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3 The Roles of the Public and Private Sectors in the U.K. Pension System

Alan Budd and Nigel Campbell

This paper describes the current arrangements for the provision of pensions in the United Kingdom. In particular, it describes the means by which the current and future public-sector cost of pensions has been controlled or reduced and private-sector provision has been encouraged.

The outstanding feature of the U.K. pension system is that, under current policies, public expenditure on pension provision will remain modest, compared with other industrial economies. For example, Chand and Jaeger (1996) estimate that the present value of the difference between the United Kingdom's public-pension expenditure and revenue up to 2050 is 4.6 percent of GDP, with existing policies and current contribution rates. This compares with a ratio of 26 percent for the United States and above 100 percent for Japan, Germany, and France. Current actuarial projections are that contribution rates will fall by 4 percentage points between now and the middle of the next century, in stark contrast with conditions elsewhere. The projected success in constraining public expenditure on pensions helps explain, in large part, why the United Kingdom avoids the longer-term fiscal crises forecast (under current policies) elsewhere. Shigehara (1995) estimates that the level of general government financial liabilities in the United Kingdom will be negative (i.e., there will be net assets) in 2030, compared with liabilities of 300 percent of GDP in Japan and 100 percent or more in the United States, Germany, France, and Italy.

This can partly be explained by more favorable (or less unfavorable) demo-

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graphic developments. (The "greying" of the U.K. population occurs later, and less dramatically, than elsewhere.) But the most important cause is the fixing of the value of the basic state pension in real terms. In addition, the future cost of the state's second-tier pension has been significantly cut by reducing the generosity of the benefits and by encouraging people to leave the scheme and move to private provision. Although the ratio of pensioners to the population of working age is forecast to rise from 30 percent in 1995 to 38 percent in 2030, the ratio of public expenditure on pensions to GDP is expected to fall over the same period, from 4.2 to 3.3 percent. One result of these changes is that the state pension (and other social security benefits) accounts for only about half the average pensioner income. This ratio will continue to fall in the future.

Another feature that distinguishes the United Kingdom from many other industrialized countries, particularly those in continental Europe, is that most of its occupational pension liabilities are already funded. U.K. private-sector pension funds have £600 billion worth of investments, more than the rest of the European Union put together.

However, current arrangements are not universally accepted as satisfactory. In particular, the current level of the basic state pension is slightly lower than the level of income support (a general means-tested benefit). The final sections of the paper describe some proposed reforms of the system.

Broadly, the U.K. system consists of a flat-rate basic state pension based on contributions.[1] There are also means-tested welfare benefits for those deemed to have inadequate income.[2] Second-tier pensions for employees are provided either by the State Earnings-Related Pension Scheme (SERPS) or by occupational or personal pension schemes. All employees (with incomes above a lower limit) must belong to either SERPS or an appropriate private scheme. (There are currently about 22 million employees in the United Kingdom.) The state system (flat rate and SERPS) is pay as you go. Private schemes are usually funded, although there are unfunded schemes for some public-sector employees. Approximately 73 percent of all employees are members of occupational pension schemes or have personal pensions. Twelve percent are only in SERPS. (About 5 percent of employees are in both occupational schemes and SERPS.) The 15 percent who are not covered consist mainly of those on low incomes. Over their lifetimes, such individuals are likely to accrue some entitlements.

1. Since we employ U.K. usage in this paper, American readers may find the following glossary helpful (the British term precedes the American): flat rate = lump sum; occupational = private; pensioner = retiree; pensions = social security; personal pensions = individual retirement accounts, 401(k) plans; preserved benefits = deferred benefits; social security = welfare plus social security; state = federal.

2. Welfare benefits available to U.K. pensioners include free medical treatment and medicines; free nursing care; means-tested long-term nursing or residential care; means-tested support to pay for housing and other living expenses; help with cleaning and other domestic duties for the frail infirm; and hot meals for the frail infirm living at home.

3.1 The State Pension System[3]

3.1.1 The Basic State Pension

The full basic state pension is currently (1996–97) £61.15 per week. This is about 15 percent of average full-time male earnings.[4] The pension is taxable. Current policy is to raise the pension annually in line with retail price inflation. Between 1975 and 1980, the policy was to uprate the pension in line with prices or average earnings, whichever was the greater. Before 1975, ad hoc increases had kept roughly in line with earnings increases since 1948.

Entitlement is based on a contributions record. Payment of the full level of benefit depends on the payment of contributions, or the receipt of credits, for about 90 percent of a working life (currently forty-nine years for a man and forty-four years for a woman). Contributions or credits of forty-four or more years for men and thirty-nine or more years for women entitle contributors to the full pension. Pensioners over eighty can receive the state pension (at a reduced rate) on a noncontributory basis.

Married women receive pensions on the basis of their own or their husband's contributions, whichever is more favorable. Almost all male pensioners receive the full pension, whereas only about 1.7 million of 6.1 million female pensioners receive the full pension on the basis of their own contributions. This position is steadily being changed by the introduction, in 1978, of home responsibilities protection (HRP), which provides credits for women who are out of work and caring for children or other dependents, and, in the same year, by the introduction of a requirement that married women must contribute to the National Insurance System and thus acquire entitlement to full pensions. An increasing proportion of women will thus become entitled to the full basic pension on the basis of their own contributions or credits.

The basic pension for single people is currently about 9 percent lower than the level of income support to which poor single pensioners are entitled. For couples the pension is about 6 percent lower. The gap is even larger for older pensioners because income support increases at ages seventy-five and eighty.

The cost in 1994–95 of the basic state pension was £27 billion (4 percent of GDP). Means-tested benefits to pensioners cost a further £8.5 billion.

The ratio of the state pension to average earnings has fallen from about 20 percent in 1977–78 to about 15 percent now. If real earnings grow by 1½ percent a year (which is a modest estimate relative to past trends), the ratio will

3. Much of the material in this paper is based on Johnson, Disney, and Stears (1996). Their comprehensive report on the U.K. pensions system formed volume 2 of the report of the Retirement Income Inquiry. Descriptions of the system and discussions of the main policy issues can be found in Blake (1995) and Dilnot et al. (1994).

4. Although the basic pension has declined relative to average earnings, it has stayed broadly constant at 20 percent of average manual male earnings throughout its ninety years of existence. In the United Kingdom, as in the United States, there has been a significant increase in the dispersion of incomes in recent years, with manual earnings falling relative to nonmanual earnings.

Table 3.1 **Projected Cost of Basic Pension (£billion, 1994–95 prices)**

	1994–95	2000–2001	2010–11	2020–21	2030–31
Price indexed	26.9	29.8	33.6	35.2	41.9
Earnings indexed	26.9	32.6	42.6	51.8	71.6

Note: As a guide to the scale of these costs, GDP in 1994–95 was £680 billion.

fall to 9 percent by 2030. For the low paid, the basic state pension is likely to remain a substantial proportion of their retirement income.

The projected cost of the basic state pension is shown in table 3.1. For comparison, the table also shows the cost if the basic pension is uprated in line with earnings (at an assumed growth of 1½ percent a year).

3.1.2 The State Earnings-Related Pension Scheme

The State Earnings-Related Pension Scheme (SERPS) serves two functions in the U.K. system. It provides a second-tier pension for its members (about 17 percent of total employees), and it establishes the minimum (in terms of either benefits or contributions) for those who can be permitted to opt out of the state's second-tier system and to use occupational or personal pension schemes instead.

As subsequent sections will show, SERPS has changed significantly since it was first introduced. It is an earnings-related pay-as-you-go scheme. Benefits are based on earnings between the lower and upper earnings limits (described below). In the long term, under current rules, the pension received by members of SERPS with a full contribution record will be 20 percent of average reckonable[5] earnings over their working life, revalued in line with average earnings to retirement age.

The upper earnings limit is adjusted in line with prices rather than earnings. The value of the SERPS pension will therefore decline relative to average earnings through time.

As mentioned, about 17 percent of employees are contracted into SERPS, of which about 65 percent are women. About 70 percent of those in SERPS earn less than £10,000 a year. (Average full-time male earnings in the United Kingdom are £20,000 a year.) The self-employed do not qualify for SERPS.

The projected cost of SERPS is shown in table 3.2.

3.1.3 Contributions

Contribution rates are set at the time of the annual budget. There is a lower earnings limit (LEL) and an upper earnings limit (UEL), although employers pay contributions above the latter. These limits are adjusted annually in line with retail prices and in 1996–97 were £61.00 and £455 a week, respectively. The LEL is set at the rate of the single person's retirement pension rounded

5. *Reckonable earnings* are earnings between the lower and the upper earnings limits.

Table 3.2 **Projected Cost of SERPS (£billion, 1994–95 prices)**

1994–95	2000–2001	2010–11	2020–21	2030–31	2040–41	2050–51
1.9	4.2	8.4	10.9	12.0	10.2	9.9

down to the nearest pound per week. The UEL is approximately 7.5 times the LEL. No contributions are paid if earnings are below the LEL. The rates for 1996–97 are shown in table 3.3.

The contracted-in rate is paid by or on behalf of members of SERPS. Those contracted out of SERPS pay lower contributions. In 1996–97, this "contracted-out rebate" was 4.8 percent of earnings between the LEL and the UEL. It was reduced to 4.6 percent in April 1997, following the government actuary's regular five-year review of the rebate. Three percent is deducted from employers' contributions, and the rest (previously 1.8 percent, currently 1.6 percent) is deducted from employees' contributions.

It can be seen from table 3.3 that there is an "entry fee" of £1.22 for employees as soon as their income reaches £61.00 per week. The marginal contribution rate for employees falls to zero when weekly earnings exceed £455. Employers' contributions are paid on *all* earnings once they reach £61.00 per week; that is, an increase in earnings from £60.00 to £61.00 costs the employer £2.83. There are similar step increases as earnings move through the successive pay bands. An increase from £209 to £210 costs the employer £7.79.

National Insurance contributions (NICs) are also used to finance unemployment benefits and a number of other benefits, including incapacity benefit and statutory maternity pay. In addition, about 11 percent of NIC receipts are paid

Table 3.3 **National Insurance Contribution Rates, 1996–97 (% NIC rate)**

	Employees				Employers		
	Contracted In		Contracted Out			Contracted Out	
Weekly Earnings	1st £61	Rest	1st £61	Rest	Contracted In	1st £61.00	Rest
Below £61.00 (LEL)	0	...	0	...	.0	.0	...
£61.00–£109.99	2	10	2	8.2	3.0	3.0	.0
£110–£154.99	2	10	2	8.2	5.0	5.0	2.0
£155–£209.99	2	10	2	8.2	7.0	7.0	4.0
£210–£455	2	10	2	8.2	10.2	10.2	7.2
Above £455 (UEL)	2	[a]	2	[b]	10.2	10.2	[c]

[a] 10 percent of earnings between £61 and £455; 0 percent on earnings over £455.

[b] 8.2 percent of earnings between £61 and £455; 0 percent on earnings over £455.

[c] The contracted-out rebate (described in the text) is available only with respect to earnings between the LEL and the UEL. Employers' NICs with respect to someone earning over the UEL are therefore 10.2 percent of their earnings minus 3 percent of the difference between the LEL and the UEL.

toward the financing of the National Health Service. The state pension scheme is contributory in the sense that entitlement to the basic state retirement pension depends on a contribution record. However, there need be no direct relation between the payments made by individuals (or their employer) and the basic pension received. This follows automatically from the fact that the pension is paid at a flat rate while contributions depend on earnings. Also, contributions are credited for those who are registered as unemployed or who receive certain social security benefits. As mentioned above, women can now receive credits for time spent caring for children. Employers' contributions do not gain any entitlement, and it is possible to make employee contributions in the course of a year that do not count. Finally, those without a full contributions record (who will largely consist of those who have earned below the LEL) can claim means-tested income support that is greater than the basic pension.

The rather tenuous link between contributions and benefits has led Johnson and Stears (1996) to suggest that the contributory requirements should be abolished and replaced by entitlement based on residence. Successive governments have chosen to retain the contributory principle partly on the ground that receipt of the basic pension does not carry the stigma that may be attached to income support and partly because they like to emphasize the link between contributions and benefits. In some cases, the contribution requirement saves public expenditure since there will be some pensioners who receive less than the full basic pension but who will not be eligible for income support (e.g., because they have too much capital). It is also true that the contributory principle means that increases in contribution rates have in the past not been subject to the same opprobrium as increases in income tax rates.

3.1.4 The National Insurance Fund

The National Insurance Fund (NIF) is one of eight funds and accounts used by the central government for its revenue and expenditure transactions.

National Insurance contributions are paid into the NIF, and contributory benefits are paid from it. The main contributory benefits are the basic retirement pension, SERPS, unemployment benefit, incapacity benefit, and widow's benefit. Entitlement to all these benefits is based to some extent on contributions made. In addition, some NICs are used to fund part of the National Health Service.

The fund operates on a pay-as-you-go basis, so contributions by current workers are used to pay current pensions. The NIF has been topped up with a supplementary payment from general taxation in most years since the NIF was set up in 1948–49.

Any pay-as-you-go scheme that pays benefits to all pensioners from the start would initially need significant financial support. This was true of the NIF, whose payments from general taxation averaged 34 percent of NIC revenue in

its first three years. A lower proportion was needed thereafter, but the transfer from the general tax pool to the NIF was still part of the design of the system until 1989. This "Treasury supplement" was worth 18 percent of NIC revenue up to 1980–81, was reduced steadily to 5 percent in 1988–89, and then was abolished from 1989–90.

As the NIF did not have a huge surplus by 1989, it is clear that the previous forty years of Treasury supplements effectively subsidized the contribution rates (or allowed for more generous contributory benefits) over that period.

There were no payments to the NIF from general taxation in the four years from 1989–90. From 1993–94, however, it became possible for a "Treasury grant" to be payable to the NIF if it appeared that its balance by the end of the year would be below one-sixth of annual benefit expenditure. This Treasury grant was thus explicitly aimed at maintaining a working balance in the fund rather than (as with the Treasury supplement) implicitly subsidizing the contribution rate. The Treasury grant has been steadily reduced from 24 percent of NIC revenue in 1993–94 to under 5 percent in 1996–97.

The NIF ran deficits in three of the four years (from 1989–90 to 1992–93) in which no Treasury supplements or grants were paid. Only in 1988–89, when the NIF surplus exceeded the Treasury supplement by £1.4 billion, and 1990–91, when there was an NIF surplus of £1.5 billion and no supplement or grant, has NIC revenue exceeded NIF expenditure.

The overall picture, therefore, is of a pay-as-you-go scheme whose revenue has not fully covered its expenditure in all but two of the years since 1948. The transfer from general taxation needed has been significantly reduced over the years and is no longer built in as an implicit and permanent subsidy to the contribution rate.

3.1.5 The Self-Employed

In 1995, about 13 percent of those in work were self-employed. Unlike employees, the self-employed are not required to make compulsory second-tier pension provision, and self-employment income does not give entitlement to SERPS. The self-employed pay different (and generally lower) National Insurance contributions.

Self-employed people with earnings above £3,430 a year pay a flat-rate contribution of £6.05 a week. Those earning below £3,430 can opt to pay the charge. These contributions give entitlement to the basic state retirement pension. There is an additional contribution of 6 percent of profits between £6,860 and £23,660 a year (the latter equals the UEL for employees; the former is rather higher than the LEL).

Although there is no state second-tier provision for the self-employed, they are eligible for tax relief on their personal pension contributions up to a cap. They do not, however, receive tax relief for pension contributions that are invested in their own business.

3.1.6 Early Retirement

Labor force participation rates in the United Kingdom remain among the highest in Europe. But, since 1980, there has been a marked fall in the participation rates of men in the last ten years of their working life. In 1980, 90 percent of men aged fifty-five to fifty-nine and 71 percent aged sixty to sixty-four were either working or looking for work. By 1994, those proportions had fallen to 74 and 52 percent, respectively.

Many of those who retire early are eligible for occupational pensions. Those over fifty are able to use their personal pension fund to buy an annuity. They cannot, however, receive their basic state retirement pension or SERPS until they reach the state pension age (currently sixty-five for men and sixty for women).

The unemployed receive National Insurance credits, which count toward entitlement to the basic state pension. Early retirees may be eligible for these credits. People under sixty would have to show that they are available and looking for work to qualify for credits and (if applicable) unemployment benefits. Men over sixty receive automatic credits independently of availability for work, while women over sixty are already eligible for the state pension.

3.1.7 SERPS—a History

SERPS was introduced by a Labour government in the 1975 Social Security Pensions Act, which came into force in 1978.[6] It added an earnings-related pension to the existing basic pension.

As now, the scheme was based on contributions on reckonable earnings, that is, earnings between the LEL and the UEL. It originally provided a pension of a quarter of the individual's average revalued reckonable earnings (as defined at the end of this paragraph). Since one aim of the act was to make the new pension arrangements mature rapidly, a full earnings-related pension was based on the best twenty years of earnings since SERPS began. Thus, anyone who was earning for twenty years or more from 1978 could get a full pension if his or her earnings were high enough. (By contrast, full entitlement to the basic state pension required, for men, contributions of over 90 percent of a normal working life, although again, at its introduction, there was an accelerated accrual rate for those working at that time.) *Average revalued reckonable earnings,* for the relevant years, were calculated by revaluing each year's reckonable earnings in line with the change in average earnings for the whole economy between the original date and the retirement date. The pension was based on the average of the twenty best years. After retirement, the SERPS pension was to be indexed to prices.

Contracted-out occupational pension schemes had to provide a guaranteed minimum pension (GMP) broadly equivalent to the SERPS pension. They also had to meet a *requisite benefits test* and therefore had, in effect, to have a higher

6. An account of earlier earnings-related state schemes is provided in Blake (1995).

accrual rate than SERPS. Those retiring from contracted-out schemes also had additional pension rights under SERPS, but the GMP was deducted from their SERPS entitlement. Since SERPS was indexed to prices but the GMP was not, SERPS effectively provided some indexation for those in occupational schemes.

3.1.8 The 1985 Green Paper

In June 1985, the Conservative government published a green paper, *Reform of Social Security* (Secretary of State for Social Services 1985a). By that date, the bulk of spending on benefits for pensioners was still in the form of the basic pension. Less than 1 percent of expenditure resulted from the earnings-related additions, although this was due to rise significantly in later years. The single person's basic pension was worth one-third the average take-home pay for a manual worker, and the pension for a married couple was worth half the average take-home pay for a manual worker.

The green paper examined the implications of the basic state pension and SERPS over the following fifty years. It showed that, if the basic pension were indexed to prices, its cost would increase by 40 percent over the following fifty years. If it were linked to earnings, its cost would almost treble. Over the same period, the ratio of National Insurance contributors to pensioners was expected to fall from 2.3 to 1.6. The green paper pointed out that the increased cost of the basic pension would benefit all pensioners equally. However, the case was different for recipients of SERPS. Its earnings-related nature meant that the newly retired would benefit more than older pensioners. Also, half the extra cost would result from payments to members of contracted-out schemes (to provide indexation top-up to the GMP). The cost of SERPS (in 1985 prices) was expected to be about £24 billion in 2035, compared with a basic pension cost in 1985 of about £15 billion.

The green paper pointed out that the peak of occupational pension scheme membership had been reached in the mid-1960s. There had been growth in the public sector, but coverage of the total workforce was still only about half. The earlier decline in private schemes was thought to have been partly caused by uncertainty about the future of pensions policy. But the new system had produced little change. It was also believed that the complexities of contracting out discouraged companies from setting up their own schemes, partly because they had to match the standards of a defined-benefit scheme.

The government believed that occupational and personal pensions were the right way to provide second-tier pensions. It argued that it was preferable for individuals to make provision for such pensions rather than to leave responsibility wholly to the state and to require taxes to be levied on the next generation. It considered the following possibilities for change:

Abolition of SERPS without Replacement. This would restrict the role of the state to the provision of a basic pension. This option was rejected on the

grounds that some employers and employees might take too short term a view. It would perpetuate "two nations" of those with and without additional pensions. Those with only the basic state pension would too often have to fall back on means-tested benefits.

A Restricted SERPS. This would restrict the scope and hence reduce the cost of the state scheme, without providing an alternative. Costs would be reduced by moves to change the period over which earnings were counted for entitlement; reduce the rate of accrual; make occupational schemes responsible for their own inflation proofing; reduce the widows' entitlement; increase the pension age for women; and reduce the maximum earnings on which entitlement would be calculated.

The green paper estimated that these latter changes could cut the eventual cost of the scheme by about half but that the changes would have essentially a negative effect: "It would make savings simply by reducing benefits. It would perpetuate the cumbersome structure of contracting out. It would do nothing to encourage employers to set up schemes or people to make extra provision through personal pensions" (Secretary of State for Social Services 1985a, par. 1.38). It therefore proposed "a new partnership" between state provision and occupational and personal provision. Its long-term goal was the position in which the state provided a basic pension for all and everybody also had an additional pension provided out of individual savings.

The main proposals for reform were to leave the basic state pension unchanged; to have men over fifty and women over forty-five continue under the existing system; to honor all existing pension entitlements under the state scheme (in the form of eventual pension payments rather than a "recognition bond"); and to phase out SERPS and replace it with occupational and personal pension schemes.

3.1.9 The 1985 Reforms

Ultimately, the government decided not to phase out SERPS. In the white paper *Reform of Social Security: Programme for Action* (Secretary of State for Social Services 1985b), published in December of the same year, it reported that a number of organizations, including in particular the Confederation of British Industry and the National Association of Pension Funds, had argued that the scheme should be modified rather than replaced. Opposition by employers partly reflected the perceived difficulties of matching the benefits offered by SERPS for the lower paid. That, in turn, was due to the fixed-cost element of pension arrangements and to the low real returns on pension funds being achieved at the time. The government accepted these arguments on the basis that it could meet two objectives: to reduce the emerging cost of SERPS and to ensure that conditions were created whereby individual pension provision could expand.

The changes to reduce the cost of SERPS followed those proposed in the

green paper: Occupational pension schemes contracted out of the state scheme should be responsible for inflation-proofing GMPs up to 3 percent a year (previously full indexation of the GMP had been the responsibility of the state). SERPS pensions should be based on a lifetime's earnings, not on the best twenty years. SERPS pensions should be calculated on 20 percent of earnings rather than 25 percent. And widows and widowers over sixty-five should be allowed to inherit half their spouse's SERPS rights rather than the full amount. The net result of the changes was expected to nearly halve the cost of SERPS in 2033–34 from £25.5 billion to around £13 billion at 1985 prices.

At the same time, the government announced a strategy to extend individual pension provision, to widen the choice for the individual, and to increase competition among pension providers. Seven points of the strategy were emphasized: (1) Contracted-out occupational schemes could include defined-contribution schemes. The minimum contribution would be the contracted-out rebate. The government believed that this would encourage industry-wide schemes. (2) An additional incentive in the form of an additional NIC rebate of 2 percent would be granted for five years to encourage employers to set up new schemes and individuals to set up personal pensions. (3) Membership in occupational pension schemes would no longer be compulsory for eligible employees. (4) Personal pensions, which had hitherto been limited to the self-employed, would be a vehicle to allow employees to contract out. The full amount of the NIC rebate plus the 2 percent incentive could be devoted to these so-called appropriate personal pensions (APPs). Contributions would be given tax relief. (5) Banks, unit trusts, and building societies as well as insurance companies would be able to provide personal pension savings schemes. (6) All occupational scheme members would have the right to pay additional voluntary contributions to boost their pensions. (7) Steps would be taken to provide investor protection for members of occupational schemes and the holders of personal pensions.

These changes were in addition to reforms that had already been introduced in the 1985 Social Security Act. The reforms had included protection of the pension rights of early leavers from occupational pension schemes (by requiring them to be increased in line with prices up to 5 percent a year) and transfer rights (everyone leaving a scheme would have the right to a transfer value representing the value of deferred pension rights, which could be put in a new employer's scheme or a single premium annuity or, under the new proposals, into a personal pension).

It can be seen that the proposals were designed to encourage private provision of second-tier pensions and to increase the "portability" of pensions. The extension of personal pensions to employees would particularly favor those who expected to change jobs frequently and who tended to be penalized by defined-benefit schemes. (The origin of occupational pensions was of course expressly designed to encourage long-term job tenure in such industries as banking and insurance.)

The government actuary (Secretary of State for Social Services 1985b, app.) estimated that the National Insurance contribution rate to pay for National Insurance benefits would be 15 percent by 2033, assuming that the basic pension was uprated in line with prices, compared with 18 percent if SERPS had been left unchanged. He commented that the new rate was one that future generations should be able to afford. The changes to SERPS (along with other major reforms to the social security system) were introduced in the 1986 Social Security Act.

The contracted-out rebate and the additional 2 percent incentive made personal pensions a very good deal, particularly for the young, since the rebate was the same for all ages, whereas the value of the SERPS benefit given up increases with age. The Department of Social Security's working assumptions were that about 500,000 people would take out personal pensions and that the number might ultimately reach 1.75 million. In fact, take-up reached 4 million by the end of April 1990 and by 1993–94 had risen to 5.7 million, of whom about 4 million had rebates paid into their personal pensions.

The National Audit Office (1990) commissioned a survey of the cost to the NIF of the rebate and the additional incentive for the period to April 1993. The survey estimated that the gross cost could be £9.3 billion and that the present value of the savings in payments of pensions was about £3.4 billion. Hence, there was a net present value cost of £5.9 billion (in 1988 prices). However, this does not take account of the step change in personal pension take-up, which will have reduced state pensions yet further in the next century even after the end of the continuation of the 2 percent incentive.

A further shadow has been cast over this episode by the fact that some of those who joined personal pension schemes left occupational schemes that offered more favorable terms. Inquiries are still continuing into alleged cases of misselling of personal pensions during this period.

3.1.10 The 1995 Pensions Act

Further reforms to SERPS were introduced in the 1995 Pensions Act. The main purpose of the act was to provide additional safeguards for occupational pensions following the Maxwell affair[7] and to equalize the state retirement age (which mainly affects the basic state pension) by increasing women's retirement age from sixty to sixty-five. But, at the same time, changes were introduced to SERPS that further reduced its future cost.

The 1986 Social Security Act had, as described above, enabled people to contract out of SERPS and buy APPs or join a defined-contribution occupational scheme. The 1995 Pensions Act is expected to reduce further the cost of

7. The late Robert Maxwell allegedly diverted pension fund assets, including those of Mirror Group Newspapers, in an attempt to restore solvency and liquidity to other companies under his control, thereby undermining the solvency of the occupational pension schemes and thus threatening the pensions of current and former employees.

Table 3.4 **Reductions in SERPS Expenditure in 2030–31 as a Result of the 1995 Pensions Act (£billion, 1994–95 prices)**

Equalization of pension age for men and women	1.9
Annualization	2.5
Abolition of guaranteed minimum pension	2.4

SERPS in 2030–31 by £6.7 billion (in 1994–95 prices). Table 3.4 shows how the savings arise.

The raising of the state pension age for women to sixty-five will be phased in over a ten-year period from 2010. It follows the European Court of Justice ruling that men and women must receive equal pension treatment. Annualization will effectively introduce an annual calculation of entitlement to SERPS, rather than a calculation at the point of retirement. This change prevents earnings below the LEL, in any year, generating SERPS entitlement. Under the old arrangements, earnings in individual years were uprated by the growth in whole-economy average earnings until retirement. The LEL at the retirement date, which had since 1980 been uprated only in line with prices, was then subtracted from these revalued earnings. As a result, employees earning below the LEL were able to accumulate entitlement to SERPS. Even contracted-out employees (earning above the LEL) will have acquired around £2.80 a week worth of SERPS entitlement.

The abolition of the GMP breaks the links between SERPS and contracted-out pensions. The state will no longer guarantee price indexation for contracted-out pensions. (The act has, however, required private-sector schemes to index future pensions by inflation or by 5 percent a year, whichever is lower.)

The 1995 Pensions Act also required that age-related rebates for contracted-out defined-contribution schemes, including personal pensions, be introduced from April 1997. This was aimed at removing the excessive incentive for younger people to contract out and encouraging older people to do so.

Table 3.5 shows how the projected future costs of SERPS have changed since it was first introduced in 1975. The changes to the scheme in the 1986 Social Security Act and the 1995 Pensions Act are estimated to reduce the public-sector cost of SERPS in 2030 from £41 billion to £12 billion (at 1994–95 prices). These latest estimates imply that the original scheme would

Table 3.5 **Effect of Reforms to SERPS (£billion, 1994–95 prices)**

	1994–95	2000–01	2010–11	2020–21	2030–31
Original regime (1975–86)	1.8	4.2	12.0	25.0	41.0
After 1986 Social Security Act	1.8	4.2	9.2	14.5	18.7
After 1995 Pensions Act	1.8	4.2	8.4	10.9	12.0

Table 3.6 Number of Employees in Occupational Pension Schemes, 1991 (millions)

Type of Scheme	Private Sector Contracted Out	Private Sector Contracted In	Public Sector Contracted Out	Total
Defined benefit	5.04	.56	4.20	9.80
Defined contribution	.43	.47	.00	.90
Total	5.47	1.03	4.20	10.70

have been about £5 billion more expensive (in 1994–95 prices) than expected at the time of the 1986 act.

The lower public-sector cost of SERPS does not mean that large numbers of people now have only one-third their previous second-tier pension provision. Instead, much of the reduction comes from more contracting out, which yields public expenditure savings without necessarily affecting individuals' future pension entitlement.

3.2 Occupational and Personal Pensions

In 1991 (the last year for which figures are available), about 68 percent of employees belonged to non-SERPS pension schemes. About one-third of these belonged to personal pension schemes.

All personal pension schemes are defined-contribution schemes. Until the 1986 legislation, approved occupational schemes had to be of the defined-benefit form. Occupational pension schemes remain predominantly of this type. The position in 1991, as described in Disney (1995), is shown in table 3.6.

Some employers have expressed interest in shifting from defined-benefit to defined-contribution schemes now that they are permitted to do so and still be contracted out.[8] This interest may be partly based on the view that defined-contribution schemes are less risky for employers than defined-benefit schemes. However, as the table shows, 90 percent of employees in private-sector contracted-out occupational schemes were in defined-benefit schemes in 1991, and the following account is mainly based on schemes of this type.

Defined-benefit schemes are typically based on actual final salaries (or some average of final years' salaries). Employee contribution rates payable in 1991 are shown in table 3.7.

It can be seen that a contribution rate of 5–7 percent is typical, although a significant number of private-sector employees (typically in the financial sector) are in noncontributory schemes. Contributions by employers—for funded schemes—are based on actuarial estimates and can therefore vary from year to year according to the performance of the investment funds. The contracting-

8. Disney and Stears (1996) discuss the moves between defined-benefit and defined-contribution schemes.

Table 3.7 Number of Members of Defined-Benefit Schemes Contributing Various Percentages of Salary (thousands)

% of Salary	Private Sector Contracted Out	Public Sector
Under 2	20	650
2 and under 3	150	0
3 and under 4	275	0
4 and under 5	730	5
5 and under 6	1,690	240
6 and under 7	1,125	2,805
7 and over	105	210
Noncontributory	945	290

out arrangements impose minimum requirements on occupational schemes. The requirements correspond approximately to the benefits provided by SERPS, which can in turn be linked to the contracted-out rebate (currently 4.8 percent but to be reduced to 4.6 percent in 1997). Most occupational schemes are considerably more generous than this and provide combined contribution rates that are equivalent to up to 15 percent of total salary. It should be emphasized that, in the United Kingdom, unlike in some continental European countries, employers' contributions (as well as those made by employees) are explicit and placed in a separately identifiable fund. They are not simply recorded as a reserve.

Pensions are essentially subject to "expenditure tax" treatment. Contributions by employers and employees are tax free (subject to Inland Revenue limits), and returns on invested funds are also free of tax. Pensions in payment are taxable, but a tax-free lump sum may be withdrawn on retirement. The lump sum may be up to 1½ times final salary or 25 percent of the accumulated fund for a personal pension.[9]

Benefits vary from scheme to scheme. In the private sector, the normal retirement age for men, and now for women following the implementation of equal treatment, is predominantly sixty-five. In the public sector, more than 50 percent of employees have a normal retirement age of sixty or younger. In existing private-sector schemes, the normal retirement age for 50 percent of women is sixty. Following the 1995 Pensions Act, schemes must treat men and women equally. In private- and public-sector schemes, the accrual rate is typically one-eightieth per year for schemes that provide a pension and an additional lump sum and one-sixtieth for those that provide only a pension. (Since part of a pension-only scheme can be converted to a lump sum, the two systems of benefit are more or less equivalent.) Thus, after forty years' service in the same scheme, members of a typical defined-benefit scheme retire with a

9. The pension fund industry argues that lump sum treatment is not as generous as it seems since fund accruals are given tax relief only at the lower rate of income tax rather than members' marginal tax rate.

Table 3.8 Defined-Benefit Schemes and Benefits Payable on Death in Service (thousands)

Benefit Payable	Private Sector	Public Sector	Total
None	10	. . .	10
Lump sum	5,540	4,050	9,590
Refund of contributions	2,870	1,020	3,890
Pension to surviving spouse	5,450	4,200	9,650
Pension to surviving children	4,110	4,200	8,310
If unmarried, pension to a nominated person	1,870	750	2,620

Notes: Lump sum is subject to a maximum of four times annual salary if tax relief is to be provided. Schemes may appear under more than one category.

pension of two-thirds of their final salary (part of which may be converted to a lump sum).

Table 3.8 shows the benefits payable on death in service. Since there are 10.7 million members of pension schemes, it can be seen that almost all members are entitled to a lump sum and/or a pension for the surviving spouse on death in service.

Since the 1986 Social Security Act, members of occupational pension schemes have been able to transfer their accrued pension rights to another occupational scheme or to a personal pension.

Large schemes (i.e., those with more than five thousand members) are usually self-administered, with the funds invested by their own investment managers or an insurance company. Smaller schemes are usually insured schemes.

By international standards, there are few restrictions on the types of investment allowed funded occupational schemes. There are, for example, no limits on the proportions devoted to investment in equities or in overseas securities. There are limits on self-investment, and schemes cannot provide loans to members or on residential property. As table 3.9 shows, the United Kingdom has a high proportion of private-sector pension funds invested in overseas equities.

3.2.1 Personal Pensions

Information on personal pensions is difficult to extract and analyze (see Johnson, Disney, and Stears 1996, chap. 5). It is estimated that, in 1991, 24 percent of employees had contracted-out personal pensions. The only investment in about three-fifths of these personal pensions was the rebate, equal to the contracted-out rebate together with any related incentives, which is paid

Table 3.9 Percentage of Pension Funds Held in Foreign Assets, 1993

Country	%	Country	%
Belgium	29	Japan	14
Canada	9	New Zealand	34
France	5	United Kingdom	27
Germany	3	United States	4

into the scheme by the Department of Social Security. For young individuals in particular, a rebate-only pension should provide a better pension than SERPS.

Personal pensions are available from a number of providers. These providers are mainly insurance companies, although building societies, unit trusts, and other financial organizations are permitted to administer pensions (at least up to retirement). As with occupational schemes, there are relatively few restrictions on investments.

Protected rights from appropriate personal pensions are now available from age fifty for both men and women. In general, proceeds from personal pension funds must be used to purchase an annuity. Recent changes in legislation have increased the individual's freedom of choice between alternative annuity suppliers. They have also allowed the purchase of an annuity to be deferred until age seventy-five (with upper and lower limits on the sums that can be withdrawn up to that point).

Personal pensions receive the same tax privileges as occupational pensions.

3.2.2 Annuities

In the United Kingdom, people "annuitizing" any individual pension savings will normally stay with the insurance provider or, on occasion, take advantage of any "open market option" to withdraw their accumulated fund and purchase the annuity from a different insurer. Any penalty is usually relatively small (and, where there is a change of insurer, is presumably more than offset by the better terms offered by the annuity provider). This market is at present unaffected by contracted-out appropriate personal pensions as these have been concentrated at younger ages. The effect of these on the annuity market will not be evident for about twenty years.

Income withdrawals from a personal pension fund prior to purchasing an annuity has generally been limited to those with relatively large pension savings. One reason for this is that such people are in a better position to understand and accept the risks involved in betting against the investment market and their individual mortality. But it is also true that the expense charges appear to be relatively high and would be an onerous burden on smaller pensions savings.

One particular aspect of the uncertainty over the date of annuity purchase is selection, that is, individuals and/or the insurance companies trying to opt for arrangements that prove to be (or at least seem likely to be) most beneficial to them. This can reduce the validity of detailed historical analysis looking solely at what has happened in the annuity market before, although, as relevant data become available, proper allowance can be made for such options.

Insurance companies could aim to select people in the hope that they would die quickly. In a perfect market, another company would offer higher pensions at retirement to such "poorer lives." It is worth noting that some insurance companies in the United Kingdom offer enhanced pensions to such "impaired" lives. One company—Stalwart Insurance—has recently extended this ap-

proach beyond the very ill. They intend to offer annuities that pay more to those with medical conditions that are more likely to cause an early death (obesity, high cholesterol levels, high blood pressure, and diabetes) but whose conditions are not life threatening.

Indexed annuities are widely available in the U.K. market.

In summary, the U.K. pension annuity market is well developed and on a sound actuarial basis, with the result that the scope for selection is very restricted. It is only in newer aspects, such as perhaps income withdrawal, where statistical experience is lacking, although it is possible to use the data available to make reasonable assumptions about the potential effect on both those taking up such options and, equally important, those not doing so.

3.3 Distribution of Pensioner Incomes

Average pensioner incomes have risen by about 50 percent in real terms since 1979. Higher incomes from occupational pensions and from investments, both of which have more than doubled, account for most of this increase. Pensioners' earnings from employment have fallen somewhat, while state pensions plus benefits have gone up. Table 3.10 shows how the mean income from each source, adjusted for the falling proportion of pensioners who are single, has changed since 1979.[10] (The raw figures show even higher average real increases in incomes.)

The increases in occupational pension and investment income reflect both higher real amounts on average and a bigger proportion of pensioners receiving these types of income. Seventy-three percent of pensioners had some investment income in 1993, up from 62 percent in 1979. The average amount increased by 88 percent over the same period. The proportion receiving occupational pensions rose by nearly half (from 43 to 62 percent), and the average occupational pension paid increased by 63 percent.

This increase in average incomes has been accompanied by a widening of the distribution of pensioners' incomes, as it has for the population of working age. However, table 3.11 shows that real incomes have increased significantly for all quintiles of the distribution.

Fewer pensioners are now at the bottom of the distribution of all household incomes. The bottom quintile of the income distribution contained 25 percent of all pensioners in 1992–93, compared to 47 percent in 1979.

3.4 Notes toward an Assessment

The main focus of this paper is on description rather than evaluation. As already discussed, the main features of the U.K. system are the modest level

10. The material on the distribution of pensioner incomes comes from Department of Social Security (1995).

Table 3.10 Average Pensioner Incomes

	1979[a]	1993[a]	% Real Increase, 1979–93
Gross income	113.40	166.70	47
Of which:			
State pension plus benefits	69.20	89.40	29
Occupational pension	18.20	40.90	125
Investment income	12.30	26.70	117
Earnings	13.10	9.20	−30
Other income	.70	.50	−25

[a]£ per week, July 1993 prices.

of the basic state pension, the encouragement of private-sector schemes for the provision of second-tier pensions, and reduced entitlements under the state earnings-related second-tier system. This section discusses some aspects of the economic consequences of the U.K. system. Typically, the relevant consequences are effects on savings, including public finances, and effects on labor supply, in terms of retirement and work/leisure choices during employment.

A common element in assessing these consequences is the rate of return on pension contributions. For example, Feldstein (1996) argues that contributions to the federal system are in effect a tax since the implied returns are lower than those available in private schemes. The following subsection discusses some calculations with respect to the U.K. system. We do not discuss labor supply effects, a discussion of which can be found in Dilnot et al. (1994).

3.4.1 Rates of Return

As Samuelson (1958) has shown, the return on a pay-as-you-go earnings-related scheme depends on the growth of the working population and of average earnings. In the United Kingdom, under current policy the basic state pension is fixed in real terms, whereas contributions are related to earnings. It follows that the return on contributions will be different for different cohorts. In addition, since benefits are flat rate, whereas contributions are earnings re-

Table 3.11 Distribution of Pensioners' Incomes

	1979[a]	1993[a]	% Real Increase, 1979–93
Mean	98.20	148.55	51
10th percentile	54.40	67.30	24
30th percentile	63.40	86.10	36
Median	69.40	98.50	42
70th percentile	86.30	142.40	65
90th percentile	165.30	262.40	59

[a]£ per week, July 1993 prices.

lated, there is a redistributional element in the basic state scheme. (However, as Dilnot et al. [1994] point out, the effect is offset by the greater longevity of the higher paid.)

Disney and Whitehouse (1993a) estimated rates of return for the state pension scheme as a whole. Their results—reproduced in table 3.12—show that the real rate of return on state pensions will be negative for men retiring after 2020. (The returns will be higher for women than for men.)

These results precede the 1995 Pensions Act, which reduced both future benefits and contributions, and whose net effect on the rate of return was therefore unclear.

Disney and Whitehouse (1993b) also attempted to estimate the effect of contracting out of SERPS on the above analysis. They believe that those contracted out may have an intergenerational rate of return 0.5–1 percent higher than those who remain contracted in.

The reason for these low estimated rates of return is that the basic state pension is assumed to be fixed in real terms. Current employees are paying for pensions that are higher (relative to average real earnings) than those that they will receive when they in turn retire. This effect adds to the normal effect whereby rates of return for successive cohorts fall as state pension schemes mature.

Blake (1994) has estimated the rate of return from SERPS and from a typical contracted-out defined-benefit occupational scheme. For the first twenty years, the real rate of return from SERPS was 6.7 percent a year, about twice the 3.3 percent from the occupational scheme. This reflected the generosity of SERPS when it was initially set up, not because SERPS paid a very high pension—it paid 25 percent of the best twenty years' earnings, usually well below the occupational equivalent—but because contributions into SERPS were comparatively low and particularly benefited those close to retirement.

After the 1985 reforms, the real rate of return on SERPS fell from 6.7 percent per annum to 1.7 percent. The 1995 Pensions Act reduced it yet further, to 1.2 percent per annum. Thus, the real return on SERPS varies between 6.7 percent (for those who retire before 1999) and 1.2 percent (for those who will retire after 2030).

The rate of return on SERPS will affect not just savings (for those who remain members). It will also affect the decision on whether to join the

Table 3.12 Intergenerational Real Rates of Return (% per annum)

Cohort Retiring In	Mean	2nd Decile	Median	8th Decile
2000	1.0	.5	.0	2.2
2010	.2	−.1	.1	.5
2020	−.9	−.1	−1.2	−.5
2025	−.7	−.5	−.9	−.8

scheme. As described earlier, the choice was complicated by the special temporary incentives to leave the scheme and by the fact that the contracted-out rebate was the same for all ages. That particularly encouraged the younger employees to leave. Optimal strategies that involve leaving and then rejoining SERPS are described in Dilnot et al. (1994). The contracted-out rebate is, as of April 1997, age related, drastically reducing this incentive to switch into and out of SERPS.

It is clear that contributions to the basic state pension, particularly for the higher paid, are in effect a form of taxation and can therefore give rise to deadweight costs of the type described in Feldstein (1996). The position on SERPS is rather more complicated since employees are able to contract out into a private scheme, including personal pensions. If those who remain members are acting rationally, they must believe that the returns on contributions to SERPS are at least as good as those in a private pension scheme (for an equal contribution). Since most of those who have remained in SERPS are among the lower paid, it is reasonable to believe that they are indeed acting rationally. It is, however, possible that the element of compulsion causes them to contribute more to pension schemes than they would choose freely.

3.4.2 Macroeconomic Effects

This section provides a preliminary assessment of the extent to which the current system and changes to it over the past twenty years have affected private and public savings.

The introduction of SERPS in 1978 extended earnings-related pensions, on a generous basis for older employees, to a wider section of the population than had previously had access to them. Since it was a pay-as-you-go system and was additional to the basic state pension, one might have expected it to replace, at least at the margin, individual savings for retirement and thereby to have reduced personal-sector savings. As Feldstein (1996) has pointed out, the extent of displacement will depend, among other things, on the relative returns on the state scheme and on private-sector schemes. As already described, Blake's calculations suggest that the return on SERPS, particularly for those approaching retirement, was significantly higher than the return available on occupational pension schemes. This reinforces the view that personal savings are likely to have fallen as a result of the introduction of SERPS.

The same arguments would suggest that the subsequent reductions in the benefits available from SERPS would have raised personal-sector savings for those who remained members of the scheme. This effect should have been reinforced by those who left SERPS and moved to personal pensions, which are funded defined-contribution schemes.

Blake (forthcoming) has made a preliminary study of whether changes in pension wealth can explain movements in the personal-sector savings ratio. Using data from 1949 to 1994, he finds a significant negative relation between SERPS wealth and the savings ratio. In other words, the introduction of SERPS

seems to have lowered the personal-sector savings ratio, and the subsequent reforms seem to have raised it. He finds no significant effects on savings from changes in basic state pension wealth but a significant effect from the real rate of return on the basic state pension. The freezing of the real value of pensions—which was a change from the previous policy and which reduced the real rate of return—thus raised the personal sector's savings ratio.

In addition to the effect on discretionary private savings, we can ask whether the changes in policy had any effect on public-sector savings. At the time of the introduction of SERPS, the total National Insurance contribution rate for contracted-in employees was raised from 14½ percent to 16½ percent. There was also a 2 percent surcharge, introduced as a fiscal measure. Thus, the increased flow of revenue could have been used to raise public-sector savings. However, there are reasons for believing that this is unlikely to be the case, although it is difficult to define the counterfactual. The United Kingdom sets its fiscal policy in relation to the public-sector borrowing requirement (PSBR), which is a cash-flow measure. Its policy does not take explicit account of contingent liabilities such as future pension payments. Thus, it will not have reduced its budget deficit (or increased its surplus) to allow for higher future payments under SERPS. In practice, the increased current revenue from higher National Insurance contributions will have been used to finance higher public spending or cuts in other taxes.

Since 1988, the government's fiscal objective has been a zero PSBR when the economy is at its trend level. Thus, the SERPS reforms, which reduced revenue flows, will not have led to a fall in public savings.

Blake does, however, find positive effects on savings from both occupational and personal pension wealth. Thus, it appears that the favorable tax treatment provided to these schemes has raised private savings and, given the exogenous nature of public-sector savings, will have raised total savings.

The fact that income support, which is a means-tested benefit, is higher than the basic state pension is likely to cause some discouragement of savings for the lower paid. There is in effect a 100 percent marginal tax rate on income from savings between the basic state pension and income support. Since the gap between the two is between 6 and 9 percent, the disincentive effects could be significant (see Hubbard, Skinner, and Zeldes 1995), although this will be offset by the requirement for all employees earning over £61.00 a week to make second-tier provision. Approximately 17 percent of pensioners receive income support.

3.5 Proposals for Reform

If the present system is maintained, the real value of the basic state pension will remain constant and hence fall relative to average earnings. At the same time, the value of the SERPS pension and of the compulsory element of contracted-out pensions will also fall relative to average earnings. If the real

value of income support is also held constant, the increased level of entitlement to earnings-related schemes should reduce the need for payments of income support to pensioners. However, those pensioners with no or only a small amount of earnings-related pension will have a low level of entitlement relative to average earnings in the longer term.

This expected outcome is consistent with the then Conservative government's approach to public expenditure and to individual choice and is consistent with the Beveridge approach to pensions. An adequate level of income (but low relative to earnings) will be available to pensioners, mainly through the contributory basic state pension. Compulsory second-tier provision provided either by the state or by the private sector will provide a fairly modest earnings-related pension. Beyond that, the choice will be up to individuals and employers, assisted by tax incentives. The public-sector cost of pensions will fall relative to GDP, and, for given demographics, National Insurance contribution rates will be reduced.

A more radical application of this approach might raise questions as to why there is any compulsory second-tier provision at all and why such provision should still involve, at least to some extent, the public sector. However, most comment on pensions focuses on rather different questions. In particular, it draws attention to the continued reliance on income support of a significant proportion of pensioners and argues that the compulsory element of the second-tier pension is inadequate.

Suggested changes to the basic state pension include restoring the basic state pension to 20 percent of average male earnings and uprating it thereafter in line with average earnings. Such a move would be costly and would bring little benefit to the poorest pensioners, who are already entitled to income support. An alternative proposal is to concentrate the benefit of the basic pension on the least well off by increasing the benefit earned by lower-paid contributors and reducing the benefit earned by higher-paid contributors. Schemes of this type would achieve a significant effect only after many years. They have been criticized on the grounds that they would be highly complex, would undermine the contributory principle, and could have unfavorable effects on incentives.

3.5.1 An Assured Pension

The Retirement Income Inquiry (RII)[11] proposed a new minimum pension guarantee, provided to all people over state pension age as of right. It would be specifically designed to provide an adequate level of income for those who do not have sufficient income from other sources. It proposed the name *Assured Pension.*

The assessed income would disregard all assets but would take into account

11. The Retirement Income Inquiry, under the chairmanship of Sir John Anson, was set up by the National Association of Pension Funds. The inquiry was completely independent, and members served in an individual capacity. Their proposals are set out in Retirement Income Inquiry (1996).

other pension income and other income from savings (with a small disregard). The withdrawal of the assured pension would be tapered. The RII did not propose a specific rate at which withdrawal would be tapered but argued that some degree was essential. All those receiving an income-related pension under the assured pension would qualify automatically for means-tested benefits, such as the housing benefit.

The RII did not make a specific proposal about the level of the assured pension although that would be critical in determining both the cost and the fundamental nature of the overall scheme. It illustrated the costs of schemes that, at age sixty-five, would provide a weekly pension for a single person of £65.00 (approximately the current level of income support), £73.50 (20 percent of average male earnings), £80.00, and £120 (approximately one-third of average male earnings). The costs are shown in table 3.13.

In its least costly form, the assured pension (with no taper) is much the same as the present system except for increasing the take-up of income support and allowing extra disregards. If (as the RII proposes) there are changes to the second-tier system that improve private provision of pensions, the introduction of an assured pension should not involve any increase in costs beyond those outlined in table 3.13.

The RII proposed that the assured pension should be financed from general taxation, apart from the basic pension, which would continue to be met from the National Insurance Fund. If the basic pension continues to be indexed to prices rather than earnings, it will provide a decreasing proportion of the assured pension (and of pensioners' incomes in general).

The RII argues that the assured pension is a more effective way of using money to provide an adequate minimum retirement income than proposals to increase the value of all pensions. This is part of the general debate about means testing versus universal provision.

3.5.2 Second-Tier Provision

Compulsory second-tier provision for employees is currently either provided through SERPS or requires, in effect, contributions of 4.8 percent of earnings between the LEL and UEL to be paid into an approved occupational or personal pension scheme.

Table 3.13 Additional Costs of an Assured Pension (£billion per year)

	Amount per Week, Single Person (Couple)			
Withdrawal Rate	£65.00 (£104)	£73.50 (£117.60)	£80.00 (£128)	£120 (£192)
100 percent (no taper)	1.0	2.6	4.6	17.2
75 percent	1.2	3.0	5.4	19.7
50 percent	1.8	4.0	6.8	22.9

The argument for compulsory second-tier provision may rest partly on the view that individuals are not the best judges of their own savings decisions. A more compelling argument may be that it reduces the need for individuals to rely on (noncontributory) state support. Frank Field M.P. in particular has argued for the extension of compulsory earnings-related schemes (see Field 1995; and Field and Owen 1994). He is strongly opposed to means-tested benefits, which, he argues, "penalise all those values which make strong, vibrant communities" (Field 1995, 10). He proposes a two-part social security system. Public welfare provision would be administered by an independent stakeholders' insurance corporation that would, in due course, set contribution and benefit rates subject to a veto by the chancellor of the Exchequer. Contributions would be earnings related for all employees, including part-time workers and others below the LEL. The government would make contributions for the lowest-paid workers, but there would be a clear distinction between the redistributive function of the scheme (based on taxation) and its savings function (based on graduated contributions).

There would also be a compulsory second-tier system operating through a stakeholders' private pension corporation. All employees and self-employed persons would be compelled to become members of a private pension scheme. The board of the corporation would set the rate of contributions for employee and employer. Contributions would start at a modest level and would be progressively raised.

Many of Field's proposals were incorporated in the report of the Commission on Wealth Creation and Social Cohesion in a Free Society (Dahrendorf et al. 1995).

The RII concluded that a compulsory second tier is needed in order to avoid excessive costs to the taxpayer of providing an adequate minimum retirement income. It proposed that the minimum level of contributions to the second tier should be sufficient and its coverage wide enough to ensure that, in the future, almost all the retired population will have adequate incomes and will not require additional state support to achieve the minimum level of income guaranteed by the assured pension. If the assured pension is related to average earnings, and if the basic state pension remains fixed in real terms, the level of contributions to the second tier will need to rise through time.

Beyond that, the RII argued that the level of contributions to pensions should be a matter of personal choice. It proposes that SERPS should be phased out and replaced by a funded national pension scheme. It would be a defined-contribution scheme, with funds invested in a well-balanced portfolio of investments. The scheme would be compulsory for those not in a scheme meeting minimum requirements, but it would be open for anyone to join, and members could contribute above the minimum required level. Tax relief would be given to contributions and to income earned within the scheme, as is currently the case with occupational and personal pensions. On retirement, the proceeds will be used to purchase annuities. The committee argues that the

national pension scheme would be particularly suitable for low-paid and mobile workers and those in small firms. It also believes that it would keep administrative costs low. It assumes that the national pension scheme would not be identified as part of public expenditure.

Employers and employees would be required to provide between them at least a minimum contribution to an approved scheme or to the national pension scheme. The employee would exercise the choice. The committee proposes that the minimum combined contribution should be set at the current contracted-out rebate of 4.8 percent. Compulsory contributions would be subject to an upper earnings limit, set at about the same level as the current UEL. There would also be a lower limit, which could be fixed at about the current LEL.

The committee proposes that rights already accrued under SERPS would be preserved and the eventual SERPS pensions financed on a pay-as-you-go basis from the National Insurance Fund. It also recommends that anyone within fifteen years of pension age should be allowed to remain in SERPS if they wish. Their compulsory contributions would be paid into the National Insurance Fund. Contracted-out rebates would cease. The new NIC rate would be set 0.5–0.7 percent higher than the current contracted-out rate, 4.3–4.1 percent lower than the contracted-in rate.

If the minimum contribution remains at 4.8 percent, the effect on contributions for employees and employers would be that those already contracted out would pay a higher NIC rate and existing contributions to an occupational or personal pension; that those leaving SERPS would pay a lower NIC rate and a minimum of 4.8 percent to their new funded scheme; and that those remaining in SERPS would pay a lower NIC rate but would pay 4.8 percent toward their SERPS pensions.

Compulsory contributions to the second tier should be increased through time to constrain the public-sector cost of paying the assured pension. This could presumably be done through increases in the compulsory contribution rate. The committee recommends that pensions should be required to provide at least limited price indexation and should include survivors' benefits. They also recommend that men and women should get equal pension rates for equal contributions within the compulsory element.

3.6 Privatization and the U.K. Experience

In this final section, we consider briefly, in the context of this collection of papers, the extent to which privatization has played a part in the development of the U.K. pensions system.

It is clear, from the other studies, that the key elements in the reforms elsewhere are privatization and funding, with the funds being invested in productive capital. Although the United Kingdom played a leading part in the priva-

tization of activities formerly run by the public sector, it has not generally counted its changes to the pension system as part of this process. Richard Disney has commented that the first major change in the U.K. pensions system in the postwar period went in the opposite direction. The introduction of SERPS, and its predecessors, was an attempt to supplement the private sector's occupational pension schemes by extending second-tier pensions to a wider range of employees. It did not involve nationalization of the existing private schemes, but, at the time of its introduction, it provided a generous alternative, particularly for those close to retirement. In addition, it provided a potential supplement to all private-sector schemes by providing postretirement indexation at a time when most private schemes did not do so.

One can say that SERPS added an unfunded earnings-related public scheme to the funded private-sector pension schemes.

The reforms since 1985 certainly qualify as a move to privatization and funding. Those who have left SERPS have moved from public-sector to private-sector schemes. They have also moved from unfunded to funded schemes that are largely invested in equities. About half the employees who were members of SERPS in 1985 have left the scheme. In addition, new entrants to the labor force may join occupational pension schemes, if they are available, or can start personal pension schemes, using the contracted-out rebate plus possible supplements from employers or employees. These schemes are funded.

It remains true that all employees and the self-employed (with earnings above a lower limit) must belong to the basic state contributory pension scheme, which is pay as you go. However, under current policy, the value of the basic pension is fixed in real terms. The public-sector component of pension incomes is therefore withering away relative to private, funded provision. There is clearly an issue of whether this system too should be privatized and funded. That would, in turn, raise questions about whether it should become earnings related or whether there should continue to be at least a flat-rate element.

There is also the question of whether SERPS should be privatized and funded. That would be a rather simpler matter than privatizing and funding the basic pension scheme. That was, in effect, the original proposal in 1985, but, at that time, the private sector was reluctant to accept responsibility for providing earnings-related pensions for the low paid and workers who moved often into and out of employment.

Like other moves toward funded schemes, the United Kingdom's reforms have had a transitional cost. Disney estimates that the switch to personal pensions may currently be reducing National Insurance Fund revenue by about £3 billion a year (about 0.5 percent of GDP) and that to offset this an increase in contribution rates of up to 2 percentage points would be required. It is clear that current pensioners are not bearing this cost, nor are those who have con-

tracted out of SERPS (except insofar as they share the general burden through higher National Insurance contributions or taxes). The £3 billion is being met by National Insurance contributors and/or taxpayers.

In general, one can say that the modest public-sector cost of pension provision in the United Kingdom does reflect a policy of privatization. Under current policies, funded private-sector schemes will provide an increasing proportion of retirement income. In the United Kingdom, by contrast with some other cases, this private provision—assisted by favorable tax treatment—will be largely voluntary rather than compulsory. Although employees are compelled to make pension provision (either in the state scheme or by investing in private pensions), there is less compulsion than there was before the reforms and significantly less than in many other industrial and developing countries.

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Comment Richard Disney

Discussion

Alan Budd and Nigel Campbell are to be congratulated on providing a clear and succinct account of the pension system in the United Kingdom, in particular concerning its historical reform process as well as reform proposals now on the table. Unlike in Chile, there was no "clean" privatization of social security in the United Kingdom: just over two decades ago, the U.K. system was characterized by a flat social security pension augmented by welfare benefits, coupled to private pension plans covering 50 percent of the workforce. The 1975 legislation saw the introduction of an additional social security pension scheme, the State Earnings-Related Pension Scheme (SERPS), for most workers not covered by private pensions. Existing private pensions were brought into the social security system by the means of "contracting out": company pension schemes paid lower rates of contribution to the National Insurance Fund on behalf of their members and in turn took on responsibility for paying a guaranteed minimum pension (GMP) to their members in retirement in lieu of SERPS.

This framework of contracting out was used as the basis for the partial privatization of the U.K. social security system after the 1986 legislation, which had stemmed from a projection that the long-run costs of SERPS were unaffordable. Now, in exchange for sacrificing their SERPS entitlement, individu-

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als could have their contracted-out rebate paid into an individual savings account known as a personal pension. Such approved personal pension accounts (APPs) could be augmented by additional voluntary tax-relieved contributions. Around 25 percent of the workforce availed themselves of the opportunity of establishing APP accounts between 1987–88 and 1994–95, with a few choosing to leave company pension plans in order to do so. With the decline in the value of the flat basic pension charted by Alan Budd and Nigel Campbell and around 75 percent of the workforce in some form of pension plan or APP account, pensioners in the United Kingdom in the future will largely rely on private pensions for their income.

Projections

The effect of this reform process, described by Budd and Campbell, is summarized in table 3C.1, which gives official projections of the future costs of providing social security in the United Kingdom. The table shows that, despite the decline in the support ratio of workers to pensioners from 2.1 at the turn of the century to just over 1.5 in 2050–51, the required National Insurance contribution rate of the pay-as-you-go social security program actually falls by over 4 percentage points. The authors describe how this "financing miracle" is achieved by the decline in the value of the basic pension, relative to earnings, the equalization of state pensionable age for men and women at sixty-five after 2010–11, the projected cutbacks in the generosity of SERPS, and the increase in contracting out of the social security program. They do not perhaps give sufficient emphasis to this last point. Tax expenditures of lower National Insur-

Table 3C.1 Future Trends in United Kingdom Support Ratio, Social Security Expenditure, and Contribution Rates

	1994–95	2000–2001	2010–11	2030–31	2050–51
Basic pension[a]	26.9	29.8	33.6	41.9	42.3
SERPS[a]	1.8	4.2	8.4	12.0	9.9
Incapacity benefits[a]	6.3	5.7	6.3	6.9	6.5
Other benefits[a,b]	2.5	2.6	2.4	3.0	2.9
Total	39.9	42.2	50.8	63.8	61.7
Contribution rate (%)[c]	18.3	17.9[d]	17.5	17.4	14.1
No. of pensioners[e]	10.6	11.0	12.4	14.7	14.9
No. of contributors[e]	22.0	22.7	24.0	23.9	22.9
Support ratio	2.06	2.06	1.94	1.63	1.54

Source: National Insurance Fund (1995).

[a]£billion at 1994–95 prices.

[b]Including widow's benefits and other benefits.

[c]Joint contribution for contracted-in employees.

[d]Assumed contracted-out rebate for the period from 1997–98 to 2001–2002 is 4.95 percent.

[e]In millions.

ance contributions to APP members are currently running at some £3 billion a year, and these rebates were a major reason for the rise in contribution rates and the deficit financing of the National Insurance Fund in the early 1990s. I calculate that the contribution rate required to finance social security is up to 2 percentage points higher currently as a result and some 2 percentage points lower in the future also. In other words, the contribution rate would have remained roughly constant, at 16 percent of eligible earnings, from 1994–95 to 2050–51 rather than falling by 4 percentage points, as indicated in table 3C.1, had APPs not been introduced.

Rates of Return

Feldstein (1996) has pointed to the implicit deadweight loss arising from pay-as-you-go (PAYGO) financing of pensions when capital market returns exceed the growth of the earnings base. Such a discrepancy might also provide a rationale for the shift from SERPS to APPs in the 1980s and 1990s in the United Kingdom. Table 3C.2 shows that the United Kingdom does indeed obtain an excess return on full funding over PAYGO funding of around 6½ percentage points annual return. Indeed, my calculations in Disney and Whitehouse (1993) suggest that returns for men remaining in SERPS will actually be negative in the future, providing a rationale for why so many young men not covered by company pension plans have purchased APPs.

However, the "premium" of funded schemes should be qualified by considerations of risk and transactions costs. Figure 3C.1 shows clearly that the performance of real returns of pension funds tends to fluctuate much more widely than the Samuelsonian "return" on PAYGO funding. Table 3C.3 compares transactions costs on different types of pension plans and social security using

Table 3C.2 U.K. Real Rates of Return

Pension fund investment performance, 1979–94, median fund's real return[a]	8.5 percent per annum
Growth of PAYGO earnings base, 1979–94, annual growth of earnings bill[b]	1.8 percent per annum
Memo items:[c]	
Growth of retail prices, 1979–94	6 percent per annum
Growth of real earnings, 1979–94	2 percent per annum
SERPS + BSP,[d] men retiring 2000 (mean return)	1.0 percent per annum
SERPS + BSP, men retiring 2020 (mean return)	−.9 percent per annum

[a]The median return obtained by all the pension funds participating in the Combined Actuarial Performance Services Ltd. sample. A "typical" fund will invest as follows: domestic equity, 60 percent; foreign equity, 20 percent; other, 20 percent. *Source:* Bacon & Woodrow (1996).

[b]*Source: Economic Trends.*

[c]For contracted-out men, rates of return on BSP + GMP are some 0.5–1.0 percent higher. For women, rates of return on SERPS + BSP may be considerably higher. *Source:* For social security returns, see the text of Budd and Campbell.

[d]Basic state pension.

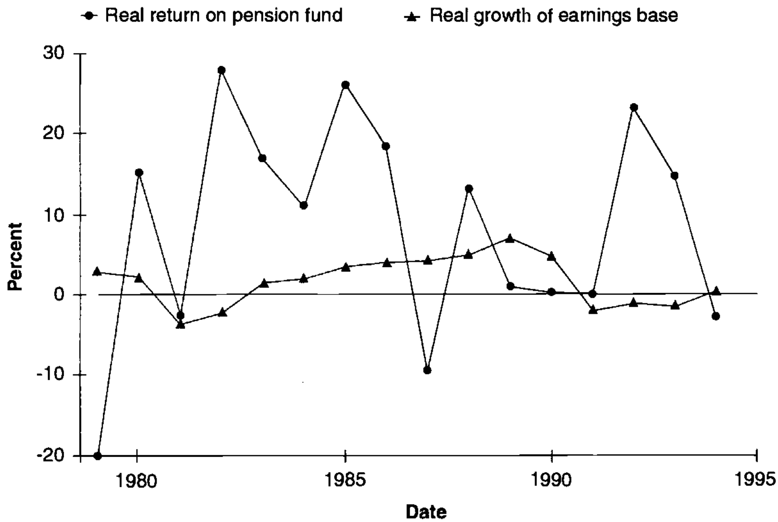

Fig. 3C.1 Annual real growth of funding and social security bases

Table 3C.3 U.K. Pension Transactions Costs

Social security pension: Administrative costs as % of expenditure[a]	1.2
Occupational (company) pensions: "Expenses and miscellaneous expenditures" as% of expenditure[b]	5.1
Personal pensions:[c] Average charges attached to a five-year monthly premium APP as % of fund value	
£200 per month, taken out 1 January 1993, retire at sixty-five (highest, 24.0 percent; lowest, 3.3 percent)	13.0
One stand-alone premium (of £10,000) (highest, 14.7 percent; lowest, 4.3 percent)	10.2

[a]*Source: The Government's Expenditure Plans.*

[b]*Source: Eighth Survey of Occupational Schemes, 1987* (1991).

[c]These are based on plan charge structures (reported in Walford 1995), applied to a projected APP given the above assumptions plus an assumed rate of return (10 percent per annum gross). Actual payouts (which may incorporate differences in plan performance) are also reported in Walford (1995).

a comparable measure across plan types (for a discussion of the appropriateness of this measure and other measures, see Mitchell, chap. 10 in this volume). Social security pensions are by far the cheapest to operate, and the costs attached to company pension plan management and to APPs should be regarded as reducing returns by up to 50 and 150 basis points, respectively. Note, too, the extent of idiosyncratic plan risk as indicated by the spread of returns within APP plans and the fact that APP charging structures typically contain a

lump sum element that should discourage purchasers with the very lowest incomes.

Who Are Approved Personal Pension Members?

In any discussion of the privatization of U.K. social security, it is APP members who are of most interest. Unlike in Chile, individuals in the United Kingdom can opt to remain in social security or to buy an APP, or to participate in a group plan, whether of the defined-benefit or the defined-contribution type, if covered. The choice structure is a more complex version of the structure modeled by Gustman and Steinmeier (chap. 8 in this volume). Although it would be possible to construct scenarios where individuals differed in their degree of risk aversion and where utility maximization decisions "sorted" individuals into different sectors (as in Brugiavini and Disney 1995), the choice between SERPS and an APP has been driven by the differential accrual structures and the financial nexus (Disney and Whitehouse 1992). Thus, APP members are typically young (people aged under thirty constituted 66 percent of optants in 1987–88, although that figure fell to 49 percent of the total in 1992–93) and male (68 percent of members in 1987–88, 63 percent in 1992–93). The median contribution of contracted-out rebate into an APP account was £9.00 per week in 1992–93 for a man (roughly £11.00, or U.S.$17.00, in current prices) and £6.00 per week in 1992–93 for a woman. These financial amounts are not large.

For individuals who lose or leave their job, no statutory contribution is made. The proportion of APP members reporting zero earnings, and therefore zero statutory contributions, rose from 11 percent in 1987–88 to 21 percent in 1992–93. And, according to official statistics from the Department of Social Security, only half of those with APPs in 1992–93 who started their accounts before 1990–91 reported having positive earnings in every year. This low proportion is not surprising given the age profile of APP members, but it raises some concern as to whether all individuals with APP accounts will obtain reasonable incomes on retirement. This concern has permeated some of the reform proposals described by Budd and Campbell, in particular the idea of having higher mandatory minimum contributions into these individual savings accounts. But it should be borne in mind that, given the differences in expected returns, APP members should be no worse off than were they to have remained in SERPS.

Of some interest given these low "basic" contributions, and the recent debate in the United States concerning the effect of IRAs and 401(k) plans on savings, is the scope for making additional voluntary contributions into APP accounts. For various reasons, official data have been very poor on this question in the United Kingdom. However, waves 2–4 of the British Household Panel Survey (BHPS) of incomes provide some interesting data on this issue. Official figures suggest that roughly 50 percent of APP members make additional contribu-

tions, and, according to BHPS data, mean weekly contributions (of those who contributed) were £11.60 in 1992, £12.50 in 1993, and £14.70 in 1994. These figures gross up to total additional contributions (savings) of some £2.2 billion in 1994, consistent with Inland Revenue data.

Preliminary tabulation of the data suggest some degree of persistence in savings behavior. For example, there is no tendency for the probability of contributing to decline with the duration since the APP contract was taken out. Furthermore, individuals who contributed at $t - 1$ are disproportionately more likely to contribute a larger amount at t, when controlling for background characteristics. But the evidence of variability in savings (and probably in job holding) is also strong: only 40 percent of the sample contributed in *every* year from 1992 to 1994. Of those who *did not* contribute in 1994, 43 percent had made an additional contribution in 1993 and 59 percent in 1992. Conversely, of those who did not contribute in 1993, 40 percent did contribute in 1994.

Overall, the picture is of a minority of APP members who are engaged in a persistent lifetime savings strategy. Others, whether owing to myopia, youth, or searching the labor market for better jobs, have a more erratic record of contribution to their APPs. This instability, plus complaints over high selling charges and misselling of some APPs, has cast a cloud over the APP "privatization" in the United Kingdom. Nevertheless, the underlying fundamentals and the maturation of contributors give hope that this sector will become a central component of future pension provision in the United Kingdom.

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Discussion Summary

Jeffrey Liebman and Andrew Samwick

Many of the questions in the discussion focused on the unique "contracting-out" features of the British system. The contracting-out rebate is currently 4.8 percent, falling to 4.6 out of a total 20.2 percent maximum tax rate on all social insurance contributions. The option to contract out partially does not exist. Many participants asked whether it was optimal to contract out or to switch back and forth between SERPS and being contracted out. The authors replied that it was clearly optimal for younger workers to be contracted out and that the government has lost money owing to the switching back into SERPS later in life (any revenue shortfalls are simply made up out of general tax revenues). Recently enacted measures may have ameliorated the problem of gaming the system by capping the contracted-out rebates and having them increase with age.

The discussion then turned to the issues of annuitization and inflation for contracted-out workers. The market for annuities is organized on an individual basis and is composed of all workers who have contracted out with personal pensions. The market is only lightly regulated, and it does not appear that there is much screening of individuals by companies. For example, much to the surprise of the conference participants, premiums are typically not made conditional on gender or health status. Approximately 50 percent of the funds are annuitized, and there is protection for spouses of those who have contracted out. The state benefits are indexed against inflation up to a limit. In the period since SERPS was enacted, most occupational pensions have implemented at least a limited cost-of-living adjustment in order to satisfy the contracting-out requirement. There was some speculation as to why indexation was not full given the availability of indexed bonds.

Other questions pertained to the way workers who had used personal pensions to contract out were investing their accounts. It was pointed out that, in the Australian system, there was great concern that workers would invest too conservatively. The authors replied that workers in the United Kingdom did have control over their accounts and that most of the funds are in equities. Furthermore, the personal pensions are virtually unregulated, with only "trustee law" and a few small safeguards to prevent disasters like the Maxwell affair.

Another question concerned the labor market consequences of the introduction and subsequent reforms of SERPS. The authors responded that there were simply too many other changes taking place during this time period to identify the effects of the privatization on labor outcomes.

The discussion concluded with questions about the political resistance to the recent reforms, given the large reduction in SERPS that they seem to have made. The authors replied that the contracting-out rebate helped reduce opposition. They also suggested that the fact that many people do not know that they are covered by SERPS may have led to the muted opposition. The government was also fortunate enough to have acted very early in the program so that there were few groups that had accumulated large entitlements at the time. The value of the basic pension is a more hotly contested political topic.