA regards these persistency rates as “disturbing” (p. 10) and offers a number of explanations: members were mis-sold pensions which were either unsuitable or too expensive; regular premium policies might be unsuitable for those with irregular earnings or uncertain long-term employment; a change of employment may lead to a member joining an occupational scheme and abandoning their personal one; adverse general economic conditions could worsen persistency rates. The PIA also offers suggestions as to why the IFAs are more successful than company representatives. First, IFAs tend to advise clients on higher incomes, who are more likely to continue contributing; second, policies chosen by an IFA are likely to be from a wider range of policies than those offered by representatives of any single company, leading to a greater likelihood of the policy closely matching the particular needs of the client.

Making membership of second pillar pension schemes mandatory rather than voluntary would do much to deal with the problem of low persistency.

*Investment performance.* Investment performance as well as the costs of delivering that performance is critical in DC schemes. Research by Blake, Lehmann and Timmermann (1998, 1999), Blake and Timmermann (1998), and Lunde *et al.* (1999) has shown the following[14]. On average, UK pension funds have under-performed the market in key asset classes (Table III), and there has been a wide dispersion of performance by individual fund managers (Table IV),

	Company representatives: after				Independent financial advisers: after			
	1	2	3	4	1	2	3	4
1993	84.1	72.3	63.6	56.7	91.5	83.3	76.6	70.5
1994	83.7	72.8	64.4		91.3	82.1	74.5	
1995	85.5	75.0			90.8	81.6		
1996	86.6				90.2			

Source: Personal Investment Authority (1998, Table I)

**Table II.**  
Persistency rates for  
regular premium  
personal pension plans  
(percentages)



**Table III.**  
Performance of UK  
managed funds in  
comparison with the  
market, 1986-1994  
(percentages)

	Average portfolio weight (%)	Average market return (%)	Average pension fund return (%)	Average out- performance (%)	Percentage outperformers
UK equities	53.7	13.30	12.97	-0.33	44.8
International equities	19.5	11.11	11.23	0.12	39.8
UK bonds	7.6	10.35	10.76	0.41	77.3
International bonds	2.2	8.64	10.03	1.39	68.8
UK index bonds	2.7	8.22	8.12	-0.10	51.7
Cash/other investments	4.5	9.90	9.01	-0.89	59.5
UK property	8.9	9.00	9.52	0.52	39.1
Total		12.18	11.73	-0.45	42.8

**Note:** International property is excluded since no market index was available

**Source:** Blake, Lehmann and Timmermann (1998, 1999)

**Table IV.**  
Fractiles of total  
returns by asset class  
for UK managed funds,  
1986-1994 (average  
annualised percentages)

	UK equities	International equities	UK bonds	International bonds	UK index bonds	Cash/other investments	UK property	Total
Minimum	8.59	4.42	6.59	-0.64	5.59	2.67	3.05	7.22
5%	11.43	8.59	9.44	2.18	7.20	5.46	5.07	10.60
10%	11.85	9.03	9.95	7.56	7.81	7.60	6.58	10.96
25%	12.44	9.64	10.43	8.30	7.91	8.97	8.03	11.47
50%	13.13	10.65	10.79	11.37	8.22	10.25	8.75	12.06
75%	13.93	11.76	11.22	13.37	8.45	11.72	9.99	12.59
90%	14.81	12.52	11.70	14.55	8.80	14.20	10.84	13.13
95%	15.46	13.14	12.05	18.15	8.89	16.13	11.36	13.39
Maximum	17.39	14.68	17.23	26.34	10.07	19.73	13.53	15.03
Max-min	8.80	10.26	10.64	26.98	4.48	17.06	10.48	7.81

**Note:** The Table shows the fractiles of the cross-sectional distribution of returns on individual asset classes as well as on the total portfolio

**Source:** Blake, Lehmann and Timmermann (1998, Table I)

with little evidence of funds being able to generate superior (i.e. above average) performance consistently over extended periods. Poorly performing funds are eventually wound up or merged into more successful funds, but it can take many years for this to happen, during which time policy holders experience consistently poor returns.

On top of this, the research found that fund managers have not been especially successful at active fund management. In particular, it found that 99.47 per cent of the total return generated by UK fund managers can be explained by the strategic asset allocation, that is, the long-run asset allocation specified by pension scheme sponsors on the advice of their actuaries following an asset-liability modelling (ALM) exercise. This is the passive component of

pension fund performance. The active components are security selection and market timing. The average pension fund was unsuccessful at market timing, generating a negative contribution to the total return of -1.64 per cent. The average pension fund was, however, more successful in security selection, making a positive contribution to the total return of 2.68 per cent. But the overall contribution from active fund management was just over 1 per cent of the total return (or about 13 basis points p.a.), which is less than the annual fee that active fund managers charge (which ranges between 20 basis points for a £500 million fund to 75 basis points for a £10 million fund)[15].

Virtually the same or better returns could have been generated if pension funds had invested passively in index funds. In addition, fund management costs would have been lower and the dispersion in returns across fund managers would have been reduced. Alternatively if fund managers believe that, despite all the evidence, they can generate superior investment performance, they should be subject to performance-related investment management fees. For example, the fee might be determined as some proportion,  $f_1$ , of the difference between the fund's realised performance and some target,  $g^*$ , plus a fee,  $f_2$ , to cover the fund manager's overhead costs based on the absolute value of the fund ( $V_t$ ). A typical formula might be:

$$\text{Performance-related fee in period } t = f_1(g_t - g^*)V_t + f_2V_t$$

This would reward good *ex post* performance and penalise poor *ex post* performance, whatever promises about superior *ex ante* performance had been made by the fund: the fund would have to accept a reduced fee or even refund the policy holder if  $g_t$  was sufficiently below  $g^*$  (although the latter case generally involves credits against future fees rather than cash refunds)[16].

Given the major weaknesses in the present design of DC pension schemes in the UK, the above outcomes at the accumulation stage of high charges and fund management fees, low persistency of contribution payments, poor and widely dispersed investment performance should come as no surprise.

#### *Distribution phase of defined contribution pension schemes*

Stakeholder pensions are going to be CAT-marked in an attempt to avoid the problems experienced with personal pensions. But the CAT-marking applies only to the accumulation phase, the phase that the scheme member does not directly experience. Little or nothing has been said about the distribution phase, when the member discovers whether or not they are going to get a good pension. The distribution phase for UK DC schemes involves the purchase of a life annuity. The provision of annuities involves the following risks.

*Adverse selection and longevity risk.* This is the risk that the individuals most likely to purchase annuities on a voluntary basis are those who believe that they are likely to live longer than the average for the population of the same age. Individuals may have a good idea, on the basis of both their own personal

medical and family histories, whether they are likely to experience lighter or heavier mortality than others in the population of similar age. Life companies do not have access to this information with the same degree of reliability.

The insurance company is not able to differentiate between prospective purchasers who will experience heavier mortality (and so make a profit for the life office) and those who will experience lighter mortality (and hence make a loss for the life office); however, it realises that those most likely to purchase annuities will come from the latter group rather than the former group.

To hedge this risk, the life office will base its annuity rates on the “select group” that is most likely to purchase annuities. Annuities will therefore be poor value for money for members of the first group.

*Underestimating increases in longevity.* Longevity tends to increase over time and there can be severe financial consequences if insurance companies underestimate increases in longevity. Longevity forecast errors of up to 20 per cent over intervals as short as ten years are not uncommon (MacDonald, 1996).

*Inflation risk.* The risk faced by those purchasing level annuities, that unanticipated high inflation rapidly reduces the real value of the pension.

*Interest rate risk.* Annuity rates vary substantially over the interest rate cycle. They are related to the yields on government bonds of the same expected term; and since these yields vary by up to 150 per cent over the cycle, annuity rates will vary by the same order of magnitude (Crédit Suisse First Boston, 1999).

*Reinvestment risk.* The risk faced by annuity providers that there are insufficient long-maturing matching assets (especially government bonds) available to make the annuity payments, with the consequence that the proceeds from maturing assets may have to be reinvested on less favourable terms or in less suitable assets.

*Inefficient allocation of risks in annuities markets.* These risks are currently allocated in the following way: the state assumes interest rate and inflation risk after the annuity is purchased (since annuity providers purchase fixed income and index-linked bonds from the government to generate the cash flows needed to meet their level and indexed annuity obligations), annuity providers assume mortality risk after the annuity is purchased (since they will make losses if their annuitants live longer than expected), and annuitants assume interest rate risk before the annuity is purchased and, in the case where they choose to buy a level annuity, inflation risk after the annuity is purchased (since they can retire at a trough in the interest rate cycle and there could be unexpectedly high inflation after they take out a level annuity).

Annuity providers add loadings of between 10 and 14 per cent (Finkelstein and Poterba, 1999) to cover their costs and risks. But even loadings of this size may not be adequate to cover the costs of failing to forecast mortality improvements accurately. Anecdotal evidence suggests that annuity providers in the UK have underestimated the life expectancy of their current annuity pool by about two years. Further, since 1999, there has been a substantial shortage of new long-maturing government bonds (both fixed-interest and index-linked)

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and this has had the effect of introducing reinvestment risk into the UK annuity market for the first time in its history (Bishop, 1999). From the annuitants' viewpoint, the falling annuity yields during the 1990s has shown that the interest rate risk they bear is substantial.

This allocation of risks is not efficient. Annuity providers could do more to promote products that help annuitants hedge interest rate risk, e.g. phased annuities, protected annuity funds where the interest rate risk is hedged using derivatives, or investment-linked annuities. Similarly, the state could do more to help annuity providers hedge longevity risk. One way would be to make supplementary pensions mandatory, thereby bringing the longevity experience of annuitants closer to that of the whole population. Another would be to issue new types of bonds known as Survivor Bonds (Blake, Burrows and Orszag, 1999). These are annuity bonds whose coupon payments decline in direct proportion to the rate at which a cohort of 65-year olds on the issue date of the bond dies out and with the coupons remaining in payment until this cohort had fully completed its life-cycle. This would enable annuity providers to hedge both aggregate mortality risks and improvements in mortality, but leave specific mortality risks a commercial choice of the provider (e.g. the provider could target groups with lighter than average mortality (such as non-smokers) and charge an additional premium, but that would be a commercial decision).

### **8. Implications for occupational pension schemes**

Over the last 20 years, UK governments have had two major impacts on pension provision in the UK. First, they have reduced the level of benefits from the state schemes. These reductions seem to be a permanent feature of the pensions landscape in the UK: it is unlikely that any political party is going to reverse them. Second, they have attempted to encourage greater and more effective private sector provision, particularly of the defined contribution type, although the Conservative and Labour governments have done this in quite different ways. The Thatcher-Major governments made private supplementary pension arrangements voluntary and used tax incentives to encourage consumers to join personal pension schemes, but they left it to the market to determine the structure and efficiency of these schemes. The result was personal pension schemes that exhibited very high front-loaded charges, because retail customers tend not to be skilled at assessing the cost-effectiveness of retail financial products (Office of Fair Trading, 1997, 1999). In contrast, the Blair government, recognising the market failure arising from poorly informed consumers, has imposed restrictions on the structure of stakeholder pension schemes that will force economies of scale and hence lower charges. But while it intends again to make membership of an occupational pension scheme a condition of employment (if the employer has a scheme), unless adequate alternative arrangements have been made, there are no plans to make supplementary schemes mandatory[17].

The sponsors of occupational pension schemes will therefore face some substantial challenges over the next decade or so. The first challenge comes

from having to ensure that occupational pension schemes provide an adequate and reliable substitute for the declining state pension system. This is a challenge that, given their history, should not be too difficult for DB schemes to meet. The second challenge is more substantial and comes from stakeholder pension schemes. For the first time in the UK, there will be a feasible low-cost alternative to employer schemes. These will be heavily marketed, not just by traditional providers such as insurance companies, but also by new affinity groups, the sellers of PPIs (such as unit and investment trusts) and brand-assurers such as Virgin. Although the effects of this will be partly mitigated by the inertia created by making membership of an employer's plan a condition of employment, employers will still face an uphill battle retaining employees in their schemes. Employers do have a potential weapon, since only occupational schemes can effectively be of the defined benefit type: financial institutions and brand-assurers are both unable and unwilling to offer DB pensions. Many pensioners clearly prefer defined benefit pensions to the uncertainties associated with defined contribution schemes, and, in any case, DC schemes have not been in existence long enough to assess their long-term effectiveness in delivering adequate pensions. These factors could be used in powerful information campaigns by occupational plan sponsors.

The third challenge comes from the poor portability of private sector occupational pension schemes[18]. Employers appear to be addressing this issue by switching away from defined benefit arrangements towards defined contribution arrangements which are more easily transferable between schemes. But if this trend continues, they will end up with a product that is very little different from that offered, possibly at lower cost, by the financial institutions and brand-assurers. In these circumstances, it is questionable whether small or medium-sized companies would bother to retain their own pension departments. A better solution for employers might be to improve the portability of their DB schemes. In Holland, there is complete portability between DB schemes because all schemes have to use the same actuarial assumptions to value their liabilities and transfer values. This means that full service credits can easily be transferred between schemes when someone changes jobs. Employers could do something similar in the UK, although there appears to be little evidence that there is any willingness to do so. In any case, the implementation of common actuarial assumptions might require government intervention.

Occupational DB schemes were not the principal target of the last two decades of pension reforms in the UK, but they are nevertheless going to be much affected by them. Such schemes currently lie on a knife-edge. There is a global movement towards DC and most new schemes being established in the UK are also DC. Many large DB schemes, especially those in sectors like banking where staff turnover is high, have switched to DC. It is conceivable that if stakeholder schemes are a success, small and medium-sized companies will cease offering DB pensions too. DB pensions might therefore be confined to the remaining public sector schemes or to industry-wide schemes where job

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transfers are principally between companies within the same industry. But, the real explanation for DB schemes being reduced to a rump in the UK (should that happen) would lie in the almost complete lack of responsiveness by employers to changing labour market conditions, rather than in the pension reforms of the last two decades.

Two decades of  
pension reform  
in the UK

## Notes

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1. LPI implies that pensions are indexed to retail price inflation up to a maximum of 5 per cent p.a.
2. Blake and Orszag (1997) show that the average person in the UK changes jobs about six times during their career and each time suffers portability losses in the form of either poorer preserved benefits (in the case where a deferred pension is left behind in the leaving scheme) or poorer transfer values (in the case where the accrued pension benefits are transferred to the receiving scheme) compared with the case of someone with the same salary history who remains in a single scheme for their whole career. These portability losses amount to about 30 per cent of the single-scheme pension.
3. NICs also build up entitlement to health service, sickness, disability and incapacity benefits and the job seeker's allowance.
4. Worth £67.50 per week for a single person in 2000-2001, while the national average earnings were about £400.00 per week.
5. The LEL was £67.00 and the UEL was £535.00 per week in 2000-2001.
6. *Economic Trends Annual Supplement 1999* (Table 3.2).
7. Department of Social Security (1998, Table 1.0) and estimates by the Government Actuary's Department.
8. For more details of the UK pension system, see Blake (1995, 1997), Fenton *et al.* (1995), Reardon (1997), Pensions Provision Group (1998).
9. An additional £3 billion per year (*Daily Telegraph*, 31 July 1999).
10. In fact, the Conservative government in the UK announced in March 1997 plans to privatise the entire state pension system from the turn of the century and to end its unfunded nature. All individuals in work would receive rebates on their NICs which would be invested in a personalised pension account. The initial costs in terms of additional taxation were estimated to be £160 million in the first year, rising to a peak of £7 billion a year in 2040. However, the long-term savings to the taxpayer from the end of state pension provision were estimated to be £40 billion per year (all in 1997 prices). The proposals were put on hold as a result of the Conservative government's defeat in the May 1997 General Election (see *Basic Pension Plus*, Conservative Central Office, 5 March 1997).
11. *Money Management*, October 1998.
12. More details on charges in personal pension schemes are contained in Blake and Board (2000).
13. See Walford (1999).
14. Similar results hold in the USA (see, for example, Lakonishok *et al.*, 1992).
15. *Pensions Management*, September 1998.
16. It is important to have a negative component to the fee in case of underperformance. A poorly designed incentive would be one that rewarded above-target performance, but did not penalise underperformance. This would simply provide an incentive for the fund manager to take excessive risks.

17. Although there are rumours that this could be an issue for the “Second Term”.
18. Public sector occupational pension schemes, in contrast, have full portability in the sense that full service credits are awarded on transfers between public sector schemes.

### References

- Bishop, G. (1999), *Why Are Long Gilts the Richest Bonds in the World, and Getting Richer?*, SalomonSmithBarney, October, London.
- Blake, D. (1995), *Pension Schemes and Pension Funds in the United Kingdom*, Oxford University Press, Oxford.
- Blake, D. (1997), “Pensions choices and pensions policy in the United Kingdom”, in Valdes-Prieto, S. (Ed.), *The Economics of Pensions: Principles, Policies and International Experience*, Chapter 10, Cambridge University Press, Cambridge.
- Blake, D. and Board, J. (2000), *Measuring Value Added in the Pensions Industry*, Pensions Institute, Birkbeck College, London.
- Blake, D. and Orszag, J.M. (1997), “Portability and preservation of pension rights in the UK”, *Report of the Director-General’s Inquiry into Pensions*, Vol. 3, Office of Fair Trading, July, London.
- Blake, D. and Timmermann, A. (1998), “Mutual fund performance: evidence from the UK”, *European Finance Review*, Vol. 2, pp. 57-77.
- Blake, D., Burrows, W. and Orszag, J.M. (1999), *Survivor Bonds: Reducing the Cost of Pension Provision*, Pensions Institute, Birkbeck College, London.
- Blake, D., Lehmann, B. and Timmermann, A. (1998), *Performance Clustering and Incentives in the UK Pension Fund Industry*, Pensions Institute, Birkbeck College, London.
- Blake, D., Lehmann, B. and Timmermann, A. (1999), “Asset allocation dynamics and pension fund performance”, *Journal of Business*, Vol. 72, pp. 429-62.
- Credit Suisse First Boston (1999), *Equity-Gilt Study*, CSFB, London.
- Department of Social Security (1998), *A New Contract for Welfare: Partnership in Pensions*, Cm 4179, December, London.
- Fenton, J., Ham, R. and Sabel, J. (1995), *Pensions Handbook*, Tolley Publishing, Croydon.
- Field, F. (1996a), *Stakeholder Welfare*, Choice in Welfare Series No. 32, Institute of Economic Affairs, London.
- Field, F. (1996b), *How to Pay for the Future: Building a Stakeholder’s Welfare*, Institute of Community Studies, London.
- Finkelstein, A. and Poterba, J. (1999), *Selection Effects in the Market for Individual Annuities: New Evidence from the United Kingdom*, Working Paper, Economics Department, Massachusetts Institute of Technology, May, Cambridge, MA.
- HM Treasury (1999), *Helping to Deliver Stakeholder Pensions: Flexibility in Pension Investment*, February, London.
- Lakonishok, J., Shleifer, A. and Vishny, R.W. (1992), “The structure and performance of the money management industry”, *Brookings Papers: Microeconomics*, pp. 339-79.
- Lunde, A., Timmermann, A. and Blake, D. (1999), “The hazards of mutual fund underperformance”, *Journal of Empirical Finance*, Vol. 6, pp. 121-52.
- MacDonald, A. (1996), “United Kingdom”, in MacDonald, A. (Ed.), *The Second Actuarial Study of Mortality in Europe*, Groupe Consultatif des Associations D’Actuaires des Pays des Communautés Européennes, Brussels.

- 
- Office of Fair Trading (1997), *Consumer Detriment under Conditions of Imperfect Information*, Research Paper 11, London.
- Office of Fair Trading (1999), *Vulnerable Consumers and Financial Services*, Report 255, London.
- Pensions Provision Group (1998), *We All Need Pensions: Prospects for Pension Provision*, The Stationery Office, London.
- Personal Investment Authority (1998), *Survey of Persistency of Life and Pension Policies*, October, London.
- Reardon, A.M. (1997), *Pensions Handbook*, Pitman Publishing, London.
- Slade, P. (1999), "Quote manipulation claims", *The Independent*, 30 January.
- Towers Perrin (1998), *European Active Investment Management Charges*, August, London.
- Walford, J. (1999), *Money Management: Personal Pensions*, Financial Times Business Publications, London.