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[REDACTED]

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[REDACTED]

HM Treasury
BPF
Room 116/3

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Dear [REDACTED]

CT PACKAGE

As promised, revised paper for 10/40. This supersedes version of 19 June.

Yours sincerely

[REDACTED]

HEAD OF ECONOMICS UNIT

cc

[REDACTED]

DIRECT ECONOMIC EFFECTS OF THE CT PACKAGE (10%
credit, 40% HRT)

I INTRODUCTION

1. This note considers the direct economic effects of the CT package. The package is composed of the following elements:

i) abolition of payable tax credits on
dividends

- for pension scheme and companies
(except charitable companies) from
Budget day
- for others from 6 April 1999

30. There are a range of possible models of dividend behaviour and the impact of removal of credits can be sensitive to the model chosen, and particularly to the definition of target pay-out ratio. In what follows, we assume, as does the Treasury model, that:

- i) the target payout ratio relates net dividends to a measure of post-corporation tax income;

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- ii) the ratio is sensitive to a measure of the tax preference for distributions over retained earnings.

31. The current proposal has the following effects:

- i) for companies paying tax, the rate cuts increase funds available for distribution;
- ii) there is a reduced discrimination against distributions because the pension funds and later some other shareholders no longer receive payable credits;
- iii) there may be pressure from financial institutions to increase dividends in the early period after the proposal;
- iv) there may be wider consequences of the financial effects of the measure which have implications for dividends - these are discussed in Section VI below.

32. Our understanding is that work on the dividend equation on the Treasury model has included

- i) a pay-out ratio relationship
- ii) a tax discrimination variable.

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33. But the equation has been under-forecasting. For the purposes of this note, we have made a crude assumption of a target payout ratio of one-half: this is above the current level. On that basis, one-half of the CT accruals, will, after lags, be distributed.

34. The tax discrimination variable, however, appears to be constructed for the basic rate shareholder only and it is not therefore ideal for the current change. In the current situation, rather less than half of shareholders will lose their imputation credits. In the absence of CGT a weighted tax discrimination variable would fall by some 10%. We assume an eventual fall in net dividends of some 5%, broadly in line with the estimated response.

35. Finally it has been suggested that financial institutions will press for higher dividends in response to the changes and there has been a good deal of comment to this effect in the Press. Given the outcome we expect on share prices (a fall of around 7% - see Section IV), there seems no reason for shareholders other than those losing credits to seek higher dividends returns: new investments will already yield more.

36. It is also necessary to consider carefully just why pension schemes - the relevant sector - might

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press for higher dividends. Prima facie, they have lost their tax preference for dividends. Higher dividend income does not help to relieve either the deficit position as seen by actuaries (see para 77) or the minimum funding requirement solvency test (see para 92). The main rationale would seem to be a straightforward liquidity effect: those pension funds which rely on dividend income, contributions and interest received to pay pensions could find a shortfall in receipts to meet their obligations. To limit the need to liquidate assets they might put pressure on companies to pay higher dividends. However, not all pension funds are in this steady state position where income and expenditure is evenly balanced: the liquidity effect would not bite as much for funds which are saving. It also follows that such liquidity effects are likely to be temporary: once a fund has had an actuarial valuation and secured an increase in contribution and/or disposed of some assets the effect should disappear.

37. Given the tenor of current comment, we allow for some effect from this source, helped by the lower CT rate for 1996/97. This reaches a maximum of £1.5b in 1998/99 and tailing away quite quickly to zero in 2000/1.

FIDs

38. The abolition of payable credits to pension funds will remove one of the main inhibitions to the

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payment of FIDs by companies with surplus ACT on overseas income. The abolition of FIDs in 1999/2000 will result in more surplus ACT as companies are prevented from paying FIDs, and there will be some anticipatory payments of dividends in advance of April 1999, as well as some reduction after that in net dividends by companies paying FIDs.

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maximum available for distribution. For a foreign source dividend of 80 (gross of 15% WT), a unit trust would have a CT liability of 4 $[(0.20-0.15)\times 80]$ and a net dividend of 64; but with an ordinary dividend this CT liability would be accompanied by surplus ACT of 9.6 so that the net dividend falls to 54.4. This is a drop of 15%. We suggest a fall of some 11% after April 1999 (when FIDs become conventional net dividends).

42. The ending of payable credits for pension funds will remove one of main brakes on foreign income dividends (although share structures and extra administrative costs will remain) since the shareholders not benefiting will be fewer in number and less vocal. So growth of FIDs should accelerate in 1997/8 and 1998/9; and in addition some forestalling back into 1998/99 is to be expected.

43. The path of FIDs in the no policy change world was expected to be as in col 1 of Table 3: this shows a rise of some £½b per annum. We assume that there is a rise of £½b per annum in the absence of payable credits, replacing a lower level of conventional dividends, and that £1/3b is brought forward from 1999/2000 to 1998/9 (this will include some companies who had not hitherto paid FIDs). After then, replacement net dividends fall by £1/3b in 1999/2000 on account of forestalling and by a further 11% in 1999/2000 and later years.

Routing of dividends

46. There are a number of possibilities for routing dividends so as to claim credit in the period where payable credits continue for some investors. So far identified are use by pension funds of

- i) offshore funds - to take advantage of credits to overseas investors;
- ii) use by exempt taxpayers of UK funds which can still claim credits.

47. It has been assumed in costing that pension funds will secure i), but generally only be able to take advantage of ii) to a very limited extent. In particular the use of unauthorised unit trusts for this purpose will be stopped.

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Summary of effects

48. The effects on dividends are summarised in Table 4 below.

TABLE 4: EFFECTS ON NET DIVIDENDS (£B)

	1997/98	1998/99	1999/2000	2000/01
Lower CT rate	+0.3	+0.7	+1.0	+1.0
Reduced incentive to distribute	-1.0	-2.0	-2.4	-2.5
Temporary pressure	+1.0	+1.5	+0.7	0
FIDs	+0.05	+0.45	-0.4	-0.2
Overseas investors, (non FID)	<u>0</u>	<u>+0.2</u>	<u>-0.2</u>	<u>0</u>
Net effect	<u>+0.35</u>	<u>+0.85</u>	<u>-1.3</u>	<u>-1.7</u>

50. The direct stock market effect of the CT package is taken to be equal to the expected change in present value of future post-tax dividend payments, after taking a weighted average of the differential effects across the various types of shareholder. The package is a complex one with pension providers losing credits right away and other changes deferred to 1999/2000. As a first approximation to how these changes might be perceived and hence reflected in equity prices we look at the long run effects on post-tax dividend income assuming that:

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- foreigners, non-taxpayers and others lose out in full as do pension providers (i.e. we ignore the slight deferral to 1999/2000 for foreigners and others, and we assume non-taxpayers receive no definite commitment to help in ISAs).

51. The estimated breakdown of payable tax credits after the Budget in 1997/98 and 1999/2000:

	Rest of 1997/98 £m	1999-2000 £m
Pension funds	1700	2800
Pension schemes (life assurance)	750	1250
Charities	250	400
PEP - holders	200	350
Individuals	50	100
Non-residents	400	650

52. We give a 43% weight to tax credit losers and a 57% weight to other shareholders. Both groups benefit from the 2% CT rate cuts. The long run changes in post-tax dividend income are:

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- pension providers currently receive net income of £83.75 from £100 of distributed company profits. With a 31% CT rate and no tax credit this becomes £69, a fall of 17.6%;

Portfolio reallocations

56. The changes in incentives are likely to lead to

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substantial changes in portfolios. Pension funds will find equity relatively less attractive, and will prefer other assets - particularly interest-bearing securities and foreign equity - and may also be prompted to consider more direct property investment.

**V. IMPACT ON PENSION PROVIDERS, PENSION FUND
CONTRIBUTIONS AND OTHER SAVINGS**

Introduction

63. There are two main types of pension scheme:

- defined benefit schemes in which the investment risk falls on the employer;
- defined contribution schemes in which the investment risk falls on the employee in the shape of either lower benefits or higher contributions.

Some public sector pensions are not funded. There are two main types of provider of funded pensions: the pension funds and the life assurance companies. The latest available estimate is that the pension share of life assurance is some 55%.

64. The main impacts of the CT package on funded pension providers are:

- loss of payable tax credits of some £3.5bn in a full year;
- a gain from increased cash dividends as a result of the rate cuts;
- the change in market value of their equity assets as a result of the change in share prices;
- there could also be some further, largely second order, dividend changes as a result of changes in the payout ratio.

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65. We expect wide-ranging impacts on employer contributions; personal pension holders; and also on public expenditure via effects on local authority schemes and if there is a need to maintain the incentive to opt out of SERPS. The main focus here has been on estimating the impact on employer contributions. This offsets some of the yield of the package due to increased deductions against CT. However, to the extent that employers treat it as an increase in wage costs and pass it on in the form of higher prices or back as reduction in wages, there would be a further offsetting increase in CT receipts when indirect effects are taken into account.

66. We have sought advice from the GAD on estimating the impact on employer contributions. This is far from a straightforward reflection of the annual tax changes affecting the pension sector. The factors which need to be taken on board are:

- actuarial practice in setting the required level of pension contributions;
- the scope for part of the impact to be absorbed by pension surpluses coupled with changes in actuarial practice which make this more likely;
- employer resistance to increased pension costs and the extent of shifting from defined benefits to defined contributions;
- the potential impact of the new Minimum Funding Requirements (MFRs) under the 1995 Pensions Act

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which are being phased in from April this year;

- the fact that a proportion of the cost would fall on employees/personal pension holders rather than on employers.

Actuarial practice

67. The vast majority of defined benefit pension schemes operate on the basis of a normal actuarial valuation once every three years. There are two main components of the calculation of the level of employer contributions:

- the surplus/deficit of the actuarial valuation of existing assets (equity, bonds, property etc) compared to the existing pension liabilities accrued to date - the so-called liabilities of past service;
- the investment required to meet the pension liabilities of future service (i.e. what needs to be invested in the fund in order to generate sufficient returns to meet the pensions which employees will be earning in the future).

68. This split is a sensible procedure. There are however some peculiarities in the other features of the conventional approach to actuarial valuations:

- actuaries use the dividend growth model to value equities, implicitly assuming a conservative real rate of return on equity. This tends to mean that the actuarial value, is somewhat less than the market value, particularly when the market yield is low. The adjustment here is done on a simple pro rata basis of assumed actuarial dividend yield to the FT index yield;

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- because in recent years equities have typically performed better than the conservative actuarial assumptions, the majority of pension funds (apart from the rather underfunded local authority schemes) have significant surpluses on past service;
- at each actuarial valuation these surpluses are measured. Sometimes it is used to enhance benefits to members but more often it is amortised away in the shape of a reduction in pension contributions over the next 10-15 years (usually the annuity is split, running to year 9 then at half that rate to year 15);
- if the reduction in contributions exceeds those required for future service then the employer may take a contribution holiday.

69. Actuaries might be criticised for over-conservative assumptions on rates of return. However there is something to be said for them given that equities are capable of poor returns over particular periods and share prices are somewhat volatile. Moreover the procedure of recycling any surpluses somewhat offsets the effect of the conservative bias towards excessive contributions.

70. On advice from GAD, our method for assessing the likely impact on pension contributions follows the normal actuarial approach. This implies two main effects:

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- the reduction in post-tax dividend income of pension providers impacts on the actuarial value of existing assets; and
- the change in the expected future post-tax rate of return on pension providers' equity investment affects the amount of future investment required i.e an impact on contributions for future service;
- we then take proportions of this effect falling on the company and personal sectors, after allowing for factors such as surpluses and reductions in pension benefits (including possible acceleration of the trend to defined contribution schemes) which are likely to modify the outcome.

(a) Quantifying the impact on employer contributions

71. These are set out in the Annex. The main figures to look at are under section B - the "Assessment based on GAD advice". These originate from GAD calculations based on assumptions agreed with the IR Economics Unit: they have since been reworked several times to allow for developments in the CT package.

72. In the Annex, the loss of post-tax dividend income to pension providers is 17.6%. It is not obvious how actuaries would assess this in practice, assumptions are likely to vary between schemes and a debate in the profession is likely to ensue. For a central estimate, however, this would translate into

a corresponding 17.6% cut in actuarial value of equity assets because the actuarial value is proportional to the assumed dividend yield.

73. Based on ONS figures for the December 1995 market value of pension fund equity holdings, plus 55% for the pension share of the life assurance companies, and updating using the Treasury forecast for equity prices, we estimated the mid-1997 market value of pension providers equity assets at £425bn. On that basis GAD suggested that the total actuarial value might be some £380bn. **Taking the 17.6% cut indicates that pension providers lose around £67bn on the actuarial value of their existing assets.**

74. Actuarial practice is to amortise any surplus/deficit on existing service over 9-15 years using a split annuity: the full cost applies to year 9 and continues at half the rate to year 15. GAD's assessment is that the full cost over the first 9 years would be £5.4bn a year. We assume half of the cost would be reflected in the form of higher pension contributions from company sector employers (see below for rationale).

75. For future service, the cost depends on the assumed change in the actuarial rate of return on future investment in UK equity. Again that will be a source of judgement and controversy. For a central estimate we take account of the fall in share prices as well as the change in post-tax dividend income. On

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central estimates, that implies that the actuarial rate of return on equity would fall by 0.5 percentage points (assuming an initial 10% nominal as typical).

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TABLE 5 ASSUMPTIONS FOR CONTRIBUTIONS CALCULATIONS

		Current package	Assuming no change in share prices
Share price fall		7.2%	0
Post-tax dividend cut		17.6%	17.6%
	£	£	£
share price	100	92.800	100
dividend	4.5	3.708	3.708
capital gain	5.5	5.104	5.5
cash total	10	8.812	9.208
% return on equity	10.0	9.496	9.208
difference		-0.50%	-0.79%

76. A key point is that the larger the fall in share prices, the smaller the reduction in the future rate of return on equity. If share prices were disproportionately determined by pension providers, then they might fall by nearer the full cut in their post-tax dividends i.e. by the 18%). At the extreme, the future rate of return on equity would be unchanged and no increase in future service contributions might be required.

77. There have been indications that

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institutions might be inclined to put companies under pressure to raise the proportion of pre-tax profits which are distributed. That would give an increase in cash dividends over and above that due to the rate cuts alone, which is already reflected in our central estimate of impact on pension contributions. It should be noted that any such increase in payout ratio in fact does nothing to solve the pension providers problem in terms of deficits: the total return on equity is not be increased by altering the allocation between income and growth. If anything, the total return could fall as growth might be impaired.

Scope for less than full impact due to surpluses etc

78. In looking particularly at the impact on company employer contributions, there are two main points to take into account. First company employers do not bear the investment risk for all pension schemes: the sectoral distribution of effects has to be taken into account. Second there are grounds for suggesting that actuaries will find it difficult on methodological grounds to justify the full impact of the CT package to employers: here significant surpluses are likely to provide the excuse for bowing to employer pressure. GAD's initial intuitive assessment was that these factors might reduce the effect on existing assets by a half and that on future service by a third. We have since looked more carefully at the sectoral distribution and GAD have

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provided some data on surpluses which we have analysed. The results suggest the GAD assessment is just about right.

79. On the sectoral breakdown, ONS have some 1995 data on the sectoral split of the equities held by self-administered pension funds. It is not thought particularly reliable. The results were companies (79%), local authorities (12%) and public corporations (9%). But in addition to the self-administered pension funds, there is a significant volume of defined benefit schemes administered via insurance companies (insured employer schemes) in addition to their personal pension and other money purchase business. In total, our estimate based on reliable ONS data is that 70% of national pension providers equity assets are held by the self-administered schemes and 30% by insurance companies. We assume the 30% splits 50:50 between insured defined benefit employer schemes and money purchase schemes. We also assume that the bulk of the former in terms of assets are run by companies: public corporation and local authority schemes are assumed to be largely self-administered. The outcome of all these assumptions is the distribution in the first column below.

TABLE 6: CRUDE ESTIMATES OF SECTORAL SPLIT OF EQUITY ASSETS OF PENSION PROVIDERS AND IMPACT ON CONTRIBUTIONS

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Pension scheme effectively owned by:	Proportion of equity %	Impact on employer contributions %	Impact on personal sector %
Companies	70	66	4 (b)
Public corporation	5	5	
Local authorities	8	8	
Self employed	2	(a)	2
Individuals	15	1	14
Total	100	80	20

(a) Allocated to the personal sector.

(b) Employees' share of costs to companies, public corporations and local authorities.

80. We then assume that the balance of cost basis on which defined benefit schemes are set up means that 95% of the investment risk falls on employers and only 5% on employees. Employers contribute about 10% to personal pensions. On that basis we have assumed that 90% of the investment risk on personal pensions, unapproved schemes and free standing AVCs falls on individuals. As shown in the Table 5, that suggests an overall impact of 80% of the cost on employers (excluding self-employed) and a 20% impact on the personal sector. These proportions allocate the total costs of the CP package to pension providers between sectors. The impact on pension contributions, however, would be less after taking account of surpluses. For the personal sector, we assume most of the cost takes the form of reduced

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pensions benefits: one-third, however, might take the form of increased saving (to replace the pension wealth lost) in the form of additional pension contributions.

81. Most pension funds have their own actuary and practice varies to a significant extent already on the degree of optimism/pessimism in financial assumptions. GAD have advised that there is no clear cut answer to how the profession would respond to the CT package. Some actuaries would simply seek to apply a mechanistic approach. That would mean adjusting the actuarial return by the cut in tax credits and ignoring other factors such as the rate cuts and the observed effect on share prices. That implies a 20% cut in the actuarial value of existing assets and a 2% reduction in the future rate of return on equity (that is 20% of a 10% nominal rate of return). Asset valuation would fall by £75bn and the cost of making it good, with no allowance for any mitigating factors, is over £12bn a year. Figures with this order of magnitude or even higher (by compressing the recovery of the £75bn into a shorter time period) can be expected to be quoted by the pension industry.

82. But GAD believe that most actuaries would have a hard time attempting to justify costs on this scale to employers. In particular if there was no visible decrease in share prices anywhere near as large as 20%, it would be difficult to justify a 20% decrease in actuarial value of equity assets. And the

inconsistency in treatment between existing assets and the rate of return on future investment is also likely to be exposed and debated within the profession, leading to departures from the mechanistic approach above. The inconsistency is that the rate of return on equity can only fall 2% if the share price is unchanged, but the value of existing assets is assumed to fall 20%. Moreover, if actuaries did apply the 2% cut in real rate of return they would end up assuming that equities yield less than gilts, another obvious inconsistency. These considerations prompted GAD to suggest that as a worst case, actuaries might allow a 20% fall in asset value and a 1% fall in future return. This scenario is illustrated in the Annex under "pessimistic actuarial assessment".

83. GAD say a debate on these issues within the actuarial profession is certain to take place, but the outcome is unpredictable. It is perhaps reasonable to expect that actuaries would take some notice of the rate cuts, as we have done, in determining the impact on the post-tax dividend yield. That would bring the profession closer to our central estimate for the full impact on existing assets i.e. 18%. It is a bit more difficult to envisage that the profession will arrive at our estimates of the effect on future return, ie -0.5%. That requires both taking some account of the actual change in share prices (which GAD think fairly likely) and it requires taking separate account of

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capital gains (less likely). The problem here is that they look at everything in dividend growth model terms and so might be quite inclined not to do this. The effect, of course, is to assume that the capital gain element of the return is reduced by just as much as the dividend overstating the loss of return. The problem stems from the fact that the dividend growth model does not allow for the change in capital gains to differ from the change in dividends. This technical issue is likely to be exposed.

84. On balance, the GAD actuary felt that the profession would end up with more realistic estimates of the impact on the future return on equity, suggesting a central estimate of 0.5% if share prices fell 6% and dividend income by 16.4%. This is consistent with our estimates for the latest package. This end result would not necessarily come about in exactly that fashion i.e. we are using it to model behaviour of the profession.

85. GAD have advised that the majority of defined benefit schemes have significant surpluses apart from those in the public sector. Their broad judgement on allowing half of the impact on existing assets to be reflected in employer contributions reflects not only the presence of surpluses but also the fact that some costs do not fall on employers. It has been argued that surpluses are in fact irrelevant because what matters is the extent to which pension contributions

are higher than they otherwise would be i.e surpluses either already have, or will be, reflected in lower contributions and/or higher benefits and/or longer contribution holidays than otherwise and the impact of the CT package is therefore the full effect against that baseline. The baseline is not disputed. What we are arguing is that employers will resist the additional cost and actuaries will face difficulty in justifying it to the point where future financial assumptions become less conservative than they were in the past. This will be easier to do in those schemes where actuaries have been the most conservative in the past and where the largest surpluses have been generated. The result is not to change the baseline but to alter the destination of future employer contributions.

86. Since GAD formed their initial view, they have since been able to provide some rough data on surpluses for about forty large and medium schemes: there are no more reliable figures. We used it to simulate the impact of the early CT package above allowing for the uneven distribution across schemes and found that for this sample, the increase in pension surpluses since the last valuation was in theory sufficient to absorb under two-thirds of the estimated cut in actuarial valuation of pension assets. This of course is not a representative sample. Moreover it is not the exact quantum of surpluses that counts. We therefore make the broad assumption that perhaps half of this surplus might be

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absorbed as a cost reduction. That implies that about 70% of the cost to employers would take the form of additional pension contributions: since companies are estimated to bear 66% of the loss the impact on company sector employer contributions works out at half of the total effect on pension providers. Coincidentally that turns out to be in line with the original GAD judgement.

87. For future service contributions we assume that two-thirds of the cost is reflected in company sector employer contributions. That predominantly reflects the 70% company share of pension providers equities. Again, this is in line with GAD's initial intuitive view.

Minimum funding requirements (MFR)

88. This is basically a test of whether the pension fund would be solvent if it were wound up. Pension fund assets at current market value are compared to the present value of future liabilities. It therefore only takes account of accrued pension rights and not those from future service.

89. For each fund, the MFR calculation will fall due on the occasion of its next actuarial valuation from April 1997. So far none has been made. Some funds forestalled the need to comply by bringing forward the valuation from the usual date.

90. The MFR rules will eventually mean that an underprovision of up to 10% of **market value** of assets to liabilities would need to be remedied by increased contributions over 5 years. A serious underprovision of more than 10% would need to be reduced to no more than 10% within a year after which the 5 years would apply. However these rules are being phased in: there will be 6 years from April 1997 to make good a serious underprovision and 10 years for an underprovision of up to 10%. This provides considerable comfort against triggering overnight increases in funding requirements. But any funds scoring an underprovision might argue that it had to be remedied sooner than the transitional rules allow.

91. GAD advice is that the vast majority of schemes are nowhere near the MFR levels. Recent press reports are therefore greatly exaggerated. The rules were set up on that basis and there has been a 10% increase in equity prices since then. Thus if abolishing tax credits caused equity prices to fall by only 10%, GAD would expect substantially less than 10% of schemes by value to be caught: probably only 1% to 5% of pension fund investment would be affected. There would of course be some well-publicised cases.

92. Increases in the dividend payout ratio do not help to meet any problems in terms of the MFR solvency test which is based on the market value of

assets. Increased dividends means that more assets can be purchased with the proceeds thus helping solvency, but at the same time increased dividends reduce the value of the shares already held. It is also true that increasing the payout ratio does nothing to make good the actual cost of the CT package to pension providers: the total return on equity cannot be increased by altering the allocation between income and growth - if anything the total return could fall as growth might be impaired.

93. The conclusions on MFR, however, are subject to future movements in equity prices. If prices fell generally as a result of the market correction anticipated by some commentators (equities are currently above their long term trend level and have been for some time), then more MFRs could be triggered as a result. The change in market circumstances would also mean more impact from a further fall in share prices as a result of cutting tax credits.

94. In the costings we have followed GAD advice in assuming the vast majority of schemes would not decide to make quick capital injections on MFR grounds. Nonetheless, when pressed GAD admitted that it could be reasonable to assume that 5% of schemes did recover the loss of actuarial value on existing assets over 3 years instead of the normal 9-15 years. The other 95% are assumed to be on the normal basis.

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In effect this meant we assumed an NPV cost of £3bn out of the total loss of actuarial value of some £67bn is dealt with by capital injections.

95. A further feature of MFRs is worth noting. That is regardless of the actual mix of funding, pensions in payment are assumed to be gilt-funded, and the assets to meet that liability are implicitly allocated an index-linked gilt rate of return. This feature of the MFR requirements has been criticised for giving funds an incentive to invest in bonds rather than equities. The future deferred pension payments of past and present employees are assumed to be equity-funded. This has implications for the impact of the CT package on MFR requirements: for MFR purposes the change in the return on equity only impacts on a volume of equity which is sufficient to fund the (future) active member liabilities and not on the actual amount of equity held. The impact will generally smaller for the more mature funds which ought to hold a greater proportion of bonds anyway.

96. Some changes to the MFR approach may be required as a result of the CT package. The assumed return on equity for MFR purposes is so low that conceivably a further reduction to take account of the CT package could drive it below the gilt return. That is likely to force a revision of financial assumptions.

Special dividends

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97. A final issue is the extent to which past special dividends, which prior to the 1996 Budget were effectively streamed to pension providers, have increased the net worth of pension funds. An understandable attitude to these is that they should not form part of the loss to pension funds due to the CT package because they represented a windfall which the funds were not meant to receive in the first place. However, in practice pension funds have had the money and no doubt invested some of it in equities which will subsequently be hit by the package. The result certainly forms part of the impact of the CT package (against the baseline of what otherwise would have happened) and in principle is included within our estimate of the impact on employer contributions. Since special dividends are small in relation to total equities held, this does not in practice make much difference.

Summing the various effects on company employer contributions and allowing for timing

98. The timing of effects on future employer contributions is driven by the three-year cycle of actuarial valuations by time lags between the date of valuation and when contributions would actually begin and be charged in company accounts. We looked at the distribution of accounting periods and allowed for the timing in allocating the cost to financial year. The usual tax lag would then need to be applied to

our estimates in estimating the impact on tax receipts.

99. The estimates are shown in the second part of Annex A. The first column gives the MFR cost. The three columns under existing service and future service represent the staging due to one-third of the schemes having a valuation each year. The total cost has been summarised at the end of the first part of the Annex A.

100. The MFR component accounts for all of the slight cost in 1997/8 and about half of the cost in 1998/9. It falls to zero by 2000/2001. From 1998/9 to 2006/7 the remaining cost splits in the ratio of 3:1 between existing service and future service (ie from 2000/1 it is 75% existing service, 25% future service). This ratio falls to 50:50 by 2013/4 and by 2015/6 all of the cost stems from future service.

101. Annex B gives the impact on employer contributions by companies if there were no change in share prices. While the effect on requirements for future service increases, we assume no action stems from MFR, which are related to market valuation. The net outcome is lower contributions in the first few years.

Further effects on other sectors

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102. Besides company employer contributions, there are further effects on public corporation and local authority employer contributions. And there is some impact on employees and other personal sector contributions including those by self-employed employers. Finally an increase in DSS expenditure on rebates for contracting out is likely to be required to prevent contracting back into SERPs. These effects are summarised in the table below for the next five years.

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TABLE 7: CONTRIBUTIONS OUTSIDE THE COMPANY SECTOR -
WITH SHARE PRICE FALL

	<u>Employer contributions</u>		<u>Personal</u>	<u>DSS rebates</u>
	<u>Public corps</u>	<u>Local authority</u>	<u>sector (mainly employees)</u>	
	£m	£m	£m	£m
1997/8	0	0	50	0
1998/9	175	0	240	400
1999/2000	270	300	490	400
2000/1	340	300	680	400
2001/2	280	300	825	400
2002/3	280	300	825	400

103. The main points on these are:

- the impact on public corporations is proportionately smaller than that on companies generally;
- the effect on local authorities is relatively modest due to special arrangements of funding those schemes;
- the additional DSS costs is a GAD estimate of the expenditure required to prevent a switch to contracting back into SERPS. Without some increase, there is a risk of a large number of employees being advised to rejoin SERPs.

104. We have estimated the effect on personal

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sector (largely employees) contributions by building on the earlier assumption that the personal sector would bear 20% of the overall cost. On existing equity assets that amounts to a loss of £13.5 billion. Assuming that two-thirds of this loss would be reflected in lower pension benefits, the cost of recouping the remaining third would be under £750m a year. On top of this, the rate of return on future personal pension investment would be reduced by around 0.5% points. Again assuming only one-third of this leads to higher contributions, the extra cost would be over £100m a year, making a total personal sector cost of around £850m. This is assumed to build up slowly as the industry campaigns for customers to increase their payments.

105. With no change in share prices the estimates would be:

**TABLE 7a: CONTRIBUTIONS OUTSIDE THE COMPANY SECTOR
ASSUMING NO CHANGE IN SHARE PRICES**

	<u>Employer contributions</u>		<u>Personal sector</u>	<u>DSS rebates</u>
	<u>Public corps</u>	<u>Local authority</u>	<u>(mainly employees)</u>	
	£m	£m	£m	£m
1997/8	0	0	50	0
1998/9	100	0	240	400

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1999/2000	200	300	450	400
2000/1	350	300	650	400
2001/2	350	300	900	400
2002/3	350	300	900	400

ANNEX A

PENSIONS AND TAX CREDITS: SCHEDULE OF EFFECTS ON EMPLOYER CONTRIBUTIONS BY COMPANIES

Assumptions

Market value of shares held in mid-1997 estimated at over £425bn
Actuarial value of shares assumed to be £380 billion.

Central assumption that share prices fall 7.2%

(a) PESSIMISTIC ACTUARIAL ASSESSMENT

(i) Past Service

Change in actuarial value of existing assets	= -20%
Full effect on actuarial value of existing assets (0.2 x £380bn)	= -75 billion
Annual cost to employers for 9 years (continuing at half level for a further 6 years)	= +£7 billion

(ii) Future Service

Change in actuarial yield on UK equities	= -1%
Extra contributions required (per year)	= +£2.5 billion

(iii) Above figures do not allow for MFRs causing some of the £7bn to be accelerated. Industry likely to quote figures well over £10bn in early years, ignoring scope for surpluses to reduce impact on contributions.

(b) ASSESSMENT BASED ON GAD ADVICE

(i) Past Service

Change in actuarial value of

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existing assets = -17.6%
Full effect on actuarial value of
existing assets = -£67 billion
Assume half of cost absorbed by surpluses and other factors:
Annual cost for 9 years from next
valuation date = +£2.9 billion
(phased in over 3 years)
Allow for 5% of funds making MFR
contributions +£1.2 billion for 3 years

(ii) Future Service

Change in actuarial yield on
UK equities = -0.5%
*Assume one-third of effect absorbed by surpluses and other
factors:*
Extra contributions required
(per year) = +£1.0 billion

(iii) Total extra cost allowing for timing of effects:

1997/8	£0.3bn
1998/9	£2.5bn
1999/0	£3.8bn
2000/1	£4.9bn
2001/2 to 2006/7	£4.0bn a year
2007/8	£3.5bn
2008/9	£3.0bn
2009/10 to 2012/13	£2.5bn a year

Falls to permanent £1.0bn a year by 2015/16

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COMPOSITION AND TIMING OF ASSUMED EFFECTS ON EMPLOYER CONTRIBUTIONS BY COMPANIES

		MFR	EXISTING SERVICE			FUTURE SERVICE			TOTAL
		fbn	fbn	fbn	fbn	fbn	fbn	fbn	
1997	1998	0.3						0.3	
/									
1998	1999	1.2	0.95			0.33		2.5	
/									
1999	2000	1.2	0.95	1		0.33	0.33	3.8	
/									
2000	2001	0.9	0.95	1	1.07	0.33	0.33	0.33	4.9
/									
2001	2002	0	0.95	1	1.07	0.33	0.33	0.33	4.0
/									
2002	2003		0.95	1	1.07	0.33	0.33	0.33	4.0
/									
2003	2004		0.95	1	1.07	0.33	0.33	0.33	4.0
/									
2004	2005		0.95	1	1.07	0.33	0.33	0.33	4.0
/									
2005	2006		0.95	1	1.07	0.33	0.33	0.33	4.0
/									
2006	2007		0.95	1	1.07	0.33	0.33	0.33	4.0
/									
2007	2008		0.48	1	1.07	0.33	0.33	0.33	3.5
/									
2008	2009		0.48	0.5	1.07	0.33	0.33	0.33	3.0
/									

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2009 / 2010	0.48	0.5	0.54	0.33	0.33	0.33	2.5
2010 / 2011	0.48	0.5	0.54	0.33	0.33	0.33	2.5
2011 / 2012	0.48	0.5	0.54	0.33	0.33	0.33	2.5
2012 / 2013	0.48	0.5	0.54	0.33	0.33	0.33	2.5
2013 / 2014		0.5	0.54	0.33	0.33	0.33	2.0
2014 / 2015			0.54	0.33	0.33	0.33	1.5
2015 / 2016 onwards				0.33	0.33	0.33	1.0

ANNEX B

PENSIONS AND TAX CREDITS: SCHEDULE OF EFFECTS ON EMPLOYER CONTRIBUTIONS BY COMPANIES ASSUMING NO CHANGE IN SHARE PRICES

Assumptions

Market value of shares held in mid-1997 estimated at over £425bn
 Actuarial value of shares assumed to be £380 billion.
 No change in share prices.

(a) PESSIMISTIC ACTUARIAL ASSESSMENT

(i) Past Service

Change in actuarial value of existing assets	= -20%
Full effect on actuarial value of existing assets (0.2 x £380bn)	= -75 billion
Annual cost to employers for 9 years (continuing at half level for a further 6 years)	= +£7 billion

(ii) Future Service

Change in actuarial yield on UK equities	= -1%
Extra contributions required (per year)	= +£2.5 billion

(iii) Above figures do not allow for MFRs causing some of the £7bn to be accelerated. Industry likely to quote figures well over £10bn in early years, ignoring scope for surpluses to reduce impact on contributions.

(b) ASSESSMENT BASED ON GAD ADVICE

(i) Past Service

Change in actuarial value of existing assets	= -17.6%
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Full effect on actuarial value of
existing assets = -£67 billion
Assume half of cost absorbed by surpluses and other factors:
Annual cost for 9 years from next
valuation date = **+£3.1 billion**
(phased in over 3 years)

(ii) Future Service

Change in actuarial yield on
UK equities = -0.8%
*Assume one-third of effect absorbed by surpluses and other
factors:*
Extra contributions required
(per year) = **+£1.6 billion**

(iii) Total extra cost allowing for timing of effects:

1997/8	£0bn
1998/9	£1.5bn
1999/0	£3.1bn
2000/1	£4.8bn
2001/2 to 2006/7	£4.8bn a year
2007/8	£4.3bn
2008/9	£3.7bn
2009/10 to 2012/13	£3.2bn a year

Falls to permanent £1.6bn a year by 2015/16

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COMPOSITION AND TIMING OF ASSUMED EFFECTS ON EMPLOYER CONTRIBUTIONS BY COMPANIES

		MFR	EXISTING SERVICE				FUTURE SERVICE			TOTAL
		£bn	£bn	£bn	£bn	£bn	£bn	£bn	£bn	
1997	1998	0							0	
/										
1998	1999	0	1			0.53			1.5	
/										
1999	2000	0	1	1.05		0.53	0.53		3.1	
/										
2000	2001	0	1	1.05	1.13	0.53	0.53	0.33	4.8	
/										
2001	2002	0	1	1.05	1.13	0.53	0.53	0.33	4.8	
/										
2002	2003		1	1.05	1.13	0.53	0.53	0.33	4.8	
/										
2003	2004		1	1.05	1.13	0.53	0.53	0.33	4.8	
/										
2004	2005		1	1.05	1.13	0.53	0.53	0.33	4.8	
/										
2005	2006		1	1.05	1.13	0.53	0.53	0.33	4.8	
/										
2006	2007		1	1.05	1.13	0.53	0.53	0.33	4.8	
/										
2007	2008		0.5	1.05	1.13	0.53	0.53	0.33	4.3	
/										
2008	2009		0.5	0.53	1.13	0.53	0.53	0.33	3.7	
/										

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2009 / 2010	0.5	0.53	0.57	0.53	0.53	0.33	3.2
2010 / 2011	0.5	0.53	0.57	0.53	0.53	0.33	3.2
2011 / 2012	0.5	0.53	0.57	0.53	0.53	0.33	3.2
2012 / 2013	0.5	0.53	0.57	0.53	0.53	0.33	3.2
2013 / 2014		0.53	0.57	0.53	0.53	0.33	2.7
2014 / 2015			0.57	0.53	0.53	0.33	2.2
2015 / 2016 onwards				0.53	0.53	0.33	1.6