Tax Relief and Partnership Pensions

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Contents

Centre for Analysis of Social Exclusion

Editorial Note

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Acknowledgements

Abstract

Government support of private (occupational and personal) pensions through the system of tax reliefs is large: between one quarter and one third that of direct support of state pensions through public expenditure. However, it is regressive, lacks transparency and is difficult to control. This paper argues that it should be replaced by a cost-neutral matching grant or tax-credit scheme. Such a scheme would embody the 'partnership' idea implicit in much government policy in this area, but would be much more progressive, more open, and more accountable than existing arrangements. The argument is illustrated by statistical comparisons of the distributional impact of the present system and three alternative versions of the tax-credit scheme. An appendix discusses the methodology for calculating the cost of pension tax reliefs over time.

"No-one ever got rich by passing up golden opportunities and that's exactly what a personal pension offers you. Why? Because one of the beauties of saving for your retirement is that the government actually gives you money - and lots of it - to encourage you... you get back every penny of the income tax you pay on the money you invest." Small print: *"the value of the tax benefit depends on how much tax you pay"* Virgin advertisement, *The Guardian,* 17th September 1997.

Introduction

There are currently two ways in which the Government supports the provision of old age pensions in Britain. One involves direct public expenditure on state-provided pensions; the other 'indirect' expenditure through tax relief on private (occupational and personal) pensions. The first includes the basic state pension and the state earnings-related pension scheme (SERPS); their costs amounted to £32.5 billion in 1996/7. The second involves a variety of different kinds of tax relief; as we shall see, the costs of these reliefs are a matter of controversy, but we estimate their net cost at approximately £9 billion.

Thus the indirect form of pension support - part of what Titmuss (1968) called 'fiscal' welfare – is already quite large in comparison to direct support. As more people join occupational, personal or the proposed 'stakeholder' pension schemes, it is likely to increase yet further in significance. This raises a set of important policy questions. Should the government help private pension provision in this fashion? Is the structure of tax relief the best method of achieving the aims of policy in the area? Or are there other policy instruments that could do the job better? It is to these questions that this paper is addressed.

Now government assistance for private pensions can be justified as a method of encouraging individuals to make their own provision for their old age, thereby reducing pressure for increased direct expenditure on the state pension scheme[1]. More generally, such assistance can be seen as part of a 'partnership' approach towards the provision of welfare: one where the state goes into voluntary partnership with individuals, instead of either discouraging their own efforts through direct provision, or coercing them through compulsory savings or other mechanisms. Thus direct spending

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1. There is a broader issue as to the justification for *any* kind of government intervention in pension provision, direct or indirect. We do not have the space to deal with this here; see Le Grand (1995) for a discussion.

on universal pensions, as in the UK and most European countries, acts as a positive disincentive for personal savings; a disincentive effect that is further complicated if the pension is not universal but income and asset-tested, as in Australia[2]. And compulsory private pension schemes, of the kind favoured in Singapore or Chile, involve coercion, with a negative impact on individual motivation and sense of self-reliance. In contrast, partnership schemes can be seen as mobilising individual self-interest in a positive direction (as advocated, for instance, by Field, 1995), while at the same time fulfilling the more altruistic purposes of collective welfare. As one of the authors has put it elsewhere, they appeal to both the 'knight' and the 'knave' in human beings (Le Grand 1997).

In that tax relief on pensions is a form of government aid that accompanies individuals' personal contributions, it is a type of partnership scheme. However, it is a highly unsatisfactory one. It is only open to those who pay taxes; partly because of this, and partly because of the existence of increasing marginal tax rates with income, it is highly regressive. It is not transparent; that is, it appears in the form of tax not being paid, and the people who receive it may well be unaware that there has been a reduction in their tax bill because of it. Moreover, even those who are aware of the tax reduction may not see it as a form of welfare assistance; rather, they may see it as simply the government taxing 'their' money less and hence as involving a reduction in governmental malevolence rather than being an example of state beneficence. It is inflexible, with the amount of aid provided being determined by parameters for the tax system such as the structure of marginal tax rates, themselves determined by factors unrelated to the particular programme for which the relief is being offered. It is difficult to control, as, unlike public expenditure programmes, tax reliefs are not subject to the annual Treasury spending round or any systematic analysis of value-for-money. And it undermines democratic oversight of the government's tax and spending priorities by departmental select committees and the like, leading to an excessive policy concern with the costs of direct public spending to the relative neglect of tax spending (Kvist and Sinfield 1996).

In what follows we expand some of these arguments against pension tax relief, and consider possible alternatives. More specifically, the next section describes the current system of relief; followed by an examination of its regressivity. The following section considers ways in which the

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2.   Universal, non-means tested, pensions have a negative income effect on both work effort and savings; means-tested pensions have both a negative income effect and a negative substitution effect.

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system could be modified or replaced altogether. It examines in some detail three versions of a matching grant or tax-credit scheme that, it is argued, could achieve the aims of policy far more effectively than the existing system without costing any more. There are three appendices: one providing the main tables on which the analysis in the main text is based, one discussing methods of estimating the cost of the various reliefs, and one providing some further distributional analyses of the proposed schemes.

The Current System of Tax Relief

Pension provision is subsidised through the tax system in three main ways. First, individuals can claim back any tax they have paid on money that has been put into their pension fund by either themselves or their employers. Second, pension funds get tax relief on their investment income. These tax reliefs are offset by the taxation of pensions when they are paid out; however, as is demonstrated in Appendix 2, this offset is only partial. Third, the lump sum component of any pension payment is tax free.

These entitlements are not unlimited. In particular, it is not possible to contribute unlimited amounts of income to a pension scheme tax free. While all contributions by employers to occupational schemes are tax free, in that they are deducted as a business expense from employers' corporation tax liability and do not count as a taxable benefit-in-kind for employees, there is an annual ceiling on the amount that employees may contribute tax free. This ceiling varies between occupational and personal pension schemes. Tax-free employee contributions to occupational schemes may not exceed 15% of earnings while more generous limits, varying with age, apply to personal pensions (up to age 35 tax-free contributions are limited to 17.5% of salary, but this rises to 40% for the over 60s). In addition, an 'earnings cap' of £84,000 is applied to both types of scheme: that is, the earnings figure to which the relevant contribution percentage is applied cannot exceed £84,000, thus setting an overall limit on the amount which can be contributed tax free. In consequence, the absolute amount which someone may contribute tax free to a pension varies with the type of scheme of which they are a member, their income and, if they are in a personal pension, their age. For instance, a member of an occupational scheme earning £10,000 a year may make tax-free pension contributions, on top of any contributions from their employer, of up to £1,500 a year; one earning £100,000 a year could contribute £12,600 (15% of

£84,000) tax free. In comparison, a 61-year-old member of a personal pension earning £10,000 may contribute tax free up to £4,000; one earning £100,000 could contribute tax free up to £33,600 (40% of £84,000).

There are also new restrictions on the tax-free status of pension fund investment income. In July 1997 it was announced that Advanced Corporation Tax credits were to be withdrawn. This has the implication that, while capital gains remain tax free, dividend income accruing to pension funds is now partially taxed. The precise effect of this change will depend on how pension fund managers adjust their investment strategies, and it is not yet clear how much additional tax will in fact be paid under the new regime.

Finally, the lump sum component of the final pension is limited to 25% of the pension fund in a personal pension or one and a half times final salary in a defined benefit occupational pension (subject again to an earnings cap of £84,000). The remaining part of the final pension, paid as an annuity, is then subject to income tax.

Despite these restrictions, the reliefs offer individuals saving through pension schemes considerable advantages. For instance, compare their tax situation with those who save through investing their own money in, say, a building society. The latter would have to find their savings out of income that has already been taxed; unlike pension savers, they would not be able to set their contributions against their tax liabilities. Further, any interest they earn on the savings will be taxed at 20% (or 40% if they are a higher rate taxpayer); whereas, until last year, the interest or dividend payments earned by those saving through pension schemes would have been tax free. Moreover, even under the new arrangements, pension funds can still avoid tax by switching their investments into ones that offer capital gains instead of dividend payments.

The only advantage to non-pension savers would be that, unlike pensioners, they would not be taxed when they came to withdraw their savings; however, even that advantage is reduced by the fact that a large part of most pension payments (the lump-sum) is tax free. Also, incomes in retirement are generally lower than during working lives, while tax allowances in retirement are higher. The result is that the amount of tax to which people are liable on their pension benefits is generally lower than the tax they would have paid had their pension contributions been subject to tax.

From the point of view of savings-neutrality, this apparent privileging of private pensions for tax purposes can be partly justified on

the grounds that pension savings are illiquid, and therefore a much less flexible form of saving than the alternatives. This illiquidity means that, if saving through private pension schemes is to be encouraged, some form of government incentive is desirable. However, the need for this incentive does not necessarily imply that the present system is the only, or even the best, way to do it. It is part of the contention of this paper that there are other ways that can be found which will better meet the aim of assisting private pensions, while at the same time furthering other social aims that the government might have.

Perhaps the most significant criticism of the system concerns its regressivity. Estimates of this are not easy to obtain. Data limitations prevent us obtaining any estimate of the distributional effect of tax relief on lump-sum payments; and it is difficult (and of limited usefulness) to estimate the distributional effect of tax relief on investment income, because, at least for defined benefit schemes, it is not possible to allocate the assets of pension funds to their members, and because, for investment income, the tax changes of July 1997 mean that any estimates based on previous years are of only limited relevance to the current situation.

However, the distributional impact of contribution relief is easier to investigate. This is illustrated in Figure 1, based on Table A1 in Appendix 1. The figure is derived from Inland Revenue statistics and shows the distribution of relief on both occupational and personal pensions by income group of taxpayers in 1996/7[3]. Employers' contributions are grossed up from employees' contributions so that the total cost of contribution tax relief equals £9.3 billion (see Appendix 2). They illustrate a strongly regressive pattern, with, for instance, those on incomes over £100,000 receiving an amount equivalent to 3.3% of their income, compared with 0.5% for those on incomes between £3,500 and £4,000. Overall, half the benefit of tax relief on pension contributions goes to people with incomes over £25,000 (the top 10% of taxpayers), and a quarter to people with incomes over £45,000 (the top 2.5% of taxpayers). As Appendix 2 sets out in detail, these figures may in fact be representative of all pension tax reliefs rather than just contribution relief, as the additional cost of

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3.   We have also constructed similar estimates using the Family Expenditure Survey based simulation model POLIMOD constructed by the micro-simulation unit at Cambridge (see Redmond, Sutherland and Wilson, 1996 for a description of the model). For occupational pensions the model revealed a very similar pattern to that derived from Inland Revenue statistics. However, a limitation of the model is that personal pensions could not be included, and, given the importance of the latter, it seemed preferable to concentrate here on the Inland Revenue estimates.

investigation income relief is cancelled out by the revenue accruing from tax paid on pensions in payment.

Figure 1: Value of pension contribution tax relief (% of taxpayer group income)
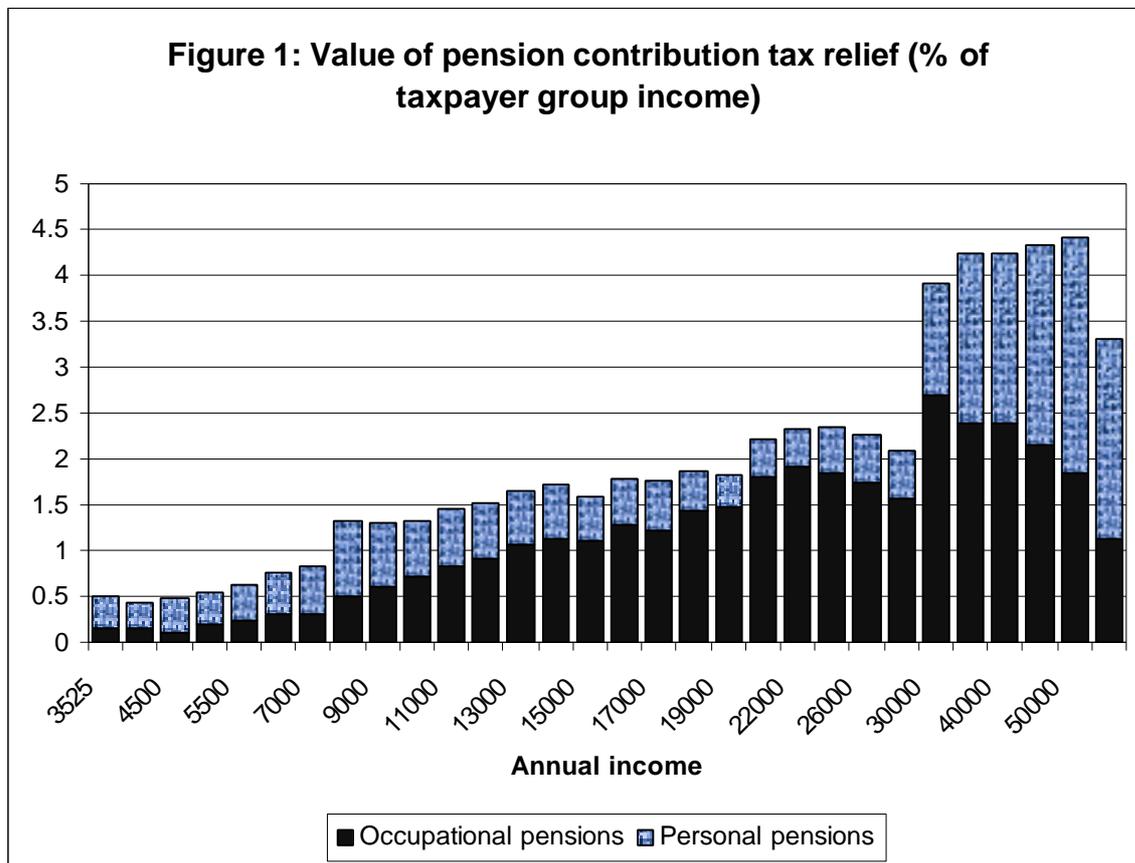
Source: Inland Revenue (1997, Table 3.8, and unpublished)

There are two reasons for the regressivity of pension tax reliefs. First, the propensity for people to be in a private pension scheme increases with their income, so that 80% of people with an income of £25,000 or more are in a private pension scheme compared to only 30% of people with an income of £7,000. This is illustrated in Figure 2. The figure also shows that there is a difference between personal and occupational schemes, with membership of occupational schemes rising steadily as incomes increase to £25,000, then declining thereafter, while membership of personal pensions is flat between £12,500 and £25,000, before climbing for the very well off.

Figure 2: Percentage of taxpayers contributing to a private pension scheme

100
90
80
70
60
50
40
30
20
10
0

3525 4500 5500 7000 9000 11000 13000 15000 17000 19000 22000 26000 30000 40000 50000

Annual income

—◆— Personal   —■— Occupational   —▲— Total
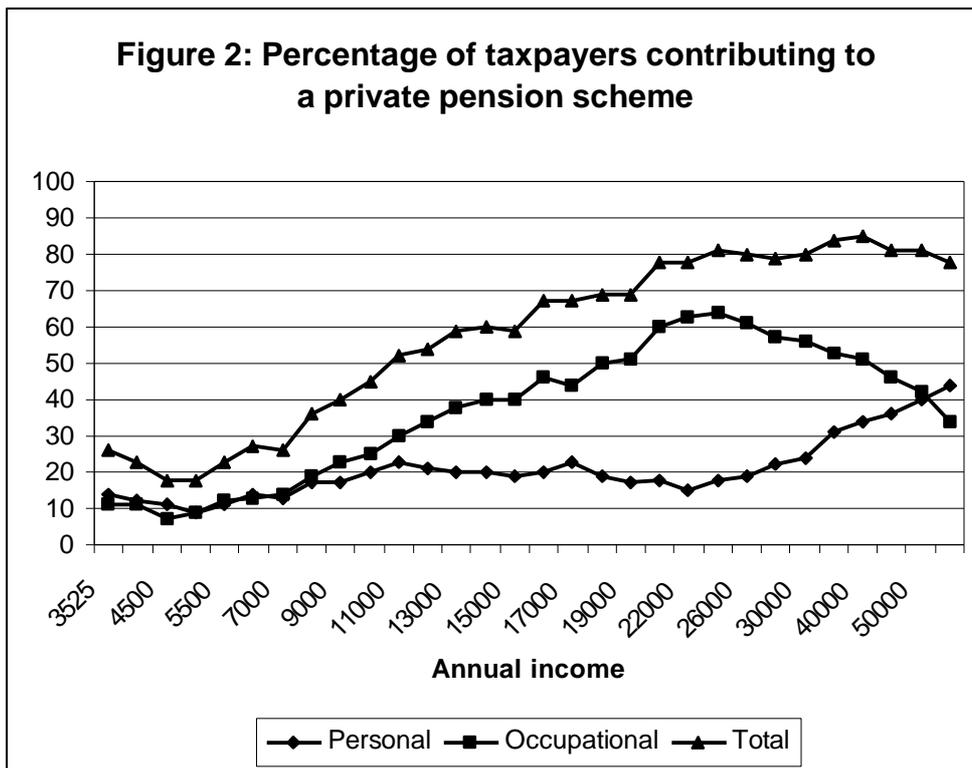
Source: Inland Revenue (1997, Table 3.8, and unpublished)

The second reason for the regressivity of tax reliefs is the fact that people can claim back tax at their marginal rate, so that the absolute amount of tax relief which someone gets rises with their income (see Figure 3). Moreover, higher rate taxpayers receive proportionately more tax relief than basic rate taxpayers, reflecting the higher marginal rate at which they pay tax.

The distributional effect of the current system of tax relief on pension contributions can also be expressed in the form of a Gini coefficient, where 0 represents complete equality and 100 represents complete inequality. Using Inland Revenue data we have calculated that the effect of the tax system is to reduce the Gini coefficient for the 25.8 million people who pay

tax from 38.24 to 34.27[4]. However, the inequality reducing effect of the tax system would be even greater without tax relief on pension contributions, with the Gini coefficient on the income of all taxpayers falling to 33.52 when such reliefs are removed.

Figure 3: Average per capita pension contribution, including tax relief (£ pa)
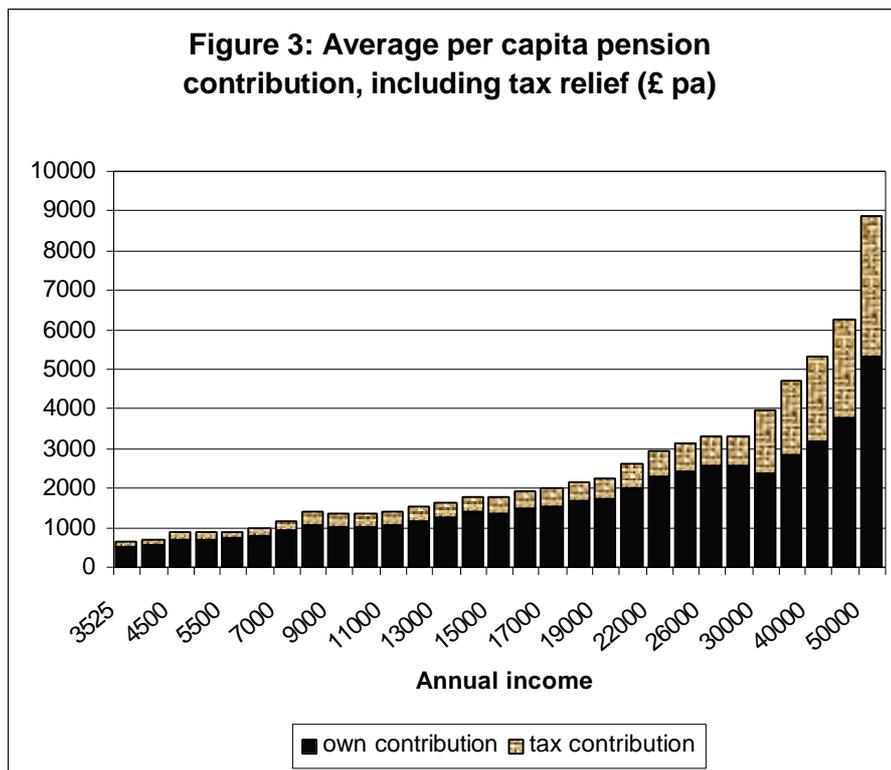
Source: Inland Revenue (1997, Table 3.8, and unpublished)

Proposals for Reform

We have seen that the present system has a number of undesirable features. These include its lack of transparency for pension contributors; its 'invisibility' in the public accounts; and its regressivity. There are a number of ways in which it could be reformed. First, its regressivity could be reduced by changing some of the parameters of the system. For instance, as has been suggested by many commentators, tax relief could be confined to the basic rate. Although this would indeed lessen the regressivity of the

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4. All Gini co-efficients are calculated using the computer program INEQ devised by Prof. Frank Cowell at the LSE.

system, it would not change the position of those who do not pay tax or who pay tax at less than the basic rate; hence its impact would be limited. Nor would it do anything to increase the transparency of the system; indeed, if anything, it would increase its complexity, especially for those unfamiliar with the language of tax accountancy. The system would still escape the controls and democratic oversight applied to direct expenditure. Finally, any such proposal on its own would reduce the amount of government aid being offered to private pensions: that is, it would not be revenue or expenditure neutral.

A more technical argument can also be made against limiting relief to the basic rate. At the moment individuals immediately pre-retirement who expect to retire on an income of more than £30,000 are indifferent between whether they pay money into their pension scheme or keep it in a building society account: very little interest will accrue in either case and their total tax rate will remain 40% in both cases, though the timing on when tax is paid will differ. However, if contribution relief were restricted to 23% they would find their pension savings being taxed at an effective rate of 57%, while the tax bill on their building society savings would be unchanged. For younger people the advantages of not being taxed on the capital gains of pension funds will probably outweigh this consideration, but, depending on the level of expected returns from pension saving, it is likely that anyone within five years of retirement who expects to continue to be a higher rate taxpayer will cease contributing to their pension fund altogether. While this raises few problems of vertical equity, such an age-related effect may be problematic from the point of view of horizontal equity. Moreover, it might create administrative problems for firms operating occupational pension schemes, as their better-off older employees would start to opt-out of company provision as they approached retirement. Reducing the level of the contribution cap, while keeping the rate of relief closer to the top rate of tax, would ease this problem.

A more imaginative solution than limiting tax relief to the basic rate would be to abolish the system of 'indirect' aid through the tax system and to use the revenue obtained to finance a direct system of aid. More specifically, one or more of the existing reliefs could be replaced with a system of matching grants. So, instead of granting tax relief on pension contributions, the government could offer to match individuals' contributions with a direct grant. The matching rate could be £ for £; that is, for each pound contributed by the individual the state would also

contribute a pound. Or, if that were considered too generous, the matching rate could be less: two-thirds, or one half, for instance. As with the present system there would be a cap on the amount of contribution that could attract such assistance.

The administration of a matching grant could in fact be integrated with the tax system, in which case it might be appropriate to refer to the grant as a 'tax-credit'. The experience of the Inland Revenue in dealing with the complexities of the tax relief system suggests the new scheme would raise few practical difficulties, and the Revenue would be the obvious administrative agency. Moreover, keeping responsibility for state support for private pensions with the Inland Revenue would help maintain the administrative simplicity of occupational schemes, where employers effectively distribute state support on behalf of the Revenue. The key difference with a tax relief system would be that, with tax-credits, the amount of support depends solely on the amount of pension contribution, and is blind to the amount of tax an individual pays.

However, unlike a matching grant system, tax-credits would not extend state support for private pension contributions to non-taxpayers. Under a tax-credit system additional support only goes to those who are currently contributing to a private pension; while under a matching grant system support is spread more widely.

A matching grant or tax-credit would have several advantages over the present system. It would be transparent: government aid would not be buried in the complexity of the tax system and individuals would see that they were being helped directly. As an item of direct government expenditure, or as an annual change in the level of the tax-credit, it would be subject to systematic parliamentary scrutiny. Under a matching grant system the aid would be available to everyone, not only to those who pay tax; and under both systems the amount of aid would not vary with the tax rate. Hence it would be considerably more progressive (or less regressive) than the present system.

To illustrate how the scheme might work in practice, we now consider three versions of it in more detail. Each assumes that tax relief on pension contributions is abolished with consequent savings of £9.3 billion (see Appendix 2 for details as to how this figure is obtained). Version A uses this revenue to fund a matching grant scheme with the matching rate set at 50p per pound; Version B has a matching rate of 66p; and Version C £ for £. In each case there is a limit on the amount of contributions that attract this aid, the limit being set at a level such that the total aid given

does not exceed £9.3 billion. The three proposals are thus cost neutral, as compared with the present system. While there may be some variations over time the proposals should also be cost neutral in the long run, as reductions in tax revenue from pensions in payment should be offset by the decreasing cost of investment income relief (see Appendix 2 for a fuller discussion of this point).

Illustrations based on Inland Revenue data are given below for the tax-credit scheme, where all winners and losers are assumed to come from within the 13.3 million people who already contribute to a private pension scheme[5]. Analyses of a full matching grant scheme (that is, one where aid is available to taxpayers and non-taxpayers alike) were also undertaken, using the microsimulation model POLIMOD. Unfortunately these are of limited interest as POLIMOD does not contain data on contributors to personal pensions. Hence these estimates are confined to an Appendix (3).

Figures 4, 5 and 6 and Tables 1, 2 and 3 below, and Tables A1, A2, A3 and A4 in Appendix 1, show some of the distributional consequences of alternative versions of the tax-credit scheme, using Inland Revenue data. With one exception, they are constructed on the assumption that there are no behavioural consequences of the proposed changes: that is, pension contributions and original income levels remain unchanged, regardless of the system of government aid offered. This is obviously unrealistic, but the present state of the art for these kinds of calculations offers little opportunity to explore different assumptions about how savings behaviour may alter. The exception concerns pension contributions above the contribution limit for aid; it is assumed that these drop to zero in each case, since, given the illiquidity of pensions, it would be irrational for individuals to continue to save in this form.

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5.   This is a slight under-estimate of the number of people in private pensions, as the Inland Revenue data does not include information on the million or so people in non-contributory occupational schemes.

Table 1 shows the effect of alternative versions of the tax-credit scheme on a range of illustrative individuals, all of whom make the average pension contribution for someone on their earnings. For comparison purposes how such individuals fare under the current tax relief system is also shown. As can be seen, the absolute amount of government support received by the three lowest earning individuals increases substantially under all three versions of the scheme. The highest earner loses under all three versions, while the individual on £25,000 gains under Versions A and B but loses under Version C.

Turning to the real world, we have estimated the effect of alternative versions of the tax-credit scheme on all taxpayers rather than simply on illustrative individuals. Figures 4, 5 and 6 show, for different income groups, the percentage of post-tax income provided by government aid under the three versions of the scheme. They can be compared with Figure 1. It is immediately apparent that they perform much better than the current system. For instance, under version A those earning between £3,500 and £4,000 receive 1% of their income as a tax-credit, compared with 0.4% for those earning over £100,000; the comparable figures are 1.3% and 0.3% for Version B, and 2% and 0.3% for Version C. Indeed the schemes actually become progressive over wide ranges of the income distribution: over £22,000 for version A, over £13,000 for Version B and over £11,000 for Version C.

Table 1: Effect of a tax-credit scheme on five illustrative individuals

Earnings £ pa	Individual pension contribution £ pa	Tax relief or tax-credit pension contribution £ pa	Tax relief or tax-credit as a % of total pension contribution	Tax relief or tax-credit as a % of earnings
Current system				
4250	550	51	8%	1%
6500	800	200	20%	3%
12500	1180	350	23%	3%
25000	2400	720	23%	3%
65000	5300	3550	40%	5%
Version A: 50p per £				
4250	550	275	33%	6%
6500	800	400	33%	6%
12500	1180	590	33%	5%
25000	1792	896	33%	4%
65000	1792	896	33%	1%
Version B: 66p per £				

4250	550	367	40%	9%
6500	800	533	40%	8%
12500	1103	735	40%	6%
25000	1103	735	40%	3%
65000	1103	735	40%	1%
Version C: £ per £				
4250	550	550	50%	13%
6500	705	705	50%	11%
12500	705	705	50%	6%
25000	705	705	50%	3%
65000	705	705	50%	1%

Source: see text.
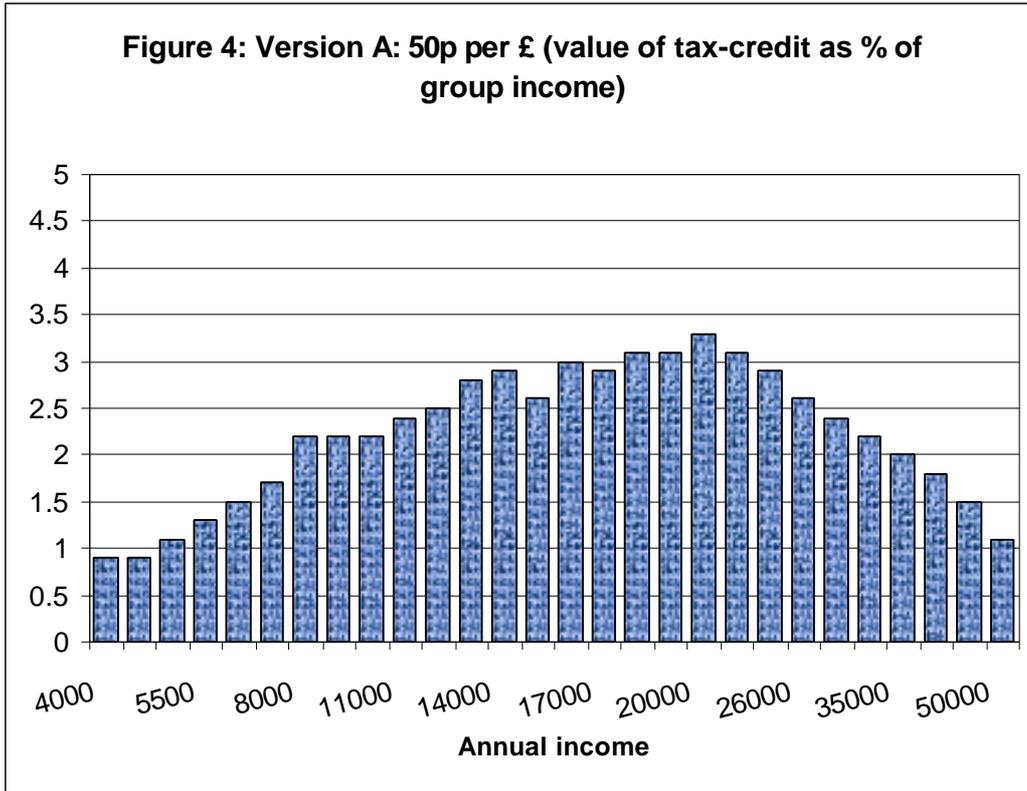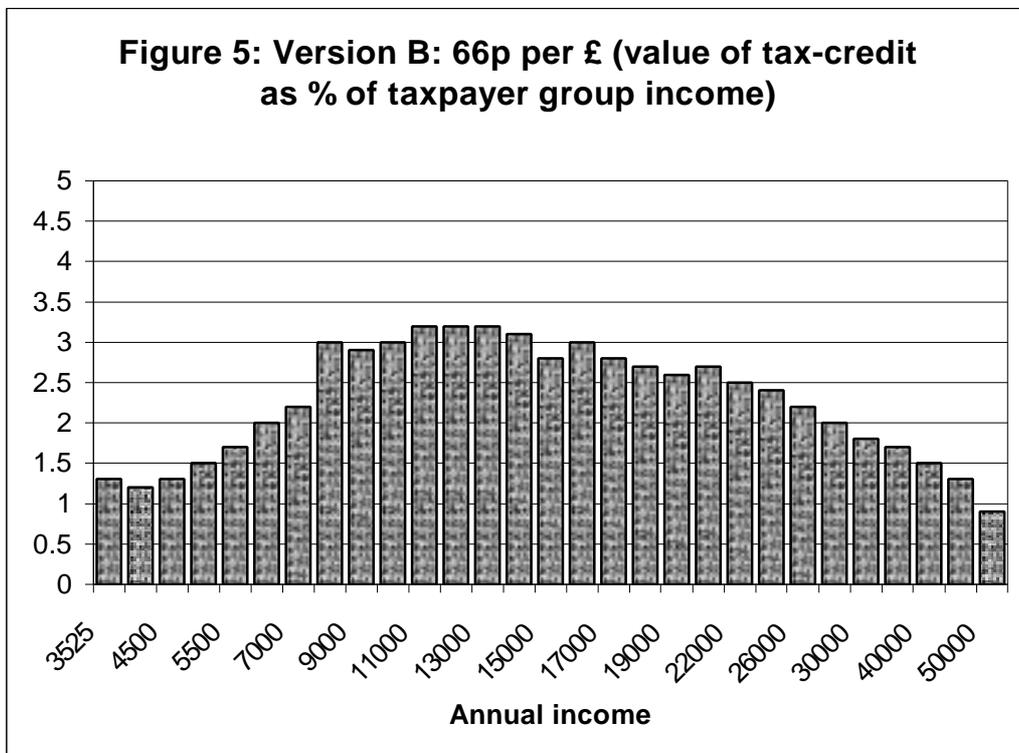
Figure 4: Version A: 50p per £ (value of tax-credit as % of group income)

Source: Inland Revenue (1997, Table 3.8, and unpublished)

Figure 5: Version B: 66p per £ (value of tax-credit as % of taxpayer group income)

Source: Inland Revenue (1997, Table 3.8, and unpublished)

Figure 6: Version C: £ per £ (value of tax-credit as % of taxpayer group income)
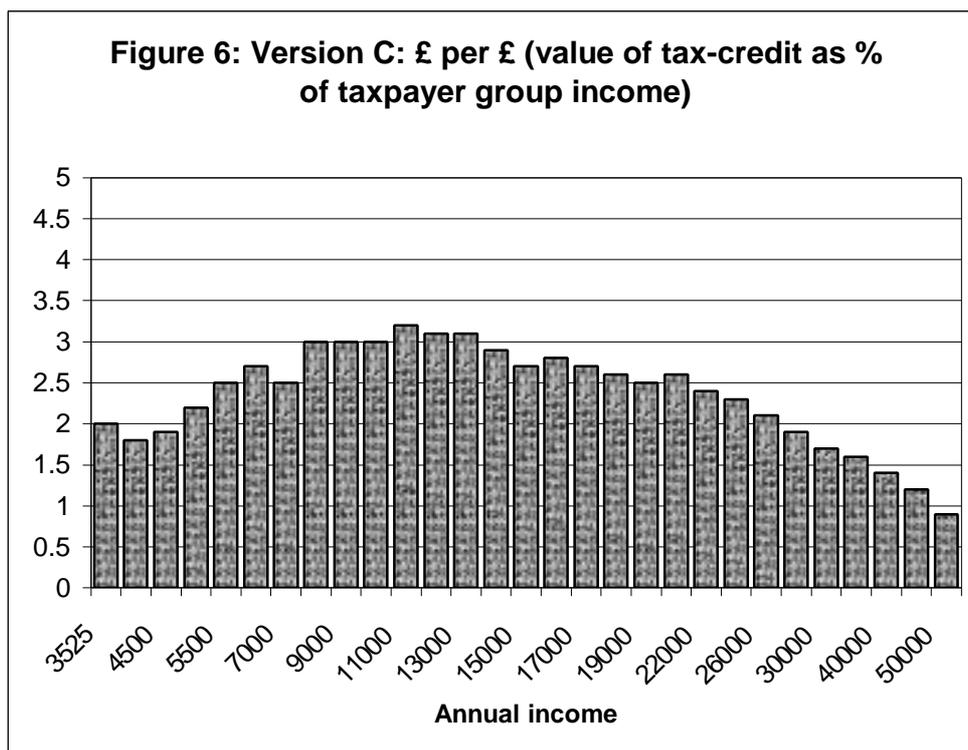
Source: Inland Revenue (1997, Table 3.8, and unpublished)

Figures 4, 5 and 6 are based on Tables A2, A3 and A4 in Appendix 1. The latter also show the gainers and losers from each of the schemes as compared with the current scheme. For version A on average only those earning more than £30,000 lose out; for version B, the losers begin at £26,000; for version C at £24,000.

The tables in Appendix 1 also show how the benefits of the scheme are spread out among pension contributors. Under Version A of the scheme people with incomes over £25,000 (the top 10% of taxpayers) receive a quarter of the benefit, half the amount they receive under the current tax relief system, and people with incomes over £45,000 (the top 2.5% of taxpayers) get 5% of the benefit, a fifth of the amount they currently receive. The equivalent figures for versions B and C are 18.5% and 17.5% respectively for people with incomes over £25,000; 3.5% of the benefit from both versions of the scheme go to those with incomes over £45,000.

Table 2 displays the results in a different way. It uses changes in Gini coefficients to show the differences in inequality in *the actual aid received by pension contributors* under the three versions of the scheme. It is apparent that all three versions dramatically reduce inequality in aid received, as compared with the present system. The reduction increases with the size of the 'match', with the £ for £ system virtually eliminating it entirely.

Table 2: Inequality in Aid Received by Private Pension Contributors

Scheme	Gini coefficient
Current system	45.43
Version A (50p for £)	14.70
Version B (66p for £)	4.03
Version C (£ for £)	0.47

Source: see text

Table 3 shows Gini coefficients for the *inequality in post-tax income for all taxpayers* for five distributions: without contribution tax relief, with contribution tax relief (the current system) and under the three tax-credit schemes. Not surprisingly, the differences are not large; £9.3 billion (the amount available for distribution) is small when compared with an aggregate for post-tax incomes of £350 billion. But what is of more interest is the direction of change. Tax relief on pension contributions actually increases inequality in post-tax incomes. In contrast, the two higher tax-credit schemes reduce it; while the lowest matching scheme increases inequality, but by significantly less than the current system.

Table 3: Government Aid to Private Pensions and Inequality in Post-Tax Income (all taxpayers)

Scheme	Gini coefficient
Without tax relief	33.52
Current system (with tax relief)	34.27
Version A (50p for £)	33.64
Version B (66p for £)	33.39
Version C (£ for £)	33.31

Source: see text

Conclusion

The present system of aid for private pensions is regressive, opaque, inflexible, and not readily susceptible to Treasury or Parliamentary scrutiny. The same resources could be used to fund a tax-credit or matching grant scheme that would, by definition, cost no more but would be superior in all these respects. It would be much less regressive; indeed, depending on the matching rate, it could actually be progressive over wide ranges of the income distribution. It would be much more transparent to its beneficiaries. It would set its own parameters, instead of their being set by the tax system; it would therefore be more flexible. And it would be much more amenable to expenditure scrutiny.

Perhaps the only disadvantage of the proposal is one of perception: switching from tax reliefs to matching grants could be seen as a way of both raising taxes and government expenditure, and this might create political difficulties. However, since the actual impact on the government's fiscal position would be neutral, this would be simply a labelling problem; and perhaps the tax-credit phraseology would help if there are asymmetric constraints on tax and public expenditures. Overall, it would be a pity if an idea was evaluated simply on terminology, and not on its real merits.

Appendix 1: Main Tables

Table A1: The Distribution of Tax Relief by Income Group

Table A2: The Distribution of Tax-credit by Income Group: Version A

Table A3: The Distribution of Tax-credit by Income Group: Version B

Table A4: The Distribution of Tax-credit by Income Group: Version C

Table A1: Distribution of pension contribution tax relief by income group

Lower bound of income band £ pa	Average income £ pa	Number of people claming tax relief 000s	Number of taxpayers 000s	Cumulative people in income band as % of all taxpayers	Average contribution pre-relief £ pa	Avg value of tax relief per claimant £ pa	Tota pension contributio £ pa
3525	3775	141	547	2.1%	531	133	664
4000	4240	135	582	4.4%	555	139	694
4500	4731	130	714	7.1%	703	176	878
5000	5244	162	885	10.6%	710	178	888
5500	5747	196	861	13.9%	727	182	909
6000	6470	440	1610	20.1%	797	199	997
7000	7514	455	1730	26.8%	952	238	1190
8000	8466	573	1600	33.0%	1062	317	1379
9000	9489	572	1440	38.6%	1048	313	1361
10000	10531	653	1450	44.2%	1042	311	1353
11000	11475	664	1270	49.1%	1062	317	1379
12000	12490	671	1240	53.9%	1177	351	1528
13000	13449	686	1170	58.5%	1269	379	1648
14000	14457	636	1060	62.6%	1380	412	1792
15000	15476	585	984	66.4%	1377	411	1788
16000	16478	574	862	69.7%	1486	444	1930
17000	17477	513	763	72.7%	1532	458	1990
18000	18477	496	719	75.4%	1670	499	2169
19000	19494	415	605	77.8%	1737	519	2256
20000	20985	931	1200	82.4%	2010	600	2610
22000	22957	748	953	86.1%	2273	679	2952
24000	24917	539	663	88.7%	2408	719	3127
26000	26984	445	558	90.9%	2568	767	3330
28000	28969	329	418	92.5%	2560	765	3325
30000	32246	503	630	94.9%	2370	1580	3950
35000	37234	296	354	96.3%	2833	1889	4722
40000	42358	194	229	97.2%	3185	2124	5309
45000	47344	123	151	97.8%	3765	2510	6275
50000	65402	370	455	99.5%	5329	3553	8882
100000	195778	98	126	100.0%	12514	8342	20856

Table A2: Distribution of tax-credit by income group (Version A: 50p per £ matching rate)

Lower bound of income band £ pa	Average income £ pa	Number of people claming tax credit 000s	Number of taxpayers 000s	Cumulative people in income band as % of all taxpayers	Average contribution pre-credit (adjusted for ceiling) £ pa	Avg value of tax credit per claimant £ pa	Total pension contribution £ pa	C
3525	3775	141	547	2.1%	531	266	797	
4000	4240	135	582	4.4%	555	277	832	
4500	4731	130	714	7.1%	703	351	1054	
5000	5244	162	885	10.6%	710	355	1066	
5500	5747	196	861	13.9%	727	364	1091	
6000	6470	440	1610	20.1%	797	399	1196	
7000	7514	455	1730	26.8%	952	476	1427	
8000	8466	573	1600	33.0%	1062	531	1593	
9000	9489	572	1440	38.6%	1048	524	1572	
10000	10531	653	1450	44.2%	1042	521	1563	
11000	11475	664	1270	49.1%	1062	531	1593	
12000	12490	671	1240	53.9%	1177	588	1765	
13000	13449	686	1170	58.5%	1269	634	1903	
14000	14457	636	1060	62.6%	1380	690	2069	
15000	15476	585	984	66.4%	1377	688	2065	
16000	16478	574	862	69.7%	1486	743	2229	
17000	17477	513	763	72.7%	1532	766	2298	
18000	18477	496	719	75.4%	1670	835	2505	
19000	19494	415	605	77.8%	1737	869	2606	
20000	20985	931	1200	82.4%	1792	896	2688	
22000	22957	748	953	86.1%	1792	896	2688	
24000	24917	539	663	88.7%	1792	896	2688	
26000	26984	445	558	90.9%	1792	896	2688	
28000	28969	329	418	92.5%	1792	896	2688	
30000	32246	503	630	94.9%	1792	896	2688	
35000	37234	296	354	96.3%	1792	896	2688	
40000	42358	194	229	97.2%	1792	896	2688	
45000	47344	123	151	97.8%	1792	896	2688	
50000	65402	370	455	99.5%	1792	896	2688	
100000	195778	98	126	100.0%	1792	896	2688	

Table A3: Distribution of tax-credit by income group (Version B: 66p per £ matching rate)

Lower bound of income band £ pa	Average income £ pa	Number of people claming tax credit 000s	Number of taxpayers 000s	Cumulative people in income band as % of all taxpayers	Average contribution pre-credit (adjusted for ceiling) £ pa	Avg value of tax credit per claimant £ pa	Total pension contribution £ pa	
3525	3775	141	547	2.1%	531	354	885	
4000	4240	135	582	4.4%	555	370	925	
4500	4731	130	714	7.1%	703	468	1171	
5000	5244	162	885	10.6%	710	474	1184	
5500	5747	196	861	13.9%	727	485	1212	
6000	6470	440	1610	20.1%	797	531	1329	
7000	7514	455	1730	26.8%	952	634	1586	
8000	8466	573	1600	33.0%	1062	708	1770	
9000	9489	572	1440	38.6%	1048	699	1747	
10000	10531	653	1450	44.2%	1042	695	1737	
11000	11475	664	1270	49.1%	1062	708	1770	
12000	12490	671	1240	53.9%	1103	735	1838	
13000	13449	686	1170	58.5%	1103	735	1838	
14000	14457	636	1060	62.6%	1103	735	1838	
15000	15476	585	984	66.4%	1103	735	1838	
16000	16478	574	862	69.7%	1103	735	1838	
17000	17477	513	763	72.7%	1103	735	1838	
18000	18477	496	719	75.4%	1103	735	1838	
19000	19494	415	605	77.8%	1103	735	1838	
20000	20985	931	1200	82.4%	1103	735	1838	
22000	22957	748	953	86.1%	1103	735	1838	
24000	24917	539	663	88.7%	1103	735	1838	
26000	26984	445	558	90.9%	1103	735	1838	
28000	28969	329	418	92.5%	1103	735	1838	
30000	32246	503	630	94.9%	1103	735	1838	
35000	37234	296	354	96.3%	1103	735	1838	
40000	42358	194	229	97.2%	1103	735	1838	
45000	47344	123	151	97.8%	1103	735	1838	
50000	65402	370	455	99.5%	1103	735	1838	
100000	195778	98	126	100.0%	1103	735	1838	

Table A4: Distribution of tax-credit by income group (Version C: £ for £ matching rate)

Lower bound of income band £ pa	Average income £ pa	Number of people claming tax credit 000s	Number of taxpayers 000s	Cumulative people in income band as % of all taxpayers	Average contribution pre-credit (adjusted for ceiling) £ pa	Avg value of tax credit per claimant £ pa	Total pension contribution £ pa
3525	3775	141	547	2.1%	531	531	1062
4000	4240	135	582	4.4%	555	555	1110
4500	4731	130	714	7.1%	703	703	1405
5000	5244	162	885	10.6%	705	705	1410
5500	5747	196	861	13.9%	705	705	1410
6000	6470	440	1610	20.1%	705	705	1410
7000	7514	455	1730	26.8%	705	705	1410
8000	8466	573	1600	33.0%	705	705	1410
9000	9489	572	1440	38.6%	705	705	1410
10000	10531	653	1450	44.2%	705	705	1410
11000	11475	664	1270	49.1%	705	705	1410
12000	12490	671	1240	53.9%	705	705	1410
13000	13449	686	1170	58.5%	705	705	1410
14000	14457	636	1060	62.6%	705	705	1410
15000	15476	585	984	66.4%	705	705	1410
16000	16478	574	862	69.7%	705	705	1410
17000	17477	513	763	72.7%	705	705	1410
18000	18477	496	719	75.4%	705	705	1410
19000	19494	415	605	77.8%	705	705	1410
20000	20985	931	1200	82.4%	705	705	1410
22000	22957	748	953	86.1%	705	705	1410
24000	24917	539	663	88.7%	705	705	1410
26000	26984	445	558	90.9%	705	705	1410
28000	28969	329	418	92.5%	705	705	1410
30000	32246	503	630	94.9%	705	705	1410
35000	37234	296	354	96.3%	705	705	1410
40000	42358	194	229	97.2%	705	705	1410
45000	47344	123	151	97.8%	705	705	1410
50000	65402	370	455	99.5%	705	705	1410
100000	195778	98	126	100.0%	705	705	1410

Appendix 2: The Cost of Pension Tax Reliefs

The Inland Revenue (1997, tables 7.10 and 1.6) estimate the gross cost of tax relief on private pensions schemes to be £17.6bn in 1996/7. This is made up as following:

Tax relief on contributions to occupational pensions [6]	= £7.0bn
Tax relief on contributions to personal pensions [6]	= £2.3bn
Tax relief on investment income of funds	= £7.9bn
Tax relief on lump sum payouts (unfunded schemes)	= £0.4bn
Total	**= £17.6bn**

As this figure is for 1996/7 it omits the £3.5bn saving on investment income relief resulting from the withdrawal of Advanced Corporation Tax (ACT) credits announced in the July Budget[7]. More importantly, this estimate does not allow for that part of the money lost through tax relief which will flow back to the Exchequer in the future through tax payments once pensions become payable. The Inland Revenue attempt to allow for this effect by subtracting tax paid on pensions in payment at the moment (£4.8bn last year), giving an estimate for the net cost of pension tax reliefs in 1996/7 of £12.8bn. However, the validity of the Inland Revenue's costing has been questioned. It is argued by, e. g., Knox (1990) that future tax receipts on private pension benefits will exceed the amount of tax currently collected on such benefits, reflecting the fact that tomorrow's pension

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6.   From employees and employers. While it would be possible to only change the system for giving tax relief on employee contributions there is a danger that further restrictions on the availability of tax relief on employee contributions (particularly for high earners) would result in employers switching to more tax-efficient remuneration systems through making their pension schemes non-contributory. It is therefore assumed in the following that contribution relief is blind to whether contributions come from employers or employees.

7.   Budget press releases. This is probably an upper bound estimate of the revenue gain from this change as it ignores any alteration in the investment behaviour of pension funds and the extent to which income is taken in the form of capital gains (which remain tax exempt) rather than dividends. As this was the expressed intention of the change it seems reasonable to expect the long run revenue gain from the removal of ACT credits to be rather lower than £3.5bn.

payments will be based on the higher levels of contribution being made today.

Such forward-looking estimates of the level of future tax payments on pension benefits have been attempted by Knox (1990), Dilnot and Johnson (1993), and Hills (unpublished). The latter attempts to calculate future tax payments by estimating the effect of three factors on the amount of contribution and investment income relief that is eventually returned to the Exchequer:

i)   the ability to take a proportion of one's pension fund as a tax-free lump sum reduces pension incomes, so reducing tax liabilities in retirement;

ii)   incomes in retirement are lower than incomes in work, and hence tax liabilities are lower; and

iii)   the existence of investment relief increases the level of pension benefits, and therefore the amount of tax collected from retirees.

The effect of i) is to reduce the amount of contributions that are taken in the form of taxable pension benefits by around 15%[8]. The effect of ii) can be estimated by assuming that the average rate of tax on pensions in payment remains constant over time at 17%[9]. Given that the average rate of tax on pension contributions is 28%[9], this implies that, ignoring the effect of tax-free lump sums, around 60% of the revenue lost through contribution relief will eventually be returned to the Exchequer in the form of tax paid on pension benefits. The effect of iii) can similarly be estimated by assuming that 17% of the gross cost of investment income relief will eventually be returned to the Exchequer. Using this methodology we estimate that the amount of tax collected on pension benefits resulting from today's pension contributions will be around £5.8bn[10], £1bn more than is

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8.   The tax-free lump sum is limited to 25% of the pension fund in a personal pension or 1.5 times final salary in a defined benefit occupational pension. Assuming someone retires on two-thirds of their final earnings then their maximum lump sum payment is equivalent to two years' worth of pension, between 10% and 15% of the total value of their pension. Given that the majority of people with private pensions are in defined benefit schemes the average proportion of a pension fund taken as a lump sum payment is assumed to be 15%.

9.   1996/7 figures. Taken from Inland Revenue (1997) p75.

10.   The cost of tax relief on pension contributions was £9.3bn in 96/7. The tax-free lump sum means 85% of this will be converted into taxable pension benefits, so £4.8bn

collected on pension benefits paid out today[11]. This suggests that, including savings due to the withdrawal of ACT credits, the true net cost of pension tax reliefs is around £9bn, rather lower than the Inland Revenue's estimate of £12.8bn and Knox's estimate of £12bn, but somewhat higher than Dilnot and Johnson's estimate of £4bn.

However, the above calculations ignore a more fundamental point - that while contributions continue to exceed benefit payouts the cost of investment income relief is likely to grow, reflecting the fact that the stock of assets qualifying for relief is increasing. Therefore our £9bn estimate of the current net cost of pension tax reliefs is unlikely to stay constant over time. Table A5 shows how the cost of the various pension-related tax reliefs has grown over the last decade.

Table A5: Cost of tax relief for occupational pensions 1986/7 – 1996/7

	Cost in 1986/7	**Cost in 1996/7**	**% growth**
Contribution relief	7.9	7.0	-12%
Investment income relief	6.5	7.9	21%
Tax on pensions in payment	(4)	(4.8)	21%
Total net cost (IR methodology)	10.5	10.1	-3%

Note: All figures in £bn at 96/7 prices. The cost of investment income relief in 86/7 has been adjusted upwards to reflect changes in the Inland Revenue's methodology. The

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(60% of £9.3bn*0.85) of contribution relief will eventually flow back to the Exchequer, as will around £1bn from tax on the higher pensions resulting from investment income relief.

11. A similar conclusion is also reached by looking at the extent to which private pension schemes have reached a steady-state position. The fact that contributions to private pensions are currently around £33bn while pension benefits paid out are around £28bn (both figures derived from Inland Revenue, 1997) suggests that, as a whole, private pension schemes are still maturing, and hence future private pension payments will be greater than today. This reflects two underlying factors. First, though membership of occupational schemes has been broadly flat for the last 30 years, the generosity of pension benefits is increasing, as is the stock of pensioners receiving occupational pension payments. Second, the growth of personal pensions over the last decade has extended the membership of private pension schemes, so a greater proportion of retirees will receive private pension payments in the future.

investment income relief figure for 96/7 includes the cost of relief in respect of funds held by personal pension schemes (which did not exist in 86/7).
Source: Inland Revenue (1997, table 7.10 and equivalents for earlier years).

Calculations of the net cost of pension tax reliefs which project forward over time (as Knox and Hills both attempt to do) should therefore consider the effect of contributions exceeding benefits on the cost of investment income relief, as well as on the amount of tax collected on future pension benefits. Though the timing of these two effects may differ, they are likely to cancel out in the long run as the amount of revenue loss from investment income relief and the revenue gain from taxing pensions in payment is roughly equal[12]. Hence a reasonable approximation of the net long run cost of pension tax reliefs is simply the £9.3bn cost of contribution relief.

The effect of proposed changes to pension contribution tax relief

The likely effect of proposed changes to the contribution relief system would be to reduce the total amount of saving which occurs through pension funds[13]. The extent of this effect will vary between the three

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12.   The similarity between the cost of investment income relief and the revenue gain from tax on pension benefits is coincidental: prior to the July 1997 Budget investment income relief exceeded tax collected on pension benefits by around £3bn.

13.   This does not imply that the level of *economy-wide* savings will also fall. The effect of our proposed changes to pension contribution tax relief on savings behaviour is difficult to determine, and is likely to vary between the three versions analysed. In all three versions of the scheme the income and substitution effects for low-earners tend in opposite directions, and as their relative importance is unknown it is not possible to determine whether, overall, the scheme will increase or decrease the propensity of low-earners to save. However, for high- earners, and older low-earners in personal pensions, we must also take into account the effect of the system of compulsory pension contributions linked to SERPS. In effect the system for contracting-out from SERPS obliges all employees in defined benefit occupational schemes to contribute 4.6% of their salary between the lower and upper earnings limits to their pension scheme, while for personal pension holders the system of age-related rebates means that between 3.8% and 9% of their earnings between the lower and upper limit is automatically contributed to their pension via the system of contracted-out rebates. This means that employees earning at or above the upper earnings limit (£465 per week, £24,180 per year) must contribute a minimum of £964 per year to their pension, while older workers in personal pensions must contribute even more. Given the tax-credit scheme's proposed limits on the amount of pension contribution qualifying for tax relief, as set out in table 1, some better-off employees would have no tax relief allowance left, and

schemes, with the most generous system (£ for £ matching grant) reducing the amount contributed to pension funds by £14bn while the least radical scheme (50p per £ contributed) reduces such saving by £5bn[14]. This in turn will cause the level of expected private pension payments, and hence the expected tax collected on such payments, to fall, increasing the long run net cost of pension tax reliefs. But the reduced amount of saving in the form of pensions will also reduce the cost of investment income relief, as the stock of assets attracting relief gradually declines. Due to the similar costs of these two elements of the pension tax relief system the long run effect of revenue-neutral changes to contribution reliefs is likely to be minimal. In other words, there is no reason to expect the long run cost of the reforms proposed in the text to differ significantly from their short run cost. Indeed, should the substitution effect dominate the income effect for low earners, it is possible that the long run cost of changing contribution reliefs will be lower than the short run cost, as higher levels of saving may reduce future expenditure on means-tested benefits.

However, Knox (1990), Dilnot and Johnson (1993) and Hills (1984a and b) all raise a more fundamental objection to the methodology used above (and by the Inland Revenue), pointing out that the cost of savings tax reliefs depends on the range of alternative tax-advantaged savings options open to people. The costings presented above implicitly assume that the alternative to saving in the form of a pension is to save through a bank or building society savings account, where contributions and interest payments do not attract tax relief. Knox suggests that more likely investment vehicles for re-directed pension savings are PEPs or TESSAs, and estimates that if all re-directed saving took this route then the long run net cost of pension tax reliefs would fall to around £2bn (Dilnot and Johnson suggest the figure would be even lower).

hence would not be able to make voluntary pension contributions. As such there would be no additional incentive for such workers to save as the substitution effect will not exist, while the income effect will still tend to reduce overall saving, at least for those who do not qualify for higher rate tax relief at the moment. Therefore the effect of the scheme, particularly Version C, may be to reduce the overall amount saved by people earning around the upper earnings limit. Ending the system whereby compulsory pension contributions attract tax relief would eradicate this problem; it would also put private pension schemes on a level playing field with SERPS, contributions to which do not attract tax relief.

14.   Based on the assumption that no contributions are made above the ceiling for tax relief. No estimate is made of the likely increase in saving resulting from the improved incentive for low earners to save in the form of a pension.

However, this ignores the fact that there are limits on the amount of money which can be contributed to such saving schemes. In particular, the government have announced that a £50,000 lifetime limit will apply to their proposed Individual Savings Accounts, which will replace PEPs and TESSAs from April 1999. Only those people below the lifetime limit would be able to transfer assets to this alternative tax-sheltered savings vehicle, hence the lower estimates produced by Knox and Dilnot and Johnson are likely to be less pertinent.

Appendix 3: Distributional effects of a matching grant scheme

A matching grant scheme would extend government support for private pensions beyond those who currently contribute to such schemes. Analysis of a matching grant scheme therefore involves investigating a counter-factual: what would be the take-up of private pensions if the eligibility constraints on state support were relaxed, and how much would people contribute if government support were more generous? Clearly there can be no robust answers to these questions, though it might be possible to investigate how savings behaviour varies across different households and use this to derive assumptions about how people will react to the new scheme. We have not attempted such an exercise. Instead we make the strongest possible assumption: that everyone who is eligible for a matching grant contributes to a private pension, and that everyone contributes up to the permitted ceiling.

Table A6 sets out the amount of matching grant, and therefore the maximum possible pension contribution (before grant), for the three variants discussed in relation to the tax-credit scheme. Eligibility for the matching grant is also varied, with one basis bringing the entire adult population into the scheme, another restricting eligibility to employees, carers and the unemployed, and another that limits availability to employees only. This last option mimics the effect of abolishing SERPS, in that all employees are now assumed to be contributing to a private pension. Because we use a strong take-up assumption the estimates of the maximum grant, and hence ceiling on contributions, which will keep the scheme revenue-neutral are likely to be rather conservative.

Table A6: Effect of three versions of a matching grant scheme for different eligibility groups

Eligibility for grant	No. of households eligible for grant (millions)	Max grant (£ pa)	Max pension contribution under Version A: 50p per £ (£ pa)	Max pension contribution under Version B: 66p per £ (£ pa)	Max pension contribution under Version C: £ for £ (£ pa)
Everyone	22.8	228	456	342	228
Employees, carers and unemployed	16.4	333	666	499	333
Employees only	13.8	420	840	630	420

Source: text and POLIMOD

As can be seen, the maximum amount of state support under a matching grant scheme is considerably lower than under a tax-credit scheme, and as eligibility to the grant is widened its value falls. This reflects our constraint of revenue-neutrality and our assumption of complete take-up: more people means each gets a smaller share of the cake. The variation in the maximum pension contribution between the three variants reflects the rate of match, so that, for instance, to get maximum benefit from the available grant under a 50p per £ system someone would have to contribute to twice the level of the grant.

The distributional effects of the scheme are illustrated in Figure A1. The figure shows the proportional gains in household income (or, because the money is paid into a pension fund, household wealth) from a revenue-neutral matching grant on the eligibility bases outlined above. As the level of matching grant remains the same in all three variants of the scheme the distributional consequences are also unchanged. However, the assumption of full take-up will become progressively less likely as the matching schemes become less generous: people will probably be more willing to forego £228 of current consumption for a £ for £ matching grant than they would be to forego £456 for a 50p per £ matching grant. In any event, the assumption of full take-up is unlikely to be correct for people in the bottom deciles under any variant of the scheme, and consequently the gain from the scheme for the poorest households is likely to be somewhat overstated.

Figure A1: Distributional effects of a matching grant scheme
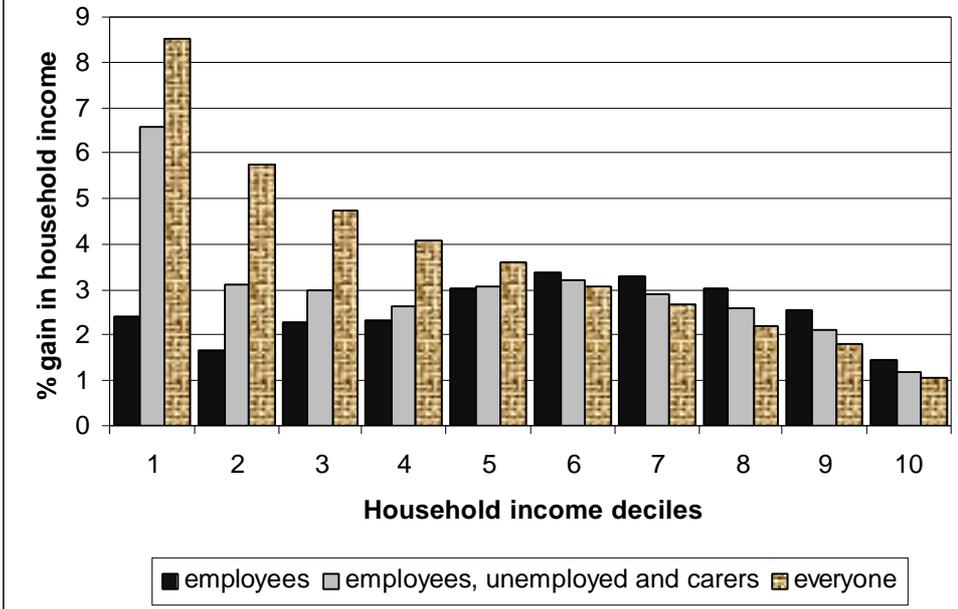
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