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PART A



Chief Economic Adviser to the Treasury

1984 Budget Conyany Toxes

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From: J WILLIAMS

Date: 9 December 1983

# NOTE OF A MEETING HELD ON 8 DECEMBER

## TAX POLICY: APPROACH TO THE BUDGET

Those present:

Mr Middleton (in the chair)

Sir T Burns

Mr Byatt

Mr Cassell Mr Monger

Mr Norgrove

MI NOIGIOVE

Mr Isaac

Mr Green

Inland Revenue

Mr Fraser

Mr Knox

Customs & Excise

Mr Jefferson-Smith)

Mr Middleton said the purpose of the meeting was to consider and take stock of the various proposals for reform across the tax field. The major proposals for reform fell in the following areas:

- (i) Company Taxation.
- (ii) Extending the VAT base.
- (iii) The tax treatment of savings and pensions.
  - (iv) The taxation of banks and building societies.
    - (v) Stamp duty, particularly on gilts.

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- (vi) The tax burden on small firms.
- (vii) The possible abolition of the Investment Income Surcharge and the National Insurance Surcharge.

Mr Middleton noted that of all these measures only the proposal to extend the VAT base was likely to be a major revenue raiser. The intention behind this meeting was to address (i) and (ii) above in particular.

# Company taxation

- The meeting considered first the reform of company taxation and in particular the Financial Secretary's minute of 29 November to the Chancellor. Mr Middleton noted that one possible package of measures might be the abolition of stock relief combined with either a reduction in the rate of corporation tax or the abolition of NIS. Mr Green said that it should be possible to produce such a package in which the revenue effects balanced out but as far as public presentation was concerned, it would be difficult to link these measures together in any logical way. It might be possible to argue that such a package would in some general way improve the structure of company taxation but it was particularly difficult to mount a strong intellectual case for abolishing stock relief. The relief had been introduced in response to high rates of inflation but the value of the relief had fallen as inflation had decelerated and if inflation were to continue to decelerate then so too would the Exchequer cost of the relief. Against this background it seemed curious to be proposing abolition. Sir Terence Burns suggested that its abolition might conceivably be justified as a tidying up measure. Mr Byatt noted that abolition might open wider issues of indexation throughout the tax system.
- 3. Mr Middleton asked about the scope for rationalising the present regime of capital allowances as a counterpart to a reduction in the CT rate. Mr Green argued that again it was difficult to mount an economic argument for reducing capital allowances.

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- It was not easy to identify any major specific economic distortions which resulted from the present capital allowances and the absence of obvious distortions weakened the case for abolition. Mr Byatt however emphasised the need to consider the structure of company taxation as a whole and efforts to make the system of company taxation more neutral might indeed create some distortions in the short term. In any event it could be argued that there were obvious distortions in the UK resulting directly from the regime of capital allowances. For example, for a given composition of output, the UK tended to be more intensive in plant and equipment than Germany. Mr Green said that while he agreed with these general economic principles, the presentation of reform would be helped greatly if it could be shown that it would be eliminating obvious concrete distortions.
- 4. Mr Cassell suggested that a more appropriate offset might be between NIS and capital allowances. Sir Terence Burns said that again it would be difficult to present such a package. There were no obvious distortions in the share of labour and capital within the manufacturing sector and furthermore such a package might be seen as not fully consistent with the Government's stated intention to promote technology. Mr Norgrove noted that the forecast rise in GDP next year was predicated on a significant increase in the rate of investment and this should be borne in mind when considering any reform which might affect investment expenditure. Mr Middleton agreed and noted additionally that the Chancellor was being criticised for the low level of industrial investment in the UK and also for failing to give greater encouragement to the manufacturing sector. Any package of reform to company taxation would be judged in Parliament against that background.
- 5. Concluding this part of the discussion, Mr Middleton suggested that the approach should be to continue analysing various possible measures in isolation before moving too rapidly towards packages of offsetting measures.

# Extension of the VAT base

6. Mr Middleton said that some form of extension of the VAT base had several attractions but would presumably have undesirable and

- immediate RPI effects. Sir Terence Burns agreed but noted that the Treasury's price forecasts showed inflation at significantly lower rates than many outside forecasts. If the Treasury forecast was correct there might be room to tolerate some small increase in the RPI. Even so, an extension of the VAT base might be interpreted as a weakening of the Government's determination to reduce inflation further or as an indication that the Government regarded the problem of inflation as now solved.
  - 7. In discussion, Mr Knox said that the Minister of State was considering various possible extensions of the VAT base, and particularly the possible extension to junk and take-away foods. There were some intricate problems of definition which the Minister's review was addressing. Other options such as extending the VAT base to children's clothing and books were particularly emotive and the political difficulties that such extensions would cause might outweigh the revenue benefits.

# Timing

8. Finally, it was noted that decisions on any reforms to the basis of company taxation and particularly capital allowances to be made in the Budget would be required quickly to allow the necessary consultations within Whitehall. Similarly, decisions on any extension to the VAT base to be included in the Budget would be required by the end of January.

J WILLIAMS

Circulation: Those present

Sir Lawrence Airey Mr Battishill



FROM: G W MONGER 20 January 1984

CC Chief Secretary
Financial Secretary
Economic Secretary
Minister of State
Sir Peter Middleton
Sir Terence Burns
Mr Cassell
Mr Monck
Mr Battishill
Mr Lovell
Mr Odling-Smee
Mr Allen
Miss Court
Mr Griffiths

PS/Customs & Excise Mr Jefferson Smith C&E Mr Beighton IR

CHANCELLOR OF THE EXCHEQUER

POSTPONED ACCOUNTING SYSTEM FOR VAT ON IMPORTS

You asked us to reassess urgently the case for withdrawing the Postponed Accounting System (PAS) on imports. The attached report has been agreed with Customs and Excise and with DTI. This minute (agreed with Customs and Excise) briefly sets out the main points. It also discusses at more length the relationship of the withdrawal of PAS to our company tax package.

# Revenue gain

2. The revenue gain from withdrawing PAS is now estimated at about £1,200m, although with a margin of £200m on either side. It should be possible to get all, or virtually all, of this gain in 1984-5. It is of course a once-for-all gain, but it does not reverse in later years.

# Effects on imports

3. The study carried out in 1980 found that the PAS did not confer an advantage on imports. This was because the period of trade credit obtained on home-produced goods was, at  $2\frac{1}{2}$  months, about the same as

- the period of deferment of VAT between receipt of imported goods and payment of VAT on them under PAS. The DTI say that this is still about the average period of credit, although it varies between industries. So it is still true that PAS does not give imports an advantage.
- 4. Nevertheless, it is also true that withdrawal of PAS would make home-produced goods relatively more attractive. The effect on imports is hard to assess and small: perhaps a reduction of £100m a year.

# Customs and Excise manpower and effect on trade flows

5. Withdrawal of PAS would add appreciably to Customs manpower requirements: a continuing increase of 120 and more overtime until the new system settled down. It would also lengthen clearance times and generate considerable extra work for importers. In the initial stages Customs consider that there might be disruption at the ports leading to political complaints. More generally, it would be contrary to the long-term policy of simplifying administration and reducing demands on business.

# EC considerations

- 6. We have been supporting the Commission's proposal to make PAS obligatory on intra-Community trade. We would have to explain why we had changed our minds by withdrawing PAS, what our attitude was now to the Commission initiative, and what we would do if it were to be successful. If it were to be successful we would at the time be faced with a difficult choice between blocking it and reintroducing PAS, with a big revenue loss.
- 7. Our support for the Commission's proposal on PAS is consistent with our strategy in the great negotiation about reform of the Community. The UK has submitted a paper on new policies which concentrated on ways of promoting Community objectives without implications for the Community Budget. One aspect covered is removals of barriers to trade. The Foreign Secretary is likely to write to you opposing any withdrawal of PAS because of the effect it would have on our wider Community strategy.

- But the Commission's attempts to get agreement to the general introduction of a PAS have made little headway over some years. Our exports suffer a disadvantage in those Community countries (mainly, France, Italy and Denmark) without an effective PAS system.

  Even if the Commission continued to press the case for general adoption of PAS our competitors would be likely to oppose a change because of the revenue losses to their own Exchequers.
- 9. A new point which has emerged in this reassessment is that withdrawal of PAS might increase our own resources contribution to the Community. The method of calculating the expenditure base could result in a once-for-all addition of about £120 million to our payments to the Community. The extra payments would probably not be made in 1984-5 (though up to £30m is possible in that year) but in 1985-6 and 1986-7. We would want to argue that the increased revenue reflected an accounting change and not a change in the expenditure base but there is a precedent against us and there would be no certainty that we would sustain this argument.

# Effect on industry

- 10. There will of course be a cash flow loss to industry largely corresponding to the cash flow gain to the Government; about half of it will be borne by manufacturing industry. It will however be less to the extent that overseas suppliers take on part of the extra burden falling on importers. It is very hard to assess to what extent this might happen. Our economists reckon that there will be little scope for UK manufacturers to pass back to suppliers the increase in the cost of raw materials and semi-manufactures but that about a third of the increased cost of finished manufactures might be passed back. This would reduce the total cost to UK traders by about a sixth.
- 11. The big change since the 1980 survey is of course the improvement in the liquidity of the company sector.

# AS and the business tax package

12. The economic and political effect of withdrawing PAS will of course depend on what other changes are made in the Budget in company taxation.

13. The important point about the company tax package you now have in mind is that the revenue-raising components do not operate in 1984-5. In later years they produce the following savings:-

	1985-6	1986-7	1987-8
Stock relief abolition	+350	+650	+750
Capital allowances on machinery & plant to 75%	+500	+750	+750
Industrial buildings to 50%	+30	+50	+60
	+930	+1550	+1660

14. This delay in achieving the savings involves the difficulty that the changes that industry will welcome - such as a reduction in the CT rate or the abolition of NIS - could not take effect, on a revenue neutral basis, in 1984-5. You could however use the savings from withdrawal of PAS to finance them in that year.

15. The obvious way of doing this would be to make tax reductions in 1984-5 whose cost in 1985-6 would be equal to the saving that will then be available from other items in the company tax package. This would ensure that no more money had to be found for the company tax package in 1985-6. It would allow you to make a reduction in the CT rates of 4-5% in 1984-5, or to abolish NIS. But because of the lags in changing these two taxes, the cost of these measures in 1984-5 would be well below the saving from withdrawing PAS. Reducing the CT rates by 5% would cost £500m in 1984-5, and abolition of NIS from 1 August would cost £450m. There would therefore be remaining savings of some £700m in 1984-5 which would be available for use elsewhere, including reduction of the PSBR.

6. The revised company tax package would look as follows:

	1984-5	1985-6
Cost:		
Reduction in CT rate by 5% or	-500	-950
Abolition of NIS	-450	-900
Financed by savings:		
Withdrawal of PAS	+1200?	= =
Abolition of stock relief and reduction in capital allowances		+930
Net surplus	+700	Nil

17. Of course, industry might complain that it was losing £700m in 1984-5. The alternative would therefore be to use some of this surplus to make bigger reductions in company tax in 1984-5. The result would however be that more money would have to be found for the company tax package in 1985-6. This effect would be magnified because the cost of action on either NIS or the CT rate would be higher in 1985-6 than in 1984-5.

# Total or partial withdrawal?

18. Another way of dealing with this problem, which would need further examination, would be to withdraw PAS only for imports of manufactured goods, leaving it in place for raw materials and semi-finished goods. This would approximately halve the revenue gain. It might also improve the reception of the change in industry generally. But it would create a new borderline problem and require a bigger increase in staff in Customs, and it might be challenged as discriminatory under Community rules.

If, however, the decision were to withdraw PAS altogether it would be important to make it clear from the beginning that no concessions to particular sectors would be contemplated. There would certainly be pressure for such concessions. But the Irish experience of first withdrawing PAS and then partly restoring it would be the worst of all worlds.

# Losers and gainers

20. Even if the effect of all the changes on the company sector as a whole is neutral, there would still of course be gainers and losers because the effects of withdrawing PAS, abolishing NIS and reducing the CT rate, vary between sectors. The appendix to this note brings together the available information about the differential effects of the three measures. Mr Monck will be arranging further work to see if the effects of this and other changes in 1984-85 and later years can be refined.

# The presentational considerations

- 21. You may want to consider whether withdrawal of the PAS, and use of the savings to finance other reductions in company tax, might be regarded as no more than a device to make the Budget balance. Perhaps it would help that this year the change would help to finance a reform in company taxation for which there are powerful arguments on merits.
- 22. This point, and indeed presentation generally, will be much helped if the CBI can be brought to support the change or at least not oppose it. At present they are divided and there is little prospect in practice of the CBI offering a firm view either way until they have consulted their members. They expect to have done this by mid-February.

(Ba)

G W MONGER



# ESTIMATED SHARES OF TOTAL TAX PAYMENTS

	(1982/83)	(1982)	(1982/83)
	VAT on Imports (%)	NIS (%)	CT (%)
Agriculture, Forestry & fishing	0.1	1.3	neg.
North Sea	0.4	neg.	4(1)
Manufacturing	38.9	29.0	29
Distributive trades	49.8(2)	14.2	13
Financial	3.4	9.2	13
Construction	0.3	5.2 )	of which
Transport & communication	0.7	7.7 }	Public
Energy and water supply	neg.	4.5	Corporations
Public administration, defence, education and health services	neg.	21.6	0ther private sector 37
Other services	6.4	7.4	200002 31

- (1) North Sea CT is very volatile because of deductibility of other North Sea taxes. Its share was 8% in 1981/82 and is forecast to be 9% in 1983/84.
- (2) Some of this reflects payments on imports intended ultimately for manufacturing.



Following representations from the Knitting Economic Development Committee, the Chancellor decided that the case for the withdrawal of the VAT Postponed Accounting System (PAS) for imports should be examined by officials.

- 2. This proposal was last considered in detail by an inter-departmental group of officials in 1980, and Ministers subsequently decided that the PAS should be retained on the grounds that it did not provide imports with an advantage over home-produced goods, whereas UK manufacturers would have incurred additional costs if PAS had been withdrawn and a significant additional administrative burden would have been placed on Customs and Excise. The present report, like the 1980 report, has been produced by officials from the Department of Trade and Industry, Customs and Excise, and the Treasury.
- 3. The conclusions of the report are summarised in paragraphs 47 to 49.

# The Present Position

## Purchases of domestic goods

- 4. A trader buying goods on the home market has to pay VAT on them when he pays his supplier; this is termed "input tax". He can take credit for this VAT against the "output tax" due to Customs and Excise on his sales, at the time he makes his next return to them. The majority of traders are normally liable to account for more "output tax" than "input tax". They are classified as "payment" traders. Such traders are normally required to make returns of VAT and pay over the balance to Customs and Excise at quarterly intervals, one month after the end of the quarter to which the return relates. But a proportion of traders are regularly entitled to take credit on their returns for more "input tax" than their liability for "output tax". This situation can arise because, for example, a high proportion of the trader's sales are zero-rated (e.g. as exports). Traders in this position are termed "repayment" traders. They may choose to submit returns either on the same quarterly basis as other traders; or at monthly intervals, as soon as possible after the end of the month to which they relate so as to obtain early repayment of the VAT they have suffered.
- 5. For any trader making quarterly returns, the average time between his receipt of goods bought on the home market and the due date for making his return, to Customs and Excise, and accounting for VAT, is 2½ months. The actual period for which a particular trader has to finance the payment of input tax will depend on the date when he actually pays his supplier for the goods in question (raw materials, equipment etc), and may vary considerably according to the period of credit taken.



## Purchases of imported goods

6. Because there is no VAT in the supplier's price of imported goods, a trader who purchases imports is liable to pay VAT direct to the Customs and Excise on them. But provided he is registered for VAT the trader is not required at present to finance such input tax on the goods he imports for any period at all. This is because under an arrangement known as the Postponed Accounting System (PAS), he is allowed to defer the VAT payable at the time of importation and instead offset it against the corresponding credit he would take for input tax on his next VAT return. In other words, his purchases are in effect VAT-free until he renders his next return to Customs and Excise. He must, of course, charge output VAT in the normal way on any subsequent sales. This arrangement was introduced after consulation with industry during the planning of VAT.

## The proposal

- 7. The proposal is that PAS should be withdrawn. VAT would become payable at importation, but would have to be subject to the arrangements for deferment which apply to customs duties. Not to allow such deferment would create a huge and costly administrative burden with which neither Customs nor traders could cope, and would be far more restrictive than the norm throughout the EC. Under EC customs rules (applied to VAT under the VAT Act 1983) traders would be required to pay the VAT due on their imports either at the place and time of entry, or by direct debit (covered by banker's guarantee) on the 15th of the following month (that is, on average one month after the goods have come in to the country). The VAT would be reclaimed on the next quarterly return, ie on average 2½ months after the time of import and importers who took advantage of the one month deferment would be required to finance the VAT payments for 1½ months on average.
- 8. This proposal was looked at in 1980 when it was concluded that the PAS was broadly neutral as between the home market and imported goods. The following paragraphs consider the effects of the proposal in current circumstances.

## Relative treatment of imports and home-produced goods

9. The Knitting EDC have argued that the present VAT accounting arrangements give a financial advantage to imports over home-produced goods. They suggest that importers receive a direct cash flow advantage equivalent to 3.2 per cent of annual turnover. However, the group's conclusion is that the practical effects of the present arrangements make little difference as between imports and home-produced goods. In these circumstances withdrawal of the PAS would change the balance between imports and home-produced goods to the disadvantage of importers compared with those who use domestically produced imputs. Currently UK suppliers in the domestic market face

mpetition from imports which benefit from the PAS arrangements, whereas UK exports do not enjoy similar benefits in countries which do not operate a PAS. Removal of the PAS would therefore put UK exports and foreign exports on a similar footing in their respective markets, but would not, of course, improve the position of UK exports.

- As explained in paragraph 5, in practice the period for which a purchaser of goods on the home market has to finance the VAT depends on the period of trade credit taken by companies. The latest available evidence (derived from the Business Monitor M3 for 1980) shows that the average period of credit in manufacturing industry was about 2½ months the average for all industry was 24 months. The present position must to some extent be a matter of conjecture. Most of the evidence after 1980 points towards companies further delaying payment of invoices, coinciding with the financial squeeze on industry, although the position may now be easing in line with industry's much improved liquidity. On balance, therefore, the 1980 figure of 2½ months average credit probably still holds good at the present time, and may even be an underestimate (although there are likely to be wide variations around this average). It must be stressed, however, that the period of 2½ months refers to credit actually taken by companies, which the group considers to be the correct figure to use when looking at the relative advantages or disadvantages created for importers by the PAS. It is very different from the average period of trade credit formally offered by companies, which averages around 30 days. The Knitting EDC quoted this formal period of trade credit in its recent memorandum to the NEDC.
- 11. This means, therefore, that on average purchasers on the home market are able to defer payment to their suppliers for about the same period as elapses before they may reclaim the corresponding input tax on their purchases. The position of individual traders may vary widely, but it would appear that in the aggregate purchasers on the home market do not have to finance the VAT payments on their purchases any more than the purchasers of imported goods. The difference is that in the case of imports tax can be accounted for and reclaimed by the same trader on the same return; for suppliers on the home market one trader pays, another reclaims. In respect of any one transaction the timing of payment and refund may not coincide but in aggregate they balance out. On the home market any financing cost to the purchaser is balanced by an equal advantage to the supplier and vice versa.

#### Effects on the revenue

12. It is estimated that VAT on imports of goods in 1984-85 may be around £9,000 million. The proposal would bring forward the date when receipt of this revenue is due by, on average, 1½ months. In principle, assuming that the flow of payments was spread evenly through the year, this would give a once-for-all revenue gain in the year of introduction of

about £1,100 million, subject to the adjustments described below. There would be corresponding potential cash flow disadvantage for traders (see paragraph 24 below). A part of net VAT receipts is payable to the European Communities as "own resources". Accelerating the payment of VAT may also increase the slice of VAT belonging to the Community. As the UK average rate of VAT over the Community VAT coverage is about 10 per cent, with a Community VAT rate of 1 per cent one tenth of any gain to the Exchequer may be payable to Brussels. The total amount would be of the order of £120 million. It is probable that none of this would be payable in 1984-85, although there could be payments of as much as £30 million. The balance would be payable in 1985-86 and 1986-87.

- 13. In practice the effect on the revenue would depend on a number of factors. These would include features in the operation of the tax and, for example, the level of imports in the last four months of the year in which the change was introduced. They give rise to a wide margin of uncertainty. Overall it seems likely these factors would increase the amount of revenue brought forward to about £1,200 million.
  - (a) VAT on imports would in future be paid at the time of entry or by direct debit one month later on average. This would ensure prompt receipt of the revenue by Customs. This contrasts with the present delays in quarterly returns. VAT outstanding at 30 November 1983 was equivalent to 45 days average payments (compared with 25 days before the Civil Service strikes). Withdrawal of the PAS would require traders as a whole to finance the VAT on imports for longer than the 1½ months to the due date of payment. Customs and Excise are trying to get these arrears down again; to the extent that they have succeeded by the end of 1984-85 there will be a reduction in the gain from ending PAS on imports replaced by a larger increment of revenue from the improvement in VAT compliance.
  - (b) Conversely there are ways traders could escape the full effects of the change. The most important is that as a result of paying the VAT on imports separately and earlier than the return on which the corresponding credit is deducted, some traders previously paying VAT with their returns will become entitled to net repayment and would become elgible to receive monthly repayments (see paragraph 4). Experience has been that only about a quarter of traders claiming regular repayments have chosen to do so monthly; naturally these are the traders claiming larger sums. Many of those swinging over to repayment positions may consider it not worthwhile to make monthly claims for what, in the scale of their businesses, are not substantial amounts; but it is not possible to be sure that previous experience will be valid in the circumstances of this change.



It is also open to importers to arrange their affairs so that the incidence of imports came at the most advantageous time for their VAT payments.

- 14. Once these changes had fully worked through, it would be expected that, on average, some £1,200 million would be accelerated. But it has to be accepted that because of the uncertainties this estimate is subject to a margin of up to £200 million in either direction. The gain to the Exchequer would in any case fluctuate because of differences in the value of imports attributable to the three groups\* of traders accounting for VAT and the seasonal pattern of overseas trade.
- 15. The effects on revenue (and the cash flow of business) in the first few months would be likely to vary significantly from the position once the changes have fully worked their way through. It is estimated that in the early months after the change, and before traders had had an opportunity to minimise the impact on their finance, the revenue effect could reach something in the order of £1,300 million at the outside. As the position then unwound, this might be expected to fall back towards £1,200 million.
- 16. The actual revenue gain in the year of introduction would depend upon the date of introduction. This is discussed further in paragraph 46 below.
- 17. Further study is needed on whether PAS should be withdrawn from warehoused goods, or whether there are cases in which it should continue to apply. This element of possible VAT revenue is therefore excluded from the estimate in paragraph 14.

# **Economic Effects**

# (a) PSBR Effects

18. The PSBR effect of advancing VAT payment is unlikely to be very different from the direct revenue effect - that is a once for all gain of around £1200 million. Whilst there would be some changes in economic activity and interest rates resulting from the measure, we think that any difference would be relatively small in the first year. In the longer term the continuing PSBR effects will reflect lower interest payments, as a result of the once-for-all reduction in borrowing, of the order of £120 million a year. Part of this effect could be offset in 1985-86 and 1986-87 because of additional payments to the EC (see paragraph 12 above).

<sup>\*</sup> VAT returns are made for three-monthly periods with approximately one-third of traders due to make their returns each month.



# (b) Monetary Effects

19. The monetary effects would be less than the reduction in the PSBR. The current liquidity position of the company sector is good, and companies may well be able to finance some of the additional VAT payments by running down their bank balances. However, some of the finance would probably come from increased bank borrowing. This would offset some of the effect of the reduced PSBR on £M3, but it is not possible to quantify what the net monetary effects would be.

## (c) Effects on Imports

- 20. The cost to traders of financing the full accelerated payment of VAT on imports would be roughly equivalent to an on-going cost increase of about 0.3 per cent of import prices. (This might be icreased marginally for those traders who opt to defer their VAT payments for one month by the costs associated with obtaining a bank guarantee. In terms of a corresponding tariff barrier the effect of a change of this size would normally be regarded as negligble.
- 21. The extent to which manufacturers are able to pass back to foreign suppliers any of the increase in cost depends on the extent to which the UK is a price-taker for the product in question. Genrally, there may be less scope for passing back the increased cost for raw materials and semi-manufactures than for finished manufactures. A reasonable broad assumption might be that there is no scope for passing back to suppliers the increase in the cost of raw materials and semi-manufactures but that about a third of the increased cost of finished manufactures is passed back. On this assumption, there might be a very small reduction in imports of around £100 million.

# (d) Effects on Industry

22. Customs and Excise consider it would not be practicable to try to impose the change selectively on, for example, distributors or profitable firms but not on manufacturers or companies with liquidity problems. Nor would it be possible to draw a dividing line between materials and finished goods that was not arbitrary and open to objection. Any attempt to do so would require extra resources to cope with the inevitable mistakes and disputes over liability at the ports and would lead to continuing representations from trade bodies. About half the VAT due on imports is on finished goods. To discriminate would amount to a quasi-tariff barrier which would run counter to the Treaty of Rome and which would crete an additional administrative burden and delays in entry processing. A phased withdrawal of PAS would not only cause severe difficulties for Customs, but would also pose an additional problem for the trade and reduce the potential revenue gain.

# 23 The available data suggests that:

- (a) Some 50,000 regular importers could be directly affected by a change in the VAT arrangements.
- (b) Around 40 per cent of VAT due is attributable to imports by UK manufacturers directly.
- (c) It has been estimated that one-third of imports which would be affeced are subsequently re-exported in one form or another.
- 24. As explained in paragraphs 12-16 above once the efects of the change had fully worked through the overal once-for-all revenue gain would be of the order of £1,200 million. Importers as a whole would suffer a corresponding, continuing loss of liquidity unless they were able to pass any of the additional costs back to their suppliers (to the benefit of the balance of payments) or forward to their customers (with an eventual increase in the prices indexes). Less than half of this would fall directly on manufacturers; some would fall on them indirectly through purchases of imported materials and other goods from merchants and dealers. The cost to traders of financing these payments at current interest rates would be about £150 million a year, but about £30 million of this might be passed back to their suppliers.
- 25. In assessing the effects of business cash flow it should also be borne in mind that:
  - (a) In the early months before traders have made any adjustment to reduce the effect on their finances the adverse impact on business cash flow could be rather larger than indicated;
  - (b) the once-for-all revenue gain represents an average of 1½ months VAT. Individual traders, however, would require additional finance rising in each three-months tax period to a peak of a full three months' VAT on their imports. This could place them in difficulties and some might not even be able to obtain the guarantees needed to enable them to take advantage of the facilities for one month's deferment described in paragraph 7 above.
- 26. In general, the financial consequences would be likely to be more important for the manufacturing sector than for the non-manufacturing (including service trades, distribution and retailing). This is because the manufacturing sector is generally less profitable, less able to pass back increased costs to oveseas suppliers and in most cases more subject to foreign competition. Nevertheless, within the non-manufacturing sector, the measure could

be expected to cause particlar difficulties for the mail order trade, since their fixed price system of trading is vulnerable to sudden increases in costs.

- 27. Annex A indicates the distribution of the VAT accounted for on UK imports in 1982-83 between trade groups. Within the manufacturing sector those most affected by the change would include the oil, motor vehicle, diamond, electrical and mechanical engineering, metal manufacturing, alcohol, air transport, tobacco, chemicals and paper industries.
- 28. Moreover, within each industry, the effect on company liquidity and competitiveness could vary considerably between individual companies, depending on:
  - (a) their relative dependence on imports of raw materials, semi-finished or finished manufactures. (For example, within the electrical goods industry, while many firms would welcome any move that made imports from Italy relatively more expensive, there would be some cost increases for UK firms such as Hoover which both manufacture in this country and import);
  - (b) whether in total they pay more VAT than they reclaim (when both the VAT due on imports and on their sales are taken into account);
  - (c) whether, where the option was available, they chose to make quarterly or monthly repayment claims; and
  - (d) how promptly they rendered their VAT returns.

Some examples of the efect are shown in Annex B, but it is emphasised that these are by way of illustration only.

29. The position of a number of the largest importers has been looked at in order to assess how they would be afected by the measure. On the basis of the limited informtion available, we have not been able to identify any major UK manufacturer for whom the impact of the change is likely be critical. The most likely cases where companies will face problems are where they are already in financial difficulty. Although such companies might seek to attribute the cause of their collapse to the withdrawal of PAS, the main trigger for collapse would in practice tend to be reluctance on the part of their banks to extend further finance. Because the effects of withdrawal would vary between companies and within sectors we do not think that these uncertainties could be resolved by consultations with representative trade bodies.

when the possibility of withdrawing PAS was last examined. As noted in the recent report by the Industrial Finance Group on financial prospects for the company sector, the adjustments which companies have been making to their labour input, their stock levels and fixed capital expenditure since 1980 have strengthened their profitability and financial positions. All recent idicators confirm that there has been a marked improvement in company liquidity. The CBI's most recent survey of company liquidity recorded an even more marked and widespread improvement in the year to October 1983 than at the time of the previous six-monthly survey. Similarly, DTI's survey of the liquidity of large non-oil companies shows that the liquidity ratio (current assts divided by current liabilities) has risen to 133 per cent - back to the levels last seen in 1978 - compared with 79 per cent a year ago. Other balance sheet indicators calculated by the forecasters all suggest that a further improvement will take place in the period up to 1985.

# **EC** Implications

- 31. The European Community rules provide no obstacle, in principle, to abandonment of the PAS so long as this were not done on a selective basis to mitigate the effects on particular industries. But the UK has supported EC initiatives for PAS to be extended within the Community. The implications are considered in paragraph 38 below.
- 32. Annex C summarises the most recent information which it has been possible to obtain about the arrangements operating in other Member States. Although there are wide variations of detail, all Member States operate a system which is broadly on the lines either of the UK's existing practice or of the arrangements described above. The precise arrangements in some Member States are not entirely clear, but the change to the system proposed could be represented as bringing the UK more closely into line with our major competitors in the Community.
- 33. In 1982 the Irish abandoned PAS ostensibly for fiscal reasons. The change caused considerable industrial and trade difficulties, and in their 1983 Budget there was a partial restoration of PAS in favour of raw materials and components imported by firms exporting 75 per cent or more of their production. This appears to be a discriminatory measure, but it is not known if the Irish have been challenged. For the reasons in paragraph 22 Customs and Excise do not think that such a distinction would be administratively practicable in the UK, even if a challenge from the EC Commission could be avoided.

## Administration and Manpower

34. The 1980 report recognised that the proposal would involve more administrative work and complications for Customs and Excise and for business; would require more Customs

staff to operate; and would move away from the direction of simplifying procedures and reducing compliance burden for businesses. These conclusions still apply. The figure for additional staff, now estimated at 120, is dealt with more fully in paragraph 37 below.

- 35. In assessing the administrative effects it has been assumed that any new system would allow importers to defer payment of the tax due on imports by an average of one month. Importers would continue to be able to take credit for the VAT due on imports on their next VAT return. But, as has been noted earlier, they would be required to pay the tax either at the time and place of entry or to furnish a bank guarantee for their liability and make payment by direct debit on the 15th of the month following importation. A fair number of traders might adopt the latter course resulting in an increase in the number of bank guarantees required for deferment from 4,000 to perhaps 16,000. Some importers would seek to gain deferment through their shipping agent's duty deferment facility, but agents could be expected to make their clients pay for this in one way or another (probably by means of an advance to cover the revenue deferred before releasing the goods). There would be some smaller importers who did not get duty deferment and who would be required to pay VAT at the time of importation. It would be a heavy administrative burden for Customs to deal with more than a relatively small proportion of VAT payments at the time of importation, which would add to the numbers of additional staff required.
- 36. It would be necessary in any event to retain the present postponed accounting system in being to provide for postal imports of below £1,500 in value, the VAT on which would involve disproportionate staff effort for Customs and Excise and the Post Office to collect at entry. However, this could well lead to further complications. Since 1980 the carriage especially of low value items of freight by air couriers has grown substantially, and indeed the Post Office is planning to enter this business. It is difficult to see how couriers could be excluded from this exemption and this would of course create pressure for similar treatment for freight within these limits.
- 37. In the light of these considerations, Customs and Excise's best estimate of the staffing implications of changing the present arrangements is as follows:
  - (a) they would have a continuing need for about 120 additional staff to operate the new system;
  - (b) overtime would be required to cope with the continuing commitment at smaller units; and
  - (c) there would be a considerable further transitional burden during the initial months before the system bedded down, which would also have to be met by overtime.

It has to be emphasised that the effects on staffing described above do not take account of any possible procedural concessions, eg extension of warehousing facilities to goods liable only to VAT which might subsequently be sought, and which would have severe additional staffing implications for Customs and Excise. No provision has been made in the Customs and Excise manpower allocation for the staff effects of the proposal. In the absence of any increase in staff these additional requirements would have to compete both with the existing demands for collecting the revenue and helping to maintain law and order, and with pressures for some tightening of customs controls in selected areas, eg textile quotas, drugs and strategic goods.

- 38. There is another consideration which should be mentioned. As a result of the UK's membership of the EC, customs procedures on importation have been and are being simplified, and controls have much relaxed. Since 1980 there have been substantial improvements made in Customs clearance times, and there have also been staff economies. The assessment and collection of VAT on imports would reverse this process and any consequent staff economies, and would result in the up-grading of much of this work which is in the course of being down-graded. More generally, a change of this type could be seen to be out of step with the efforts which Customs and Excise and the Department of Trade and Industry have been making to persuade other countries to simplify their complex and sometimes obstructive customs procedures in the interest of UK exporters. In this context UK has strongly supported both the Narjes initiative to strengthen the internal market and simplify cross-border procedures in intra-Community trade, and the Commission proposal for a 14th Directive which would make it obligatory for all Member States to operate postponed accounting for VAT on intra-Community imports. If UK were to reverse its present arrangements it would be necessary to explain why the UK had changed its mind by withdrawing PAS, what the UK's attitude was now to the Commission initiative, and what the UK would do if the initiative were to be successful. Subsequent resumption of PAS would involve the once-for-all revenue loss equivalent to the present gain from withdrawal.
- 39. The effect on importers should be considered. Most of the additional work in the commercial field would fall on customs' agents and warehousekeepers. They would be bound to face increased compliance costs, in addition to the direct costs involved in providing bank guarantees and financing the initial loss of liquidity. At present Customs documentation for importations from the Community, which represent over 50 per cent of all traffic, can, for the most part, be processed without the complications which arise from taking and accounting for revenue. The need to account for tax at importation would generate a requirement for considerable additional paperwork from importers with an increase in the number of errors and queries which would inevitably slow down official processing. This in turn would significantly increase the time needed for clearance at those ports with

substantial traffic from the Community such as Dover and Felixstowe. This could restaring serious congestion. Such delays could pose a particularly severe problem on the Northern Ireland Land Boundary because of security.

40. The change would come at a time when Customs are pursuing a more rigorous line with the trading community regarding the accuracy of clearance documents and when they are having difficulty in maintaining the availability of official staff to traders and are about to increase substantially the charges made for attendance. These factors can be expected to lead to much continuing trade hostility to the withdrawal of PAS, and would be certain to lead to an increase in complaints from traders, trade associations and in Parliament at the delays occasioned.

## Statutory requirements

41. Withdrawal of the PAS would not, in principle, require primary legislation. However, for a change of this magnitude it would undoubtedly be argued that it should be the subject of full debate in the House and that it would not be appropriate to proceed by way of Statutory Instrument subject to Negative Resolution. This might point to a provision being included in the Finance Bill.

## Consultation

- 42. In the absence of consultations with trade representatives, it has not been possible to provide conclusive indications of the effects of withdrawing PAS on individual industries or firms or of the extent of any increase in industry's compliance costs (for example, in reprogramming computers).
- 43. The group's conclusion is that consultations on the administrative arrangements for the change would be essential before implementation. It remains a matter for political judgement whether industry should be consulted before a decision was taken in principle to change the present arrangements. Criticism could be expected, from trade representatives who were consulted before the present system was adopted, if a decision were taken to alter it without opportunity for representations to be heard. On the other hand, it seems likely that such consultations would produce loud and sustained protest rather than clear factual analysis of the effects on individual sectors. On balance, therefore, little would be gained by embarking on consultations before a decision to proceed was announced, except in the case of the CBI. In the past the CBI's publicly declared position has been that they oppose the withdrawal of PAS. However, at the January NEDC meeting Sir Terence Beckett indicated that the CBI favoured a review. Since then the CBI have said that they plan to circulate their members to get a view of the merits of the withdrawal of PAS, and the results of this review are likely to be available by mid-February.



- 44. The change would need to take effect on the first day of a calendar month. From the date of the Chancellor's decision, Customs and Excise would require 6 months to implement the new system. Some work would be possible before the decision was made public but the bulk of the lead time would be after the announcement following which there would need to be discussions with representative bodies about implementation. From the point of view of Customs and Excise the preferred implementation date would be 1 October.
- 45. The effect on the revenue, and on companies' cash flow, would also be relevant to the timing of a change. This is because, as noted in paragraph 7 above, the essence of the change would be to alter the pattern of VAT credits and payments within the normal quarterly accounting period. Allowing for the one month period of grace for payment, this means that the process of acceleration would be completed within four months from the date the change first took effect. (Though the true net effect of the scheme could take a little longer because of delays in VAT settlement and if traders were slow in appreciating the implications for monthly repayment in certain cases.)
- 46. To obtain quick results the change could be announced in the 1984 Budget Speech to take effect in the course of 1984-85. Provided that implementation took place by 1 December 1984 the PSBR could be expected to benefit by a substantial part of the potential gain in 1984-85. The benefit grows rapidly in the first four months after introduction with some further increase, perhaps as much as £100 million, in following months.

## Summary and Conclusions

- 47. The Knitting EDC's allegation that the PAS arrangements provide a financial advantage to imports does not appear to be well-founded. Due to the average amount of trade credit taken by traders, purchasers on the home market are able, on average, to defer payment to their suppliers for about the same period as elapses before they may reclaim the corresponding input tax on their purchases. Therefore, in aggregate purchasers on the home market do not have to finance the VAT payments on their purchases any more than the purchasers of imported goods.
- 48. Having considered the possible effects of withdrawing the PAS, the case for this proposal is that it would:-
  - (a) bring the UK broadly into line with the requirements placed on importers by some of our main competitors in Europe, in a way which would not be incompatible with our EC obligations;

- (b) provide a discouragement to imports, to the extent perhaps of reducing imports by at most £100 million a year;
- (c) produce a once-for-all revenue gain of about £1200 million (plus or minus £200 million) (with similar effect on the PSBR, but a much smaller reduction in the money supply).

## 49. On the other hand the measure would:-

- (d) reduce corporate liquidity in the initial months by up to £1300 million and in the long run by about £1200 million (plus or minus £200 million), of which manufacturing would bear almost one-half, in a way which could not be mitigated by discriminating between sectors;
- (e) involve more work for Customs and Excise requiring permanent additions of 120 staff, together with an increased requirement for overtime working; and
- (f) as the counterpart of (b) add to the compliance costs of traders importing raw materials, or semi-finished or finished goods.



ANNEX A

# ANALYSIS OF VAT DUE ON IMPORTS BY TRADE CATEGORY IN 1982-83

Trade Group	Total Tax Due (£ million)	Individual Industries With More Than £10 Million Due	Amount Due (£ million)
PRIMARY INDUSTRIES			
Agriculture, Forestry, Fishing	5.3		
Mining & Quarrying	29.3	Petroleum & Natural Gas	27.9
MANUFACTURING INDUSTRIES			
Food, Drink & Tobacco	203.3	Brewing & Malting Spirit Distilling Tobacco	36.2 51.0 61.1
Coal & Petroleum Products	369.7	Mineral Oil Refining	368.0
Chemicals & Mixed Industries	416.0	General Chemicals Pharmaceuticals Synthetic Resins Dyestuffs & Pigments	188.0 69.7 22.1 19.1
Metal Manufacture	170.1	Iron & Steel Aluminium Copper, Brass, etc	62.3 31.3 28.0
Mechanical Engineering	195.8	Pumps, Valves, etc Constructions & Earth Movers	25.1 24.7
Instrument Engineering	54.5	Scientific & Industrial	45.3
Electrical Engineering	434.1	Electrical Machinery Insulated Wires & Cable Radio & Electronic Components Electronic Computers Electric Appliances	43.0 26.5 72.9 157.5 42.3
Shipbuilding & Marine Engineering	10.0		
Vehicles	472.7	Motor Vehicle Manufacturing Aerospace Equipment Manufacturing	354.9 95.9
Metal Goods	124.5	Precious Metals	47.6
Textiles	139.6	Production of Manmade Fibres Woollen & Worsted	32.9 22.0
Leather, Leather Goods & Fur	15.1		
Clothing & Footwear	61.4		

Trade Group	Total Tax Due (£ million)	Individual Industries With More Than £10 Million Due	Amount Due
Bricks, Ceramics, Glass, Cement, etc	26.1		
Timber, Furniture, etc	115.2	Timber	84.1
Paper, Printing & Publishing	157.2	Paper & Board Packaging	66.3 46.9
Other Manufacturing Industries	109.3	Rubber	28.6
CONSTRUCTION			
Construction Industries	25.8		
UTILITIES			
Gas, Electricity & Water	0.6		
TRANSPORT & COMMUNICATION			
Transport & Communication	52.8	Air Transport	41.0
DISTRIBUTIVE TRADES			
Wholesale Distribution  Retail Distribution  Dealers	195.1 599.1	Alcoholic Drink Petroleum Products Clothing Textiles Footwear Electrical Goods Radios, TVs, Tape Recorders Jewellery Photographic Goods Furniture & Flooring China, Glassware & Hardware Paper & Board Products Women's & Girls' Wear Industrial Material Industrial & Agricultural Machinery	311.2 1263.9 95.0 65.4 37.3 108.1 142.5 44.2 44.2 35.3 28.9 78.5 27.9 442.1
SERVICES			
Insurance, Banking & Financial	269.1		
Professional & Scientific	27.3		

ade Group	Total Tax Due (£ million)	Individual Industries With More Than £10 Million Due	Amount Due (£ million)
Miscellaneous	479.2	Distribution, Repair & Service of Motor Vehicles	375.0
Public Administration	nil		
NATIONAL TOTAL	7900.2		



ANNEX B

# EFFECTS OF WITHDRAWING THE POSTPONED ACCOUNTING SYSTEM ON SAMPLE TRADERS

Note: It is assumed throughout that the payment traders render their returns on the due date (ie one month after the end of the period) and repayment traders as soon as possible after the end of the period.

# A. PAYMENT TRADER WHO REMAINS A PAYMENT TRADER

A chemical manufacturer (whose purchases are 20 per cent imports) who at present pays £25.6 million on his quarterly return, would pay £2.4 million at import each month and £18.4 million on his quarterly return.

Overall he would be required to pay £7.2 million on average 6 weeks earlier. i.e. CASH FLOW DETERIORATION.

# B. PAYMENT TRADERS WHO OPT TO MOVE TO MONTHLY VAT RETURNS AS A REPAYMENT VAT TRADER

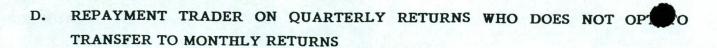
A computer manufacturer (whose purchases are 66 per cent imports) who at present pays £9.6 million on his quarterly return would pay £4.6 million at import each month, and receive repayments of £1.4 million on each monthly return.

<u>Overall</u> he would be required to pay £9.6 million tax on imports, on average, 6 weeks earlier. i.e MITIGATED CASH FLOW DETERIORATION.

# C. REPAYMENT TRADER MAKING MONTHLY RETURNS

An airline (whose purchases are 33 per cent imports) who at present receives repayments of £1.6 million from his monthly return, would pay £0.9 million monthly at import, and at about the same time receive increased repayments of £2.5 million.

Overall MARGINAL IMPACT ONLY.



A small clothing manufacturer (whose purchases are 10 per cent imports, and whose sales are 40 per cent zero-rated) who at present receives repayments of £1000 from his quarterly return would pay £333 each month at import, and receive increased repayments of £2000 from his quarterly return.

Overall he would be required to pay £1000 on average 6 weeks earlier. i.e. CASH FLOW DETERIORATION.



ANNEX C

## BELGIUM

- (a) Imports from other Benelux countries: automatic, compulsory postponed accounting. No security required.
- (b) Imports from other countries: postponed accounting available subject to prior authorisation and lodging of security.

#### DENMARK

Payment of VAT may be deferred by authorised importers under customs duty deferment system until the end of the month following the month of importation (ie average of 45 days credit).

#### GERMANY

Payment of VAT may be deferred by authorised importers under customs duty deferment system until the 15th of the month following the month in which the importer submits an aggregated monthly return of his imports. By this time, his VAT return is due, and the VAT paid on imports is almost immediately deductible. Effect is very similar to postponed accounting. Authorisation required to use this procedure, but no security.

# **IRELAND**

Comprehensive postponed accounting abolished on 1 September 1982, but partly restored by present administration on 1 April 1983. Importers who export at least 75 per cent of their output may now postpone VAT. Other authorised importers may defer payment under the customs duty deferment system.

## ITALY

Payments of VAT may be deferred by authorised importers under the customs duty deferment system. Italy's system of authorising deferment is said to be especially restrictive.



## LUXEMBOURG

Postponed accounting automatically available without security, and compulsory for taxable persons submitting regular VAT returns.

#### **NETHERLANDS**

- (a) Imports from other Benelux countries: postponed accounting automatically available without security.
- (b) Imports from other countries: postponed accounting available subject to prior authorisation. No security required.

#### FRANCE

Payment of VAT may be deferred under the customs deferment system for up to 30 days or until the 15th of the month following the month of importation, according to the payment method adopted.

#### GREECE

VAT not yet introduced.

#### UNITED KINGDOM

Postponed accounting available without prior authorisation or lodging of security, but is withdrawn in cases of abuse.

Company lox

CHANCELLOR

FROM: N MONCK

DATE: 21 February 1984

cc Chief Secretary Financial Secretary Economic Secretary Minister of State Sir/P Middleton Six T Burns Mr Bailey Mr Littler Mr Byatt Mr Cassell Mr Battishill Mr Lovell Mr Monger Mr Odling-Smee Mr G P Smith Mr Ridley Mr Lord

Mr Portillo PS/IR

PS/Customs and Excise
Mr Green
Mr Beighton

# ECONOMIC EFFECTS OF CORPORATION TAX PACKAGE AND ABOLISHING NIS

I attach an analytical paper written by Mr Smith after discussion with Mr Byatt and other economists and with my Group. Much of it will be familiar to you. But I am circulating it now because it will underly work on the general presentation to the business tax package which will be going to the Financial Secretary and other Ministers later this week.

- 2. The paper brings out the economic benefits of the reforms via higher post-tax profits and improved quality of investment. But at the same time it makes clear that some of the effects on investment and measured output will work/opposite directions with some uncertainty about the direction let alone size of the net effect. Selling the reform package successfully will, as usual, rest a good deal on judgement and on some selectivity in choosing the positive points and in preparing defensive arguments. But the analysis in the paper will help us to avoid untenable claims.
- 3. The question Miss O'Mara put to Mr Monger (in her minute of 13 February) about the steps being taken in the Budget to remedy the bias in the present tax system in favour of capital and against labour is covered in paragraphs 11-18 of the paper.

week

- 2 -

- 4. The paper does not deal with the distribution of gains and losses between sectors of the economy. But I understand that decisions yesterday will helpfully reduce the North Sea's share of gain from the CT measures and from the package as a whole. The paper also does not deal with acceleration of investment during the transition to the new regime, which may become a significant part of the presentation.
- 5. Further work is in hand by MP and DEU respectively on a quantitative simulation of the Budget business measures and on the past relationship (or lack of it) between changes in investment incentives and private investment in different types of asset.

M

N MONCK

## Taxation of Companies

- 1. This note considers the effects of the abolition of NIS and the CT changes. It does not deal specifically with unincorporated businesses. They will lose from the CT package, but will gain from the abolition of NIS\* and will, like companies, have some incentive to substitute labour for capital. So some of the analysis applies in broad terms to them also.
- 2. The analysis is for the most part concerned with the longer-term effects of shifting to a CT regime with lower (Stage 3) allowances and a CT rate maintained permanently at around 35 per cent. It does not therefore deal with the year by year implementation of the full package, and the possible timing of the effects is sketched only in the very broadest terms.
- on output, investment etc arising from changes in aggregate company profitability. The second deals with relative capital and labour costs and labour/capital substitution. The third concerns the criteria relevant to assessing these changes. It focusses in particular on how we should evaluate changes in investment. This is a matter of economic balance. Investment is a cost-it uses resources which could be used in other ways: it is worth while only if the returns are high enough to balance the cost.

# I - Company Profitability

4. The combination of CT and NIS changes will increase post-tax company profitability\*\*. The NIS cut is a continuing gain. The CT package may be broadly revenue neutral over the next three years but if the CT rate is held permanently at, say, 35 per cent (and a fortiori if it is reduced further) company tax bills will fall substantially as writing down allowances build up in the 1990s.

See Mr Beighton's minute of 13 February to the Chancellor on the effects on small businesses.

<sup>\*\*</sup> In the usual accounting sense. This is an ex ante gain; not all of it will stick with companies as higher profits.

- 5. This represents a significant (and growing) switch in the balance of taxation in favour of companies. This switch will not affect the 'appropriate' pressure of demand in the economy in the longer run (beyond this Parliament); but it may affect productive potential (the sustainable level of output) via the supply side.
- 6. Some of the initial gains to companies especially in the long run will be redistributed via higher wages, higher distributions and lower prices. To some extent therefore the end result of cutting company taxes will be the same as cutting taxes on persons directly. (Ultimately taxes are borne by people, not companies.)
- 7. But though there are similarities, there are important differences. Companies do not simply act as post-boxes, redistributing their gains. They do not immediately face, or yield to, demands for more cash from their workers or owners. Over the medium term at least, they will be able to hang on to a good part of the gains. And even in the long run, different tax regimes will have different effects.
- The main potential economic gain from greater post-tax profitability arises because companies will have more resources to search out profitable lines of activity, to engage in more R&D, more intensive product development, more active search for process innovation, to make greater marketing efforts and so on. This is not merely a question of bringing off the shelf plans and projects already in existence but held up because finance was costly or difficult to obtain. (There is some evidence to suggest that firms regard external finance as more costly than internal resources.) But the more favourable profit prospects may stimulate the creative energies of companies to develop new opportunities which would not otherwise have been thought of. Such changes could raise potential output in the longer-term, even allowing for a considerable amount of the initial gains to be passed on. Indeed, if companies do react in this positive way to the changes, the fact that some of the gains 'leak' into higher wages or dividends

does not mean that they are running to waste. It would be a necessary element in the process of improving economic efficiency and raising productive potential.

- 9. On the other hand, there may be some effects working the other way. For example, increased resources available to companies may reduce pressures for cost containment and slow down the elimination of uneconomic activities. And the beneficial supply side effects on the company sector must be set against possible disincentive effects on the labour side, since personal taxes would have to be higher than they might have been.
- 10. Clearly, therefore, the potential effect of higher post tax profitability depends on company behaviour. We think on balance that the beneficial effects from higher profitability outweigh the adverse effects. This judgement depends partly on the changes in economic attitudes which have taken place over the last few years. We are assuming that the pressures will have yielded some permanent gains in attitudes to costs and competitiveness which will not be entirely eroded by lower tax bills. Any such judgment however must be uncertain.

# II - Cost of Capital and Labour

ll. Besides affecting average costs and profits, the tax changes also affect costs at the margin. The NIS cut applies equally to average and marginal labour costs. But the CT cuts affect the marginal cost of capital\* in different ways. Broadly speaking they reduce the subsidy on new investment in some kinds of asset (eg plant and machinery) and reduce the tax on others (eg commercial buildings). The table below gives some illustrative figures for required pre-tax rates of return necessary to achieve 5% post tax; with allowances reduced to Stage 3 levels and assuming a CT rate of 35 per cent.

<sup>\*</sup> That is the rate of return a new investment needs to earn in order to yield the post tax return required by suppliers of finance.

		Debt Finance		Equity Finance %					
	Plant	Industrial buildings	Commercial buildings	Plant	Industrial buildings	Commercial buildings			
Present System	-0.2	-0.1	3.2	2.0	2.2	7.7			
New System	2.5	2.7	4.1	3.1	3.4	4.8			
Change	+2.7	+2.8 *	+0.9	+1.1	+1.2	-2.9			

A + sign indicates an increase in the cost of capital and hence a disincentive to investment.

12. Note that these are stylised figures: they depend on the assumptions made. For example, they assume inflation at 5 per cent. But the tax system is not indexed and falling inflation would raise the pre-tax returns required to earn 5 per cent real after tax. Moreover, the figures assume companies are full taxpayers. In fact CT is not levied on a project basis and the change in marginal rates will depend on the tax position of the company\*. In particular, the changes in the regime may bring some companies from a (partially) tax exhausted situation into full tax. These complexities cannot be reduced to simple figures.

## Capital and Investment

13. Subject to this, the reduction in subsidy will discourage investment in some low yielding assets: and the reduction in effective tax will reduce the present disincentive to invest in some high yielding assets. This will improve the asset mix, and raise the productivity of the capital stock of whatever size. We could for instance get higher output from a given stock or the same output from a smaller stock. This quality improvement is a clear gain (see also III below).

<sup>\*</sup> The analysis does not take into account the special features of the North Sea regime.

- 14. Whether in the event the capital stock and the associated level of gross investment will be higher or lower in the longer run\* depends inter alia on changes in the overall marginal cost of capital. This will rise because although some investments become less costly, the majority will need to earn more pre-tax than before. By itself this will tend to reduce the 'optimal' level of the capital stock and the optimal level of capital per man.
- 15. The balance of these two effects on the size of the capital stock is not clear a priori. But it seems likely that they will reduce it (though the profitability effects discussed in Section I are likely to go the other way).

## Labour/Capital substitution

16. The quality improvement in para 13 above increases the productivity of both labour and capital - it is a net economic gain. But the increase in the overall cost of capital will tend to encourage the substitution of labour for capital and so reduce the productivity of labour (though it will increase that of capital). Since for practical purposes we may assume that total employment in the long run is given irrespective of the tax changes\*\*, this 'substitution effect' will - other things equal - be tending to reduce output (though the profitability effects in Section I will be working the other way). Reduction in output due to labour/capital substitution is not an economic loss. It merely reflects a better use of resources which involves less (subsidised, low yield) investment than would have taken place under the existing tax system. This is discussed further in Section III below.

<sup>\*</sup> There will be some increase in investment in the short run due to forestalling but this is not dealt with here.

<sup>\*\*</sup> There may be some effect on labour supply via work incentives.

- 17. The abolition of NIS initially reduces the cost of labour. Assuming this does not all leak into higher wages or lower prices this will tend to reinforce the increases in marginal capital costs and to encourage labour/capital substitution. Like the changes in post tax profitability, these initial gains to business will be redistributed as time goes by. Higher wages and lower prices (including capital goods prices) will tend to weaken the substitution effect. But it is worth remembering that these 'leaks' are not necessarily pure waste: eg higher wages associated with general improvements in efficiency of the kind suggested in Section I above may not raise wage costs per unit of output (or not to the same extent).
- 18. The main economic argument for the NIS cut is the potential medium-term gains to employment which it would encourage. It is unlikely to increase sustainable employment in the long run significantly. There may be some effect because labour supply is not completely inelastic (and indeed the package may generate some incentive effects which increase the supply), but this will be small compared to the additional employment which might be generated in the medium-term while there is excess supply of labour.
- 19. The changes in labour and capital costs thus give rise to a number of possible effects on the level of output, investment, the capital stock and labour productivity. None of them can be quantified with any precision. In particular the effects of changes in the marginal cost of capital on the level of investment have been notoriously difficult to assess though research does not suggest they are large. Moreover, the effects are not all working in the same direction: eg the improvements in the quality of capital will tend to raise labour productivity, but labour/capital substitution to reduce it. However, the economic value of the changes cannot be assessed in these terms. This is discussed in the next section.

## III - Criteria

20. The question here is how the effects identified in the previous section should be evaluated in terms of economic gain or loss.

To recapitulate, the effects are:-

- (a) an increase in post tax company profitability which could raise productive potential and labour and capital productivity. This may well involve a higher level of investment;
- (b) an improvement in the quality of investment and the capital stock due to a more even handed pattern of tax incentives affecting the different kinds of assets. This raises both capital and labour productivity;
  - (c) an overall increase in the marginal cost of capital relative to labour due to the CT changes reinforced especially in the short/medium term by the cut in NIS. These changes tend to reduce capital per man and hence to reduce labour productivity (and increase capital productivity).

It is not clear, however, whether the level of output, investment and the capital stock will be higher or lower, since the effects are not all pulling in the same direction.

21. It seems clear that the effects from increased profitability and from the improvement in the quality of capital are unequivocal gains. They imply increase in output per unit of input arising from greater efficiency and better resource allocation. The substitution effects under (c) appear less straightforward. In particular the possibility that labour productivity might fall seems on the face of it to imply some economic loss.

- 22. However, this is not so. As pointed out above, the reduction in capital per man which causes the reduction in labour productivity arises mainly because the subsidies at present given to some low yielding investments will be reduced by the CT changes. As the table in para ll above shows, some projects could, under the present regime, actually have a negative return and still pay the company: the taxpayer, not the project itself, provides the return.
- 23. Presumably there is no dispute that these projects waste resources, and that real income (living standards) would be raised if they were not undertaken. But some projects which have a positive but low rate of return will also be discouraged by the tax changes. If these projects are not undertaken people will be genuinely worse off in future years in the sense that they will have fewer disposable resources.
- 24. The question here is whether the investment is worthwhile, since in general the resources could be used in other ways. This cannot be answered solely in terms of conventional measures of GDP or national income. We need a value criterion and the rate of interest provides this.
- 25. Investment implies incurring a cost now in order to get a benefit in future. It is not worthwhile unless the future benefits are enough to balance the present costs. The rate of return required by investors gives a measure of the valuation of present and future costs and benefits as seen by the market. There are all sorts of reasons why this may not be a perfect measure, but taking it at face value, the implication is that a project which yields less than this in pre-tax terms (ie to the Government and the supplier of finance combined) is a wasteful use of resources. The benefits in future years are simply not worth the costs incurred now. Thus abandoning the project would raise real income in the 'true' sense (ie living standards) even though this could not be shown by the national accounts.

- 26. The upshot of all this is that if we were confident that markets would allocate resources on the basis of a reasonable measure of time preference and would take into account all the costs and prospective benefits from investment, then we would not worry whether the measured levels of investment, output, labour productivity etc ended up higher or lower. To the extent that the changes reduce distortions and allow markets to work better, the effects outlined in I and II above all point the same way in terms of economic benefit.
- 27. An obvious objection to this would be that the markets may not for various reasons evaluate costs and benefits correctly. In particular, there may be dynamic effects (economies of scale etc etc) which are not captured in conventional market appraisals. Arguments of this type underlay the favourable tax treatment given to manufacturing and to investment in P&M. However, the issue here is not whether such 'dynamic economies' etc exist (they do) but whether we can exploit them more effectively than the markets in spite of their shortcomings (and, if so, whether the tax system is the best instrument). Our track record is not encouraging. We have given generous incentives to investment but this has not resulted in 'high investment' economy: nor do we seem as a nation to have reaped as high a return as other countries from the investment we have undertaken.

## IV - Conclusion

The proposed changes:-

- (i) Corporation Tax reduction of capital allowances and bringing the CT rate down to, say, 35%;
- (ii) abolition of NIS;

### will:-

- (a) by increasing aggegate company profits, stimulate companies to intensify their search for profitable activities and so lead to higher output and, other things being equal, more investment;
- (b) by reducing the cost of labour, reinforce the incentive to increased employment in the medium term;
- (c) by reducing the extent to which the tax system distorts investment incentives, lead to a better quality and therefore more productive capital stock;
- (d) by reducing the tax subsidy to certain kinds of investment, discourage them. This will mainly take the form of reducing investment whose pre-tax yield is so low that it tends to reduce rather than increase living standards.

SIR TERRY BURNS

FROM: C J RILEY

DATE: 27 February 1984

cc Mr Byatt

Mr Monck

Mr Evans

Mr Odling-Smee

Mr Shields

Mr G P Smith

Mr Aaronson

Mr O'Donnell

Mr Ritchie

Mr Spencer

Mr Bayoumi

## ECONOMIC EFFECTS OF THE CORPORATE TAX PACKAGE

I attach a paper which sets out the estimates we have made of the effects of the corporate tax package, for discussion at your meeting tomorrow. The work has been done mainly by Tam Bayoumi. A concluding section describing the simulation results will be circulated before the meeting and meanwhile only print-out tables are attached.

C J RILEY

Porty.

#### ECONOMIC EFFECTS OF THE CORPORATE TAX PACKAGE

### Introduction

This paper presents some estimates of the economic effects of the corporate tax package, and sets out broadly how the have been derived. It does not discuss the nature of the economic effects at length, and where necessary reference should be made to Mr Smith's paper sent to the Chancellor on 21 February by Mr Monck. The analysis covers the period to 1988-89.

2. Modelling of the behaviour of the corporate sector poses many well known analytical and empirical problems. The Treasury model leaves much to be desired in this area, and is not capable itself of dealing adequately with the structural nature of the changes in the package. Quantitative analysis of the effects therefore requires significant judgemental input, with the model simulating mainly the second round effects. An additional difficulty arises because of the phased nature of the package, which will be announced at the time of the Budget. This is likely to cause expectational and timing effects which are extremely difficult to quantify, and which the model itself cannot deal with. The estimates presented in this paper must therefore be regarded as particularly uncertain, both in scale and in timing. They should be treated as no more than possible orders of magnitude.

### The Package

- 3. For the purposes of this paper the package is defined as follows:
  - (i) Reductions in the main corporation tax (CT) rate and first year capital allowances (FYA) as follows

	First year capital	allowances(%)	
Year in which	Plant, machinery	Industrial	
tax accrued	and vehicles	buildings	CT rate (%)
1983-84	100	75	50
1984-85	75	50	45
1985-86	50	25	37
1986-87	25 (WDA)	4 (WDA)	33
	(Floating Balance)	(Straight Line)	

By the end of the process only writing down allowances (WDA) will be available. The figures here pre-date the decision to change the CT rate to 40% and 35% in the last two years, but consequential changes should be small.

- (ii) Reduction in small companies CT rate

  The present rate of 38% is reduced to 30% in 1984-85.
- (iii) Abolition of stock relief

  This applies to tax accruals from 1984-85.
  - (iv) North Sea
    In addition to the CT package two further proposals for the North
    Sea sector have been modelled. These are the repeal of section
    17(3) of the Oil Taxation Act (1975) and the package of measures

designed to reduce tax losses from farmouts of licence interests in the North Sea.

(v) Abolition of NIS

The present rate is 1%, and abolition becomes effective from 6 August 1984.

### Revenue Effects

4. The total direct revenue effects of the package, calculated by Inland Revenue, are set out in table 1 below. They assume unchanged levels of profits, investment and labour costs.

TABLE 1 - DIRECT REVENUE EFFECTS

	1984-85	1985-86	1986-87	1987-88	1988-89
Corporation Tax					
Non-North Sea private sector	-210	-190	+ 35	+ 25	+195
North Sea companies	+ 35	- 75	-310	-220	- 60
Public corporations	- 5	0	+ 15	+ 15	+ 25
Total Corporation Tax	-180	-265	-260	-180	+160
NIS*	-465	-925	-980	-1025	-1070
Total package	-645	-1190	-1240	-1205	-910

<sup>\*</sup> After clawback.

- 5. The package therefore implies a significant net revenue loss/fiscal boost, due mainly to the abolition of NIS. By the end of the period the CT package is actually providing a small revenue gain, though this is a temporary phenomenon due to the particular profiles of the CT and allowance changes. By the end of the decade the CT rate reduction will be outweighing the effect of the FYA reduction and a progressive revenue loss from CT will emerge, building up to about £4 billion in 1993-94 at prices of the day.
- 6. Within the private sector, North Sea companies will gain significantly more from the CT package than non-North Sea companies over the MTFS period, in spite of the measures being proposed for clawing some of this back. This is because their mainstream CT payments are higher than average in relation to the value of capital allowances at this stage of North Sea development, and because they are not significantly affected by the abolition of stock relieve. However, the very low labour intensity of North Sea operations means that they gain very little from the reduction in NIS.

#### Substitution Effects

7. The package will significantly alter the costs of capital, labour, stockholding and borrowing for tax paying companies. The changes vary over time, with the nature of the asset, and with the form of borrowing. The effects of the changes will be to alter the optimal stocks of capital, labour, inventories and borrowing at given levels of output and income. Over

the period covered here, there will be significant changes in the flows of expenditures and financing as a result, though in the long run when stocks have full adjusted, effects on the flows should largely cease. The transitional period is likely to be longest for capital investment. The following sections set out the basis of our estimates.

## (i) The Cost of Capital

8. We take as our starting point the real cost of capital formula derived by King\*:

where A = present value of capital allowances

T = CT rate

 $\rho$  = post-tax cost of finance

T = inflation rate

S = rate of economic depreciation

The effects of the tax changes in the package on the cost of capital have been calculated on the basis of the following assumptions:

- a pre-tax interest rate of 10%
- 5% inflation
- economic depreciation rates of 10% for plant and machinery and  $3^{1}3^{8}$  for buildings
- 70% of investment is financed by equity or retained earnings, and 30% by bank borrowing

The estimates are set out in table 2 below, and described in detail in Annex A.

<sup>\*</sup> Review of Economic Studies, vol.41, 1974.

TABLE 2: EFFECTS ON THE COST OF CAPITAL

				Level*
Asset	1984-85	1985-86	1986-87 onwards	in 1983-84
Plant and machinery	- 0.5	+ 0.7	+ 1.4	1.3
Industrial buildings	- 0.2	+ 0.7	+ 1.3	1.7
Commercial buildings	- 1.9	- 1.5	- 1.4	5.5
Average over all assets				
(excluding company tax)	- 0.7	+ 0.3	+ 0.8	1.9

9. The effects are quite complicated - the reductions in FYAs reduce the net present value of allowances, and hence increase the cost of capital for plant and machinery and industrial buildings. The effect of reducing the CT rate differs between assets both because of different rates of economic depreciation and because of different allowance regimes. For commercial buildings, which depreciate slowly and attract no allowances, the reduction in tax is a significant net gain; whereas at the other extreme plant and machinery lose from a reduction in the value of any given rate of tax allowance and relatively rapid depreciation. Company cars were excluded from these calculations because most investment in company cars is a form of wage payment which attracts personal tax advantages, and is therefore unlikely to react to small changes in the cost of capital. In spite of the reduction for commercial buildings, the average cost of capital is increased in the long run by nearly 1% because of the increases for the other assets. This is a significant change in relation to the average level in 1983-84. However, in the first year the average cost of capital is reduced. This occurs essentially because the first stage of the reduction in allowances is not sufficient to offset the lower rate of CT which applies to profits in future years.

<sup>\*</sup> Net of depreciation

## (ii) The Cost of Stockholding

10. The cost of stockholding rises because of the abolition of stock relief, the extent of the rise depending on the rate of inflation. The formula in this case is

where a is zero with stock relief and unity with no stock relief. At the present rate of CT, the effect of abolishing stock relief is approximately equal to the rate of inflation - ie 5% given the assumptions made here.

As the inflation and the CT rates decline, so too does the effect of abolition of the cost of stockholding.

## (iii) The Cost of Labour

11. The abolition of NIS reduces the real cost of labour to the extent that it is not offset by an increase in real wages. If the supply of labour were completely inelastic one would expect this offset eventually to be complete, but in practice this is unlikely to be so. We have assumed that the labour supply elasticity is about a half the elasticity of demand for labour - say  $^{1}4-^{1}2$ % rather than  $^{1}2-1$ % - in which case the rise in real wages would offset about two thirds of the direct effect on real labour costs. The direct effect only about  $^{3}4$ %, because of the exclusion of some categories of labour, eg part-timers, and earnings limits. So our assumptions imply a reduction in the cost of labour in the long run of only about  $^{1}4$ %.

### (iv) The Cost of Borrowing

12. The net cost of equity finance is unchanged by the package because there is no change to the relevant tax rates. But the reductions in the CT rate increase the net cost of debt finance. With a 10% nominal interest rate, the reduction in the CT rate from 52% to 35% increases the net cost by 1.9% - from 4.8 to 6.7%

## (v) The size of the substitution effects

13. In order to estimate the size of the effects, it is necessary to make assumptions about the relevant elasticities. It has not been possible in the time available to do a survey of the relevant empirical work, and the elasticities have been chosen mainly with an eye to what is readily available. They do not derive from a complete and coherent model of company behaviour, which doubtless means that there are inconsistencies.

Nevertheless, they should permit moderately sensible estimates to be made of the orders of magnitude of the various effects.

Investment. The assumed elasticity with respect to the cost of capital is based on the model for manufacturing investment estimated by Charlie Bean (GES Working Paper No 25). The coefficient implies that a one point rise in the cost of capital would reduce the cumulated level of manufacturing investment by 4.5% in the long run. This effect, recalculated as an elasticity with respect to the capital stock, is equivalent to 0.35. This has been applied to non-manufacturing investment also, on the implicit assumption that it relevant to all types of asset. However, it has been assumed that changes in investment in buildings come through with a longer lag than changes in the plant and machinery. Allowance was also made for a fall in the capital stock of 0.1% over the same period as a result of the NIS change.

Employment. Given an assumed elasticity of demand for labour of  $3_{\rm H}$ , andd an a reduction in the cost of labour of  $1_{\rm H}\%$  will result in a rise in private sector employment of 0.2% This effect, equivalent to around 35 thousand new jobs, has been phased in over 5 years. In addition we have allowed for a rise in the level of employment of about 0.1%, due to the increase in the cost of capital.

Stocks. The assumed semi elasticity of the level of stock holding with respect to the cost of stocks was calculated using an overall elasticity derived from the coefficients on real interest rates in the stock equations on the model. These equations imply that a one point rise in the cost of stocks causes the level of stocks to fall by 0.6%. The effect of the abolition of stock relief is to raise the cost of holding stocks by 5%, thus reducing the level of stocks by 3% - or £400m at 1982 prices.

Bank Borrowing. The assumed elasticity used for the effect of changes in the post tax interest rate on the level of bank borrowing was derived from the model equation for bank lending by ICC's. The semi-elasticity of -1.8 implies that in the long run the rise in the cost of bank borrowing of 1.9% reduces the stock of bank borrowing by  $3^{1}2\%$  - or about £1 billion at 1982 prices.

### Forestalling.

- 14. Announcement in the Budget of future changes to the CT regime opens up the possibility that companies will alter the scheduling of their investment plans, particularly for plant and machinery. In both 1984-85, when the cost of capital is actually reduced, and in 1985-86, when it has increased by less than the full amount, there is an incentive to bring investment forward from later years. The extent of such forestalling is very difficult to gauge. It is not possibly simply to apply a standard elasticity to the difference in the cost of capital in the year in question from its long run value. The estimates are therefore highly subjective.
- 15. It is useful to distinguish two types of forestalling. The first, which we might term 'economic' forestalling, involves companies actually bringing forward investment decisions and the purchase and installation of capital goods. There are obvious limits to the extent to which this is possible. Many companies may be reluctant to advance existing plans, exposing themselves to a greater degree of uncertainty in the process. Many may not actually have plans more than a year or so ahead to be advanced. And even if they do, decision and production lags are likely to limit the extent of any resulting increase in investment. Forestalling of this sort is likely to have a relatively large effect on imports.
- 16. The second type might be termed 'financial' forestalling. In this case companies simply advance their payments on existing projects. First year allowances are granted at the time expenditure including progress payments is incurred, not at the time of delivery. The intention is also to change the rules for writing down allowances so that they too start when the expenditure is incurred. At relatively little cost in terms of interest paid or foregone, companies can therefore qualify for higher allowances by advancing payments a small amount, say from the beginning of one financial year to the end of the previous year. There would be no direct 'real' economic effects, but the revenue and financial effects could be quite large.
- 17. The extent of 'financial' forestalling is likely to be greater than of 'economic' forestalling. We have made some arbitrary, but hopefully plausible assumptions, remembering that most of the investment brought forward into 1984-85 and 1985-86 will mean lower investment in the later

years. Our assumptions are set out in table 3 below, together with the stimated effects on CT revenue of the financial forestalling.

TABLE 3: FORESTALLING (£million)

	1984-85	1985-86	1986-87	1987-88	1988-89
Economic forestalling	+ 500	+ 200	- 200	- 100	_
Financial forestalling	+1000	+ 500	- 750	- 750	
Total forestalling	+1500	+ 700	- 950	- 850	
Effect on CT revenue	0	- 290	- 310	- 90	+ 60

Financial forestalling of £1 billion in 1984-85 would occur if companies brought forward their payments by on average only one month, a fairly cautious assumption. Some may well do more than this. The figure assumed for total forestalling in 1984-85 is equivalent to about 10% of private investment in plant and machinery, with somewhat less in 1985-86. Needless to say these numbers could be wildly wrong.

#### Leasing

18. The alterations to the CT regime significantly affect the incentive to leasing. The incentive is increased in 1984-85 with the reduction in the cost of capital to tax paying, rather than tax exhausted, companies. But by 1986-87, leasing will have become much less attractive. Short term leases of up to 5 years will no longer be attractive for purely tax reasons, and this type of leasing business - which accounts for about £1.5 billion of new leases each year - is likely to be drastically reduced. Short leases are likely to remain attractive only to companies facing cash flow constraints and limits to their ability to borrow. Long leases are likely to remain attractive, though less so than at present. A further factor tending to reduce leasing business is that reductions in both allowances and the CT rate within a broadly neutral CT package will tend to reduce the number of tax exhausted companies.

19. Given all these considerations, we have made the following assumptions about leasing business.

## TABLE 4: EFFECTS ON LEASING BUSINESS

	1984-85	1985-86	1986-87	1987-88	1988-89
Total effects on					
investment, including	+ 500	+ 300	- 305	- 250	- 270
economic forestalling					
Total effects on	+ 400	+ 100	- 750	-1050	-1300
leasing					

They reflect both the effects of the package on total investment, and the switching of finance for existing investment. In 1984-85, the leasing effect is assumed to account for a high proportion of the total effect on investment. By the end of the period, it far exceeds it.

## Income and Profitability Effects

- 20. The net reduction in revenue as a result of the package will give rise to income effects on company income and expenditure. We have assumed:
  - (i) reductions in <u>prices</u> as increased net of tax profitability spurs on companies to increase output:
  - (ii) increases in  $\underline{wages}$  and  $\underline{employment}$ , as financial pressure on companies is eased;
  - (iii) increases in dividends.

Ultimately, these are likely to exhaust the total direct effect on companies' net of tax profits. In the short run there may well be some changes in the rates of stockbuilding, bank borrowing, and acquisition of liquid assets, but ultimately these must be small if there is to be no continuing change in the relevant stocks relative to output or income.

21. The relative importance of these effects will vary over time. We have had to make fairly arbitrary assumptions. For a given level of output it seems sensible to assume that ultimately the largest effect of any net gain from corporation tax will be on dividend distributions. We have assumed

that about two thirds of the total effect takes this form from 1987-88, with the remainder split between wages and prices. For NIS we have allowed the model to work unimpeded, and the change in costs feeds through roughly half and half into earnings and prices. In addition to these effects, we have assumed about £50 million per annum continuing increase in investment, for given levels of output, as increased profitability encourages firms to engage in more intensive product development and innovation.

### Direct Effects

22. Our assumptions about the direct effects of the package are set out in table 4 and 5 below.

TABLE 4: DIRECT EFFECTS OF THE CORPORATION TAX PACKAGE (£million)

	1984-85	1985-86	1986-87	1987-88	1988-89
Non-North Sea Revenues	- 210	- 190	+ 35	+ 25	+ 195
Investment	+ 500	+ 300	- 305	- 250	- 270
Employment	- 25	- 75	- 75	- 40	- 20
Stockbuilding	- 300	- 65	- 40	0	0
Producer prices	0	0	- 45	- 30	+ 15
Wage costs £m	0	0	85	80	- 10
Level of Liquid Assets	- 10	- 10	- 10	- 10	- 10
Level of Bank Borrowing	+ 450	+ 500	- 75	- 650	- 850
Change in dividend payments	- 5	+ 10	+ 140	+ 60	- 140

SIR TERRY BURNS

FROM: C J RILEY

DATE: 28 February 1984

cc Mr Byatt

Mr Monck

Mr Evans

Mr Odling-Smee

Mr Shields

Mr G P Smith

Mr Aaronson

Mr O'Donnell

Mr Ritchie

Mr Spencer Mr Bayoumi

## ECONOMIC EFFECTS OF THE CORPORATE TAX PACKAGE

I enclose the final section of this paper. I'm sorry yesterday's version was incomplete.

C J RILEY

23. For corporation tax the largest changes are to investment, mainly in plant and machinery, stocks, and bank lending. The income effects are small. It is possible that financial forestalling may be recorded by the CSO as a change in investment, and not offset in any other item of expenditure (eg stockbuilding). Since there are no 'real' effects from financial forestalling we have ignored this and included only the financial effects. But it seems possible that there may be as a result a spurious increase in the expenditure measure of GDP, not allowed for in the simulations.

TABLE 5: DIRECT EFFECT OF THE ABOLITION OF NIS

Revenue	1984-85	1985-86	1986-87	1987-88	1988-89
Revenue	- 465	- 925	- 980	- 1025	- 1070
Investment	- 25	- 50	- 50	- 50	- 100
Employment	+ 40	+ 120	+ 200	+ 240	+ 280
Prices	- 150	- 430	- 440	- 460	- 490
Wages	150	430	440	460	490

24. The direct effects of the abolition of NIS reflect the wage and price equation in the model, and judgemental effects on investment and employment. The wage and price figures in table 5 are rough estimates, based on model parameters. They are quantitatively the largest effects, though the employment and investment effects are not insignificant. Other effects on company behaviour implicit in the model are not recorded in the table.

## Simulation Results

- 25. The package has been run through the model, both including and excluding the abolition of NIS. The abolition of NIS has also been simulated separately, but note that due to non-linearities the simulation results do not quite add up. The results are summarised in table 6. They assume a fixed money supply (the weighted aggregate used in EEPM, not just a weighting of MO and £M3 as now seems more appropriate).
- 26. The results are dominated by the NIS change. The PSBR increases in the first two years are close to the figures on the latest scorecard. With

money supply fixed, there is some small increase in interest rates. Nevertheless in the first couple of years, there is some downward pressure on the exchange rate. This is because the current account deteriorates, reflecting both the overall fiscal boost - and thus slightly higher output - and the net positive effect of higher investment and lower stockbuilding on imports.

27. The estimated unemployment effects of the corporation tax part of the package reflect the vagaries of the company liquidity adjustment system in the model. They also reflect the imposition of negative <u>direct</u> effects on employment, due to the higher caital stock through most of the period. We may well need to consider this further. The timing of the investment and bank lending effects reflect the forestalling we have assumed due to the CT changes. With lower stockbuilding in the early years and reduced investment thereafter, the overall effect of the package is to increase non-North Sea ICCs' financial surplus throughout the period.

	1		Complete Package	Package. exclusing NIS	NIS	
Real GNP	1984-85					
Real GDP	1985-86		+0.1		+0.1	
( 6 )	(986 -87		+0.2		+0-1	
	1987-88		+ 0.2		+0.1	75 4 4 4 4 4
	2301	Chiango Inc.				
Money GDP	1984-85		-0.2	-	-0.1	
(%)	1985-86		-0.2		-0.2	
( %)	1986-87		-0.1	+0.1	-0.2	
	1987-88		-0.1	+0.1	-0.2	
	C147 G0					
RPT	1984-85		-0.1	-	-0.1	
<u>RPT</u> (%)	1985-86		-0.2	to.1	-0.2	
	1986-87		-0.2	-	-0.2	
	1987-88		-0.2	-	-0.2	
Arrage Rarungo	1984-85		×		+0.1	
Average Farmigo	1985-86		+0.1	-	+0.2	
	1986-87		+0.2	-	+0.2	
	1987-88		+ 0.2	-	+0.3	
Exchange Roste (°a)	1984-85		-0.1	-0.2	+0.1	
(%)	1985-86		-0.2	-0.5	+0.3	
	1986-87		+0.1	-0.2	-10.3	
	1987-88		+0.2	+0.1	+0.2	
(Housands)	1984-85		-		-	
(Housands)	1985-86			+16	-12	
	1986-87		-17	+16	-26	
	1987-88		-31	-	-27	
2 . 7						
Private Investment (excl. housing and land)	1984-85			41.2	-0.1	
(%)	1985-86			+1-1	+0-1	
	1986-87			-0.6	40.3	
	1987-88			- 0.9	+0.2	6 )
DCo A	1000 00	Scarcard	+632	+185		Senecard
PSBR (Limitain)	1984-85	+655	The second secon	N. C. A. C.	+464	+470
(Imilhory)	1985-86	+1260	+1195	+491	+708 +690	4 140
	1986-87		+ 996	+245	+787	
	1987-88		+ 116	+242	4 101	
Short form interest rates	1984-85		+0.1	+0.1	+0.1	
(%)	1985-86		+0.2	-	+0.5	
(%)	1986-87		+6.2	-0.2	+0.3	
	1987-88		+0.2	-0.1	+0.3	
	01 1-88		7 7 2		703	
Bank longuis to TCC.	1384-85		+ 0.3	40.5	-0.2	
Bank Lending to ICCs	1985-86		-0.6	+0.2	-0.5	
(10)	1986-87		- 1-6	-1.0	-0.5	
	1987-88		-2-1	-1.6	-0.6	
	()01-00		- a-1	- 1.0	_ 0	

		Complete Pactrage		NIS	
Current balance (±million)	1984-85	- 220	-289	-25	
(±million)	1985-86	-40S	-133 +195	-326 -535	
	1987-88	-726	-94	-409	
Non-NS ICCs' function frophis (Emillion)	1984-85	+ 688	+179	+378	VIII WAR THE STATE OF THE STATE
(Emllion)	1985-56	+ 631	+501	- 271	
	1987-58	- 37	+282	- 46	
			Control of the Contro		
	CONTRACTOR OF THE PERSON NAMED IN COLUMN 2				1
	Control of the Contro				

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DIFFERENCE TABLE ONE

	1 GDP	CONSUM -ERS EXPEND -ITURE %	REAL PERS DISP INC %	UNEM -PLOY MENT OOO'S	AVER -AGE EARN -INGS %	6 RPI %	7 NOMINAL GDP AT MARKET PRICES %	8 MAGGWT %	9 £M3 %	SHORT INTEREST RATES % PTS	EXCH -ANGE RATE %	COMPETI -NESS R WAGE COS		PSBR	NON NS ICCS NAFA
1984 1985 1986 1987	.02 .08 .14	.03 .16 .27 .36	.07 .26 .41 .54	-2.1 2.1 -12.0 -28.7	.01 .09 .15	03 18 19 20	08 23 15 11	.00	.03 .18 .38 .52	.08 .12 .21 .20	07 25 .11	35 85 47 37	-188 -332 -503 -680	330 1182 1168 1016	416 793 278 -2
1983/84 1984/85 1985/86 1986/87 1987/88	.00 .02 .10 .16 .17	.00 .05 .18 .31 .38	.00 .12 .28 .47	.0 -1.4 2 -16.7 -31.1	.00 .02 .10 .18 .24	.00 06 19 20 18	.00 15 21 13 10	.00	.00 .07 .22 .41 .58	.00 .11 .16 .20 .20	.00 12 18 .13 .16	.00 56 78 43 34	0 -220 -405 -559 -726	0 632 1195 1137 996	0 688 631 189 -37
1983 QTR 2 QTR 3 QTR 4	.00	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00	0 0 0	0 0 0	0 0
1984 QTR 1 QTR 2 QTR 3 QTR 4	.00 .01 .10	.00 01 .02 .09	.00 01 .12 .16	.0 2 -6.7 -1.5	.00 .00 .02 .01	.00 .01 03 08	.00 .00 05 26	.00 .00 .00	.00	.00 .11 .11	.00 .11 12 26	.00 .12 57 95	0 1 -111 -78	0 2 69 258	0 77 51 294
1985 QTR 1 QTR 2 QTR 3 QTR 4	01 .06 .12 .14	.11 .14 .19 .20	.20 .24 .29 .31	2.6 9.7 1.1 -5.0	.06 .09 .10	14 19 20 19	28 26 21 18	.00 .00 .00	.14 .18 .17 .22	.10 .04 .10 .23	22 31 28 17	85 91 88 78	-32 -88 -101 -111	303 281 295 304	279 179 172 170
1986 QTR 1 QTR 2 QTR 3 QTR 4	. 10 . 10 . 17 . 19	.20 .24 .31 .34	.30 .38 .46	-6.7 -5.7 -14.2 -21.4	.11 .14 .18 .19	17 17 20 21	17 18 13 11	.00	.32 .41 .41 .40	.27 .23 .16 .18	.06 .12 .11 .13	55 46 44 43	-105 -121 -125 -152	316 284 284 285	110 44 32 8
1987 QTR 1 QTR 2 QTR 3 QTR 4	.18 .15 .17	.34 .34 .37 .40	.53 .51 .55 .56	-25.6 -24.8 -30.1 -34.2	.20 .21 .24 .25	21 19 20 18	11 14 11 07	.00 .00 .00	.43 .50 .56 .61	.21 .18 .18 .21	.15 .14 .14 .17	39 38 36 33	-161 -161 -166 -191	284 222 253 258	-8 -44 -31 -31
1988 QTR 1	. 17	.38	.56	-35.2	.26	17	07	.00	.65	.23	. 18	29	-207	264	-42

NOTE: COLS 1-3,5-12 ARE PERCENTAGE CHANGES FROM BASE RUN

## DIFFERENCE TABLE SIX

## CURRENT RUN LESS BASE RUN

AT 1975 BASE RUN PRICES, SEASONALLY ADJUSTED FORECAST COLUMNS 1TO 9 IN £ MILLION

_	RECASI															
		1 CONS EXPDT	PUBLIC AUTH CONS	FIXED INV	4 EXPORTS GOODS+ SERVICES	5 STOCK BUILD -ING	6 TOTAL FINAL EXPDT	7 IMPORTS GOODS+ SERVICES		GDP(E) AT FACTOR COST		GDP(COMP) AT FACTOR COST E	12 GDP P-C OF BASE RUN	13 UNEMPLO 000'\$	P-C	15 MPLOYEES IN PLOYMENT
19 19 19	85 86	20. 127. 220. 301.	1. 0. 1. -1.	85. 87. -7. -44.	2. 26. 51. 36.	-30. -108. -28. 24.	78. 133. 238. 317.	47. 23. 47. 81.	7. 25. 35. 44.	24. 85. 157. 192.	0. -1. -1.	24. 83. 156. 191.	.02 .08 .17 .22	-2.1 2.1 -12.0 -28.7	01 .01 06 13	3.2 -3.2 18.1 42.9
19 19 19	83/84 84/85 85/86 86/87 87/88	0. 42. 144. 250. 311.	0. 4. 2. 1. -1.	0. 123. 63. -28. -44.	0. 5. 34. 52. 27.	0. -98. -55. -8. 29.	1. 75. 188. 268. 322.	0. 41. 47. 51. 87.	0. 13. 27. 38. 45.	1. 21. 115. 179. 190.	-1. -1. -1. -1. -1.	0. 21. 114. 178. 189.	.00 .02 .11 .20 .22	.0 -1.4 2 -16.7 -31.1	.00 01 .00 08 14	.0 2.2 .3 25.1 46.5
19	83 QTR 2 QTR 3 QTR 4	0.	0. 0. 0.	0. 0. 0.	0. 0. 0.	0. 0. 0.	1:	0. 0. 0.	0. 0. 0.	1: 1: 1:	-1. -1. -1.	0. 0. 0.	.00	.0	.00	.0
19	84 QTR 1 QTR 2 QTR 3 QTR 4	3.	0. 0. 0.	0. 1. 47. 38.	0. 0. 0. 2.	0. -1. 16. -45.	1. -2. 66. 14.	0. -5. 37. 15.	0. 0. 3. 5.	1. 3. 26. -5.	-1. 1. 0. 0.	0. 4. 26. -6.	.00 .01 .10 02	.0 2 -6.7 -1.5	.00 .00 03 01	.0 .2 10.2 2.3
19	85 QTR 1 QTR 2 QTR 3 QTR 4	37.	3. -6. 0. 3.	37. 16. 16.	3. 5. 8. 10.	-69. -18. -12. -8.	-4. 26. 49. 62.	-6. 4. 10. 15.	6. 5. 7.	-3. 17. 32. 39.	0. -1. -1. -1.	-3. 16. 31. 39.	01 .06 .12 .14	2.6 9.7 1.1 -5.0	.01 .04 .01 02	-4.0 -14.8 -1.7 7.5
, 19	86 QTR 1 QTR 2 QTR 3 QTR 4	63.	4. -5. -1. 3.	13. -11. -4. -5.	11. 13. 14. 13.	-16. -8. -6. 2.	53. 38. 66. 83.	18. 2. 8. 19.	7. 7. 10. 11.	28. 28. 48. 54.	-1. -1. -1. -1.	28. 27. 48. 53.	.10 .10 .17 .19	-6.7 -5.7 -14.2 -21.4	03 03 07 10	10.1 8.5 21.3 32.3
19	87 QTR 1 QTR 2 QTR 3 QTR 4	77.	4. -5. -1. 2.	-8. -16. -12. -8.	12. 10. 8. 5.	5. 7. 5. 8.	83. 67. 78. 91.	21. 16. 18. 25.	11. 10. 11. 12.	51. 41. 49. 53.	-1. -1. -1. -1.	50. 40. 48. 53.	.18 .15 .17 .19	-25.6 -24.8 -30.1 -34.2	12 11 14 16	38.4 37.1 45.1 51.1
19	88 QTR 1	80.	3.	7.	4.	9.	88.	28	12.	49.	-1.	48.	. 17	-35.2	16	52.7

DIFFERENCE TABLE TEN

BREAKDOWN OF PUBLIC SECTOR RECEIPTS(1)

	INCO	1 SONAL DME & ITAL KES	2 ON COMF TAXA	3 SHORE PANY ATION FCS	4 NORTH SEA TAXES	5 TAXES ON EXPEND. (2)	6 NAT.INS. CONTRIB -UTIONS	7 GROSS TRAD. SURPL.	8 LA RATES	9 RECEIPTS FROM PENSION FUNDS	10 OTHER INCOME	11 TOTAL PUBLIC SECTOR RECEIPTS
1984 1985 1986 1987		12 49 143 265	-100 -293 -125 31	0 -11 69 43	15 -12 -248 -258	-434 -1391 -1459 -1500	5 3 -49 -48	52 120 124 138	1 -2 5 10	0 0 0 0	-5 -23 -74 -116	-453 -1560 -1615 -1435
1983/84 1984/85 1985/86 1986/87 1987/88		0 16 72 173 294	0 -202 -258 -76 61	0 0 -12 95 23	0 39 -51 -312 -239	0 -772 -1411 -1471 -1510	0 7 -7 -53 -49	0 80 121 129 133	0 0 0 6 13	00000	0 -4 -34 -88 -123	0 -836 -1579 -1597 -1396
1983 QTR QTR QTR	3	0 0 0	0 0 0	0 0	0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	0 0	0 0 0
1984 QTR QTR QTR QTR	2	O 2 5 5	0 -1 1 -100	0 1 -1 0	0 0 -1 17	0 0 -139 -295	0 0 4 1	0 1 22 30	0 0 0 1	0 0 0	0 2 -14 7	0 4 -122 -335
1985 QTR QTR QTR QTR	2	4 8 15 22	-101 -64 -64 -64	0 -4 -4 -3	24 -12 -12 -12	-338 -346 -351 -357	1 2 1 -1	28 27 31 33	-1 0 0 0	0 0 0	. 1 -5 -9 -10	-383 -394 -393 -390
1986 QTR QTR QTR QTR	2 3	28 31 38 46	-66 -26 -16 -17	-1 21 25 25	-15 -73 -80 -80	-358 -364 -367 -370	-8 -11 -14 -16	29 38 26 31	0 1 1 2	0 0 0	-11 -18 -21 -24	-402 -400 -409 -404
1987 QTR QTR QTR QTR	2	58 63 69 76	-17 20 14 14	25 7 5 5	-79 -59 -60 -60	-370 -374 -376 -380	-12 -12 -12 -12	35 37 29 36	2 3 3 3	0 0 0 0	-25 -27 -31 -32	-384 -343 -358 -350
1988 QTR	_1	86	13	5	-60	-380	-13	30	5	0	-33	-346

<sup>(1)</sup> ON PAYMENTS RATHER THAN ACCOUNTS BASIS

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FULLP3 FIXED M

LESS EEPM BASE MK 12

DIFFERENCE TABLE ONE

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	GDP	CONSUM -ERS EXPEND -ITURE %	REAL PERS DISP INC %	UNEM -PLOY MENT	AVER -AGE EARN -INGS %	RPI %	NOMINAL GDP AT MARKET PRICES %	MAGGWT	£M3	SHORT INTEREST RATES % PTS	EXCH -ANGE RATE %	COMPETIVE -NESS REE WAGE COST	-ENT	PSBR £M	NON NS ICCS NAFA
1984 1985 1986 1987	.02 04 04 .02	01 07 06	.01 11 10	9 13.1 17.9 4.4	.00 01 .00	.02 .08 .06	01 02 .05 .08	.00	.01 .13 .01 05	.09 .04 17 11	10 44 27 .00	10 44 25 .03	-218 -217 177 7	84 458 502 309	89 458 692 426
1983/84 1984/85 1985/86 1986/87 1987/88	.00 .00 04 02 .02	.00 02 09 03 .04	.00 01 14 06 .08	.0 1.3 15.8 16.1 .3	.00 .00 01 .01 .03	.00 .03 .09 .04 .00	.00 03 .00 .06 .08	.00	.00 .04 .12 03 03	.00 .12 02 17 08	.00 19 45. 20 .05	.00 20 44 17 .08	0 -289 -133 195 -94	0 185 491 484 245	0 179 501 724 282
1983 QTR 2 QTR 3 QTR 4	.00	.00	.00	.0	.00	.00	.00	.00	.00	.00	.00	.00	0 0 0	0 0 0	0 0 0
1984 QTR 1 QTR 2 QTR 3 QTR 4	.00 .01 .07 02	.00 01 02 01	.00 01 .04 .00	.0 1 -5.0 1.6	.00 .00 .02 01	.00 .01 .02 .04	.00 .00 .03 06	.00	.00 .00 .01 .04	.00 .12 .12 .12	.00 .13 16 38	.00 .13 15 39	0 2 -102 -117	0 2 -10 92	0 79 -59 76
1985 QTR 1 QTR 2 QTR 3 QTR 4	08 03 02 02	04 07 08 10	08 10 13 15	8.6 13.5 14.3 16.0	02 .00 .00 01	.06 .08 .09	08 02 .00	.00	.11 .16 .15	.12 .05 .01 02	36 44 48 49	37 42 47 49	-71 -66 -46 -34	101 116 119 123	97 98 124 146
1986 QTR 1 QTR 2 QTR 3 QTR 4	07 07 02 01	11 07 04 02	19 11 07 05	19.4 18.3 18.2 15.8	02 01 .01	.09 .07 .04 .02	.02 .03 .06 .07	.00	.07 .04 01 06	11 16 21 19	37 29 24 17	38 28 20 14	13 52 66 46	134 135 117 117	132 159 167 150
1987 QTR 1 QTR 2 QTR 3 QTR 4	.00 .01 .02 .03	01 .02 .04 .05	02 .02 .07 .10	12.2 5.6 1.6 -1.8	.02 .02 .03 .04	.01 .00 .00	.07 .07 .08 .09	.00	07 06 04 02	14 13 10 06	09 02 .04 .08	06 .01 .07 .12	31 17 -2 -39	115 66 67 60	136 90 62 25
1988 QTR 1	.02	.06	. 12	-4.5	.04	.00	.08	.00	.02	03	.09	.13	-70	52	-9

NOTE: COLS 1-3,5-12 ARE PERCENTAGE CHANGES FROM BASE RUN

DIFFERENCE TABLE SIX

CURRENT RUN LESS BASE RUN

AT 1975 BASE RUN PRICES, SEASONALLY ADJUSTED FORECAST COLUMNS 1TO 9 IN £ MILLION

FORECAST COLUMNS 1TO 9 IN £ MILLION															
	1 CONS EXPDT	PUBLIC AUTH CONS	3 FIXED INV	4 EXPORTS GOODS+ SERVICES	5 STOCK BUILD -ING	6 TOTAL FINAL EXPDT	7 IMPORTS GOODS+ SERVICES		9 GDP(E) AT FACTOR COST		11 GDP(COMP) AT FACTOR COST	GDP P-C OF BASE RUN	13 UNEMPLO' 000'S	P-C I	
1984 1985 1986 1987	-6. -56. -48. 20.	0. -3. -5. -3.	130. 153. -103. -179.	0. 12. 38. 35.	-40. -157. -118. 22.	84. -51. -236. -106.	61. -10. -179. -119.	5. 0. -11. -5.	18. -41. -46. 18.	0. 0. 0.	17. -41. -46. 18.	.02 06 06 .02	9 13.1 17.9 4.4	.00 .06 .08 .02	1.3 -19.9 -27.0 -6.6
1983/84 1984/85 1985/86 1986/87 1987/88	0. -15. -70. -28. 35.	0. 0. -4. -4. -3.	0. 208. 90. -155. -183.	0. 1. 18. 42. 28.	0. -115. -121. -91. 58.	1. · 80. -87. -237. -65.	0. 75. -42. -200. -86.	0. 8. -5. -11. -3.	1. -3. -40. -26. 25.	-1. -1. 0. 0.	0. -4. -40. -26. 25.	.00 01 06 04 .03	.0 1.3 15.8 16.1 .3	.00 .01 .07 .07	.0 -2.0 -23.9 -24.2 4
1983 QTR 2 QTR 3 QTR 4	0. 0. 0.	0. 0. 0.	0. 0. 0.	0. 0. 0.	0. 0. 0.	1: 1: 1:	0. 0. 0.	0. 0. 0.	1. 1. 1.	-1. -1. -1.	0. 0. 0.	.00	.0	.00	.0
1984 QTR 1 QTR 2 QTR 3 QTR 4	0. -2. -3. -1.	0. 0. 0.	0. 1. 45. 84.	0. 0. 0.	0. -1. 12. -51.	1. -2. 54. 32.	0. -5. 33. 33.	0. 0. 2. 4.	1. 3. 19. -5.	-1. 1. 0. 0.	0. 3. 19. -5.	.00 .01 .07 02	.0 1 -5.0 1.6	.00 .00 02 .01	.0 .1 7.6 -2.5
1985 QTR 1 QTR 2 QTR 3 QTR 4	-8. -13. -16. -19.	0. -1. -1. -1.	78. 28. 24. 23.	1. 2. 4. 5.	-74. -27. -27. -29.	-5. -11. -16. -21.	14. -1. -9. -13.	3. 0. -1. -2.	-21. -9. -6. -7.	0. 0. 0.	-21. -9. -5. -6.	08 03 02 02	8.6 13.5 14.3 16.0	.04 .06 .07 .07	-13.1 -20.4 -21.7 -24.2
1986 QTR 1 QTR 2 QTR 3 QTR 4	-22. -13. -7. -5.	-1. -1. -1. -1.	15. -42. -38. -37.	7. 9. 11. 11.	-38. -30. -30. -20.	-40. -79. -66. -52.	-18. -55. -59. -48.	-2. -4. -3. -2.	-20. -20. -5. -2.	0. 0. 0.	-20. -20. -4. -2.	07 07 01 01	19.4 18.3 18.2 15.8	.09 .08 .08	-29.3 -27.5 -27.4 -23.8
1987 QTR 1 QTR 2 QTR 3 QTR 4	-3. 4. 7. 11.	-1. -1. -1. 0.	-37. -51. -48. -43.	11. 10. 8. 6.	-11. 1. 11. 20.	-42. -37. -23. -6.	-39. -37. -28. -15.	-2. -2. -1. 0.	0. 2. 7. 9.	0. 0. 0.	0. 2. 7. 9.	.00 .01 .03 .03	12.2 5.6 1.6 -1.8	.06 .03 .01 01	-18.2 -8.4 -2.4 2.7
1988 QTR 1	12.	1	-41.	4.	26.	1	-6.	0.	7.	-1.	7.	.03	-4.5	02	6.7

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FULLP3 FIXED M

DIFFERENCE TABLE TEN

BREAKDOWN OF PUBLIC SECTOR RECEIPTS(1)

	1 PERSONAL INCOME & CAPITAL TAXES	2 ON COMP TAXA ICCS		4 NORTH SEA TAXES	5 TAXES ON EXPEND. (2)	6 NAT.INS. CONTRIB -UTIONS	GROSS TRAD. SURPL.	8 LA RATES	9 RECEIPTS FROM PENSION I FUNDS	10 OTHER INCOME	11 TOTAL PUBLIC SECTOR RECEIPTS
1984 1985 1986 1987	8 -38 -68 4	-100 -328 -178 -10	-1 -25 41 27	16 1 -210 -234	6 10 -9 3	2 2 25 14	5 13 12 10	0 3 2 2	0 0 0 0	17 2 -77 -101	-47 -359 -463 -285
1983/84 1984/85 1985/86 1986/87 1987/88	0 4 -51 -59 27	0 -203 -304 -131 30	0 -2 -31 69 12	0 42 -33 -275 -219	0 9 5 -9 10	0 -3 11 24 10	0 6 3 24 7	0 0 3 3 3	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	0 24 -15 -93 -97	0 -123 -412 -447 -216
1983 QTR 2 QTR 3 QTR 4	0 0 0	0 0	0 0 0	0 0 0	0 0 0	0 0	0 0	0 0 0	0 0 0	0 0 0	0 0 0
1984 QTR 1 QTR 2 QTR 3 QTR 4	O 2 5 2	0 -1 1 -101	0 1 -1 -1	0 0 -1 17	0 0 2 4	0 0 3 -1	0 1 3 1	0 0 0 0	0 0 0 0	0 2 5 10	0 4 17 -69
1985 QTR 1 QTR 2 QTR 3 QTR 4	-4 -9 -11 -13	-103 -75 -75 -75	-2 -7 -8 -8	27 -9 -8 -8	3 3 2 2	-4 2 2 2	1 3 4 5	0 1 1 1	0 0 0	7 3 -1 -6	-75 -88 -95 -101
1986 QTR 1 QTR 2 QTR 3 QTR 4	-17 -19 -18 -14	-79 -39 -30 -31	-8 13 18 18	-8 -64 -69 -69	-1 -4 -3 -1	5 6 7 7	-9 3 12 6	0 1 1 1	0 0 0	-11 -19 -22 -26	-128 -122 -104 -109
1987 QTR 1 QTR 2 QTR 3 QTR 4	-9 -1 5 9	-31 9 6 7	19 3 2 3	-72 -52 -55 -55	-1 -1 1 4	5 3 3	3 2 2 2	0 1 1	0 0 0	-26 -26 -25 -24	-112 -62 -60 -50
1988 QTR 1	15	8	4	-57	6	11	0	1_	0	-21	-43

<sup>(1)</sup> ON PAYMENTS RATHER THAN ACCOUNTS BASIS

NIS-1 AUG FIXED MAGGWT

LESS EEPM BASE MK 12

## DIFFERENCE TABLE ONE

												 12			15
	GDP	CONSUM -ERS EXPEND -ITURE %	REAL PERS DISP INC	UNEM -PLOY MENT	AVER -AGE EARN -INGS %	6 RPI %	7 NOMINAL GDP AT MARKET PRICES %	8 MAGGWT %	9 £M3 %	SHORT INTEREST RATES % PTS	EXCH -ANGE RATE	COMPETI -NESS R WAGE COS	VE CURR EL -ENT	PSBR £M	NON NS ICCS NAFA
1985 1986 1987	. 10 . 13 . 12	.23 .30 .32	.39 .48 .47	-7.7 -23.5 -27.6	.23	20 18 17	16 17 17	.00	.07 .38 .53	.15 .33 .27	.20 .32 .19	30 20 31	-251 -512 -440	731 694 748	113 -225 -121
1984/85 1985/86 1986/87 1987/88	.02 .11 .13 .11	.07 .25 .32 .32	. 14 . 42 . 49 . 45	.1 -12.1 -26.0 -27.2	.08 .24 .24 .25	08 20 18 16	10 16 17 17	.00 .00 .00	.02 .13 .43 .56	.06 .23 .31 .26	.14 .26 .27 .18	25 24 24 31	-25 -326 -535 -409	464 708 690 787	378 1 -271 -46
1984 QTR 2 QTR 3 QTR 4	01 01 .03	01 .01 .09	01 .07 .18	.5 1.5	.00	.00	.00 09 15	.00	.00	.06	.06 .14 .18	.06 29 42	4 6 -3	2 86 171	8 124 154
1985 QTR 1 QTR 2 QTR 3 QTR 4	.07 .07 .11	.16 .21 .26 .28	.30 .37 .44 .45	-2.4 -1.6 -10.4 -16.3	.18 .22 .26 .24	16 21 22 20	16 20 16 13	.00 .00 .00	.03 .02 .06 .16	.06 .08 .17 .29	.16 .15 .20 .29	35 35 27 20	-31 -55 -73 -91	204 171 177 179	92 27 -2 -4
1986 QTR 1 QTR 2 QTR 3 QTR 4	.14 .11 .14 .15	.27 .28 .32 .33	.44 .46 .50	-20.2 -18.5 -25.8 -29.6	.22 .22 .24 .24	17 17 18 18	14 20 17 16	.00	.29 .39 .42 .44	.38 .35 .30 .29	.39 .36 .29	13 16 22 27	-107 -135 -132 -138	181 159 176 178	-20 -67 -67 -71
1987 QTR 1 QTR 2 QTR 3 QTR 4	.14 .09 .11 .13	.33 .31 .32 .34	.50 .45 .46	-30.1 -24.7 -27.0 -28.6	.24 .23 .25 .25	18 16 17 16	16 19 18 15	.00 .00 .00	.47 .51 .56	.29 .27 .25 .26	.21 .18 .17 .18	29 32 32 31	-130 -110 -99 -101	177 168 197 206	-66 -45 -14 4
1988 QTR 1	.12	.32	.45	-28.4	.26	15	15	.00	.59	.26	.20	28	-99	217	9

NOTE: COLS 1-3,5-12 ARE PERCENTAGE CHANGES FROM BASE RUN

NIS-1 AUG FIXED MAGGWT

DIFFERENCE TABLE SIX

## CURRENT RUN LESS BASE RUN

AT 1975 BASE RUN PRICES, SEASONALLY ADJUSTED FORECAST COLUMNS 1TO 9 IN £ MILLION

FORECAST COLONIAS TO 9 IN E WILLIAM															
	1 CONS EXPDT	2 PUBLIC AUTH CONS	FIXED INV	4 EXPORTS GOODS+ SERVICES	5 STOCK BUILD -ING	6 TOTAL FINAL EXPDT	7 IMPORTS GOODS+ SERVICES		9 GDP(E) AT FACTO COST		GDP(COMP) AT FACTOR COST	12 GDP P-C OF BASE RUN	000'S	14 )YMENT EM P-C I EMP	
1985	179.	-5.	12.	8.	25.	220.	84.	28.	107.	-1.	106.	.13	-7.7	04	11.6
1986	245.	-2.	47.	4.	50.	345.	158.	40.	147.	-1.	146.	.18	-23.5	11	35.4
1987	265.	-4.	31.	-2.	-7.	284.	112.	42.	130.	-1.	129.	.16	-27.6	13	41.3
1984/85	51.	0.	-3.	2.	-10.	40.	8.	8.	24.	-1.	23.	.03	.1	.00	2
1985/86	202.	-3.	22.	8.	38.	267.	111.	32.	124.	-1.	124.	.15	-12.1	06	18.3
1986/87	257.	-2.	46.	2.	45.	348.	159.	41.	148.	-1.	147.	.18	-26.0	12	39.1
1987/88	265.	-4.	30.	-4.	-23.	265.	98.	41.	126.	-1.	125.	.15	-27.2	12	40.7
1984 QTR 2	-1.	0.	0.	0.	-1.	-3.	-1.	0.	-2.	0.	-2.	01	.5	.00	7
QTR 3	2.	-1.	0.	0.	-4.	-3.	-1.	0.	-2.	0.	-1.	01	1.5		-2.3
QTR 4	18.	0.	-3.	0.	-5.	11.	1.	3.	8.	0.	7.	.03	.9		-1.3
1985 QTR 1 QTR 2 QTR 3 QTR 4	32. 41. 51. 55.	1. -6. -1. 2.	0. 2. 3. 7.	1. 2. 2. 2.	0. 5. 9. 12.	35. 44. 64. 78.	10. 18. 25. 32.	5. 6. 8. 9.	20. 20. 31. 38.	-1. -1. -1. -1.	20. 19. 31. 37.	.07 .07 .11	-2.4 -1.6 -10.4 -16.3	01 01 05 07	3.7 2.4 15.7 24.7
1986 QTR 1	55.	3.	10.	2.	12.	82.	36.	9.	37.	-1.	37.	.14	-20.2	09	30.5
QTR 2	57.	-6.	11.	1.	13.	77.	38.	9.	30.	-1.	30.	.11	-18.5	08	27.9
QTR 3	65.	-1.	14.	1.	12.	91.	42.	10.	39.	-1.	39.	.14	-25.8	12	38.9
QTR 4	68.	2.	12.	0.	12.	95.	42.	11.	42.	-1.	42.	.15	-29.6	14	44.6
1987 QTR 1	67.	3.	9.	0.	7.	86.	37.	11.	38.	-1.	38.	.14	-30.1	14	45.1
QTR 2	63.	-5.	6.	0.	1.	65.	28.	10.	27.	-1.	26.	.09	-24.7	11	36.9
QTR 3	66.	-2.	7.	-1.	-6.	64.	23.	10.	31.	-1.	30.	.11	-27.0	12	40.3
QTR 4	70.	1.	9.	-1.	-9.	70.	23.	11.	36.	-1.	35.	.13	-28.6	13	42.8
1988 QTR 1	67.	2.	8.	-1.	-9.	68.	23.	11.	34.	1.	34.	. 12	-28.4	13	42.5

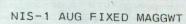
NIS-1 AUG FIXED MAGGWT

DIFFERENCE TABLE TEN

BREAKDOWN OF PUBLIC SECTOR RECEIPTS(1)

	1 PERSONAL INCOME & CAPITAL TAXES	2 3 ON SHORE COMPANY TAXATION ICCS FCS	4 NORTH SEA TAXES	5 TAXES ON EXPEND. (2)	6 NAT.INS. CONTRIB -UTIONS	7 GROSS TRAD. SURPL.	8 LA RATES	9 RECEIPTS FROM PENSION FUNDS	OTHER	11 TOTAL PUBLIC SECTOR RECEIPTS
1985 1986 1987	139 223 270	33 13 51 23 38 14	-17 -34 -23	-1382 -1437 -1504	8 -56 -42	108 118 132	6 16 16	0 0	-10 3 -25	-1103 -1093 -1125
1984/85 1985/86 1986/87 1987/88	30 173 237 277	-3 3 45 18 53 22 31 11	-8 -19 -33 -23	-778 -1396 -1453 -1522	14 -11 -58 -41	71 112 121 128	0 13 14 17	0 0 0 0 0 0	-19 -5 -2 -34	-689 -1070 -1098 -1156
1984 QTR 2 QTR 3 QTR 4	1 2 9	0 0 -1 1 -1 1	0 -1 -2	0 -142 -297	0 1 4	0 16 29	0 0 1	0 0	1 -16 -1	1 -141 -257
1985 QTR 1 QTR 2 QTR 3 QTR 4	19 30 42 49	-1 1 10 3 11 4 12 5	-4 -5 -4 -4	-338 -344 -348 -352	9 1 0 -2	27 23 27 31	-1 2 2 2	0 0 0	-4 -4 -3 0	-293 -284 -268 -259
1986 QTR 1 QTR 2 QTR 3 QTR 4	53 53 56 61	12 6 12 6 13 6 14 5	-7 -8 -10 -10	-352 -356 -361 -367	-10 -12 -16 -18	31 42 19 27	6 3 4 4*	0 0 0 0	2 2 0 -1	-26C -258 -289 -286
1987 QTR 1 QTR 2 QTR 3 QTR 4	67 66 67 71	14 9 8 8 7	-6 -6 -5 -6	-368 -373 -378 -385	-12 -10 -10 -10	34 36 27 35	4 4 4 4	0 0 0	-3 -4 -8 -10	-265 -275 -293 -292
1988 QTR 1	74	7 . 2	-5	-386	-11	30	5	0	-12	-296

<sup>(1)</sup> ON PAYMENTS RATHER THAN ACCOUNTS BASIS
(2) EXCLUDING NORTH SEA



EEPM BASE MK 12

#### DIFFERENCE TABLE TWO

			1 PSBR	2 GILT SALES TO NON -BANKS	3 NAT SAVINGS	4 OTHER DEBT SALES TO NON -BANKS	5 CHANGE IN BANK LENDING TO PR. SECTOR	6 NET EXTE- RNALS	7 CHANGE IN M3	8 STOCK OF £M3	9 £M3 % OF BASE	10 MAGGWT % OF BASE	11 VELOC £M3 % OF BASE	12 M1 % OF BASE	13 PSL2 % OF BASE	14  INTER BANK RATE % PTS
1985 1986 1987			731 694 748	407 190 66	37 41 38	11 5 5	-97 34 -248	-45 -113 -154	150 379 236	199 577 813	.07 .38 .53	.00	22 53 69	04 33 48	.04 .23 .34	.15 .33 .27
1984/ 1985/ 1986/ 1987/	86 87		464 708 690 787	214 229 212 138	17 39 42 36	8 12 1 7	-198 -49 -33 -260	12 -46 -148 -143	38 332 254 203	38 369 623 826	.02 .13 .43 .56	.00	12 27 59 72	01 10 37 51	.01 .08 .27	.06 .23 .31 .25
	QTR QTR QTR	3	2 86 171	48 -41 29	O 3 6	0 3 2	-33 -60 -69	7 10 31	0 22 26	0 22 49	.00	.00	.00 10 18	.00 01 02	.00	.06 .06
	QTR QTR QTR QTR	3	204 171 177 179	177 123 85 21	8 9 11 10	3 2 2 4	-36 -34 -21 -6	-8 -15 -14 -9	-11 -12 44 129	38 26 70 199	.03 .02 .06	.00	19 23 21 25	.00 .01 03 13	.02 .02 .04	.06 .08 .17
(	QTR QTR QTR QTR	2 3	181 159 176 178	0 31 90 69	10 10 11 11	4 1 0 1	12 35 13 -25	-9 -25 -36 -43	170 128 52 29	369 497 549 577	.29 .38 .42 .43	.00	38 56 59 60	25 33 36 38	.17 .23 .26	.38 .35 .30
(	QTR QTR QTR QTR	2 3	177 168 197 206	22 -17 10 51	11 9 10 , 8	0 2 2 2	-55 -57 -67 -69	-44 -40 -36 -34	46 77 73 41	623 700 772 813	.46 .51 .56	.00	62 69 72 73	41 46 50 52	.30 .34 .37	.29 .27 .25
1988	QTR_	1	217	94	9	_ 1_	-67	-32	13	826	.58	.00	74	53	.37	.26

COLS 1 TO 10 £ MILLION

NOTE: ANNUAL PERCENTAGE CHANGES ARE AVERAGES OF QUARTERLY PERCENTAGE CHANGES

LESS EEPM BASE MK 12

NIS-1 AUG FIXED MAGGWT

DIFFERENCE TABLE THREE

# PERCENTAGE CHANGES FROM BASE RUN

					 5	6	7	8 PR	9 ICES	10	11			14 TIVENESS
	EARNINGS	REAL TAKE HOME PAY	WAGE COSTS	EXC EQUIL. EXPECT. (RXPQ)	HANGE RA	EXPECT NEXT PERIOD (RXPE)	RETAIL	CONSUMER		IMPORTS	GDPM DEFLATOR	TFE DEFLATOR		REL EXP PRICES
1985 1986	.23	.42	49 51 49	.34 .59 .50	.20	.25 .61 .88	20 18 17	22 26 25	27 34 31	19 29 22	27 32 31	26 32 29	29 20 31	03 02 08
1987 1984/85 1985/86 1986/87	.08 .24 .24 .25	. 15 . 45 . 47	38 49 51 49	.19 44 .56 .49	.14 .26 .27	.11 .35 .66	07 20 (18 16	09 23 27 25	10 30 34 30	10 23 27 21	12 28 32 30	12 28 32 28	25 24 24 31	.04 01 06 08
1987/88  1984 QTR 2 QTR 3 QTR 4	.00	.00	.00	.07	.06	.04	.00	05	.00 05 :4	03 09 13	.01 09 18	.00 09 17	.06 29 42	.05 .09 .04
1985 QTR 1 QTR 2 QTR 3	.18 .22 .26	.34 .41 .47 .45	52 49 47 50	.23 .25 .36	.16 .15 .20 .29	.16 .19 .27 .40	16 21 22 20	23 23	23 27 29 31	15 16 19 26	24 29 29 28	22 26 27 28	35 35 27 20	03 08 04 .02
QTR 4 1986 QTR 1 QTR 2 QTR 3	.22	.45	51 52 51	.65 .62 .55	.39 .36 .29	.53 .59 .62 .69	17 17 18	26 28	33 35 35 34	32 26 30 27	29 33 33 32	30 32 33 32	13 16 22 27	.07 .01 06 08
QTR 4	.24 .23 .25	.47 .43 .45 .45	49 50 49 49	.53 .50 .43	.21 .18 .17 .18	.76 .84 .91	18 16 17	25 25	33 31 30 30		32 31 31 30	30 29 29 28	29 32 32 31	09 09 09 07
QTR 4		.44	47	.49	.20	1.09	15 	5 24	30		29	27	28 	05



PACKAGE EXCLUDING NIS.
EEPM BASE MK 12

DIFFERENCE TABLE TWO

				7										
1984	PSBR	2 GILT SALES TO NON -BANKS	3 NAT SAVIN	4 OTHER GS DEBT SALES TO NO -BANKS	IN BANK LENDING	6 NET EXTE- RNALS	7 CHANGE IN M3	8 STOC OF £	9 CK £M3 .M3 % 0 BAS	F % 0F	£M3 % OF	% OF %	2 OF INTER	
1984 1985 1986 1987 1983/84 1984/85 1985/86 1986/87 1987/88 	84 458 502 309 0 185 491 484 245 0 0 0 0 0 2 -10 92 101 116 119 123 134 135 117 117 115 66 67 60 52	87 -83 416 1080  0 -6 -72 764 1072 0 0 0 92 131 -137 -93 2 -5 13 -82 173 133 191 266 264 284 266	3 - 4 -	-11 -110 -408 -756 -28 -174 -499 -786 -7 0 0 0 -8 -9 7 -18 -31 -31 -31 -31 -31	SECTOR  301 -398 -799 -72  0 168 -631 -508 38 -631 -508 38 -631 -508 38 -631 -636 -631 -738 -111 -136 -366 -124 -181 -128 -75 -25	-212 -224 105 156 0 -261 -152 115 146 -0 0 11 -107 -116 -49 -63 -58 -54 24 22 29 30 34 45 42 35	52 80 -208 54 0 127 -43 -184 127 -0 0 0 0 -5 17 39 76 66 -13 -48 -47 -33 -62 -66	52 131 -77 -23 0 127 84 -100 27 0 0 0 0 0 0 0 0 0 0 127 12 52 127 193 179 131 84 51 -111 -77	.01 .01 .03 .01 05 .00 .04 .12 03 03 		% OF BASE	% OF % (	OF INTER BANK RATE % PTS	
COLS 1 TO 10 £ NOTE: ANNUAL I		258  GE CHANGES		203	35	24		-23 27 	02	.00	.03 .02	.2542	13 10 06	
			THE AVE	RAGES 0	F QUARTER!	Y DEDCE						.2651	03	

ALTIOAL PERCENTAGE CHANGES ARE AVERAGES OF QUARTERLY PERCENTAGE CHANGES



DIFFERENCE TABLE THREE

#### PERCENTAGE CHANGES FROM BASE RUN

	1 EARNINGS	2 REAL TAKE HOME PAY	3 WAGE COSTS	4 EXC EQUIL. EXPECT (RXPQ)	5 HANGE RA	6 TES EXPECT NEXT PERIOD (RXPE)	7  RETAIL			10 	11 GDPM DEFLATOR	TEE	DEI	14 TIVENESS REL EXP PRICES
1984 1985 1986 1987	.00 01 .00 .03	.00 08 09 01	.00	.11 .04 22 15	10 44 27 . 00	.08 .48 .73 .71	.02	.01 .06 .09	.00	.05 .35 .24	03 .01 .09		 10 44 25	
1983/84 1984/85 1985/86 1986/87 1987/88	.00 .00 01 .01 .03	.00 02 10 07 .00	.00 .00 .01 .03 .03	.00 .15 03 23 11	.00 19 45 20	.00 .16 .57 .74 .68	.00 .03 .09 .04	.00 .01 .08 .08	.00 .02 .12 .07	.00 .12 .35 .20	.00 03 .04 .09	.00 01 .11 .13	.03 .00 20 44 17	.04 .00 14 20 04 .05
1983 QTR 2 QTR 3 QTR 4	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00
1984 QTR 1 QTR 2 QTR 3 QTR 4	.00 .00 .02 01	.00 .00 .01 03	.00 .00 .01 01	.00 .15 .15	.00 .13 16 38	.00	.00 .01 .02 .04	.00	.00 01 01	.00 07 .06	.00 01 04 06	.0C 02 03 01	.00 .13 15 39	.00 .11 17
1985 QTR 1 QTR 2 QTR 3 QTR 4	02 .00 .00 01	06 07 09 10	01 .02 .01 .01	.15 .06 .00 03	36 44 48 49	.32 .42 .53 .64	.06 .08 .09	.03 .06 .08	.08 .10 .12 .13	.27 .33 .38 .40	02 .01 .02 .03	.04 .08 .10	37 42 47 49	30 20 23 24 23
1986 QTR 1 QTR 2 QTR 3 QTR 4	02 01 .01	12 10 07 06	.00 .01 .03 .03	14 22 28 25	37 29 24 17	.72 .74 .73 .73	.09 .07 .04 .02	.09	.14 .13 .09	.27 .25 .25	.09	. 14 . 16 . 14	38 28 20	11 06 06
1987 QTR 1 QTR 2 QTR 3 QTR 4	.02 .02 .03 .04	04 02 .00	.02 .02 .03 .03	19 17 14 08	09 02 .04 .08	.74 .72 .69 .67	.01	.06 ,05 .04 .03	.03	.12 .07 .02	.07 .06 .06	.10 .08 .06	06 .01 .07	.00 .03 .05
1988 QTR 1	.04	.02	03	05 	.09	.65_	.00	.02	.00	04	.06	.04	.13	.06

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ACKAGE INCLUDING NIS.

EEPM BASE MK 12

DIFFERENCE TABLE TWO

	1 PSBR	2 GILT SALES TO NON -BANKS	3 NAT SAVINGS	SALES	5 CHANGE IN BANK LENDING TO PR. SECTOR	6 NET EXTE- RNALS	7 CHANGE IN M3	8 STOCK OF £M3	9 £M3 % OF BASE	10 MAGGWT % OF BASE	11 VELOC £M3 % OF BASE	12 M1 % OF BASE	13 PSL2 % OF BASE	14  INTER BANK RATE % PTS	
1984 1985 1986 1987	330 1182 1168 1016	115 352 605 1058	5 26 48 52	-6 -100 -401 -752	174 -591 -635 -259	-204 -228 -24 -79	108 161 256 319	108 269 525 844	.03 .18 .38 .52	.00	11 44 61 71	01 11 24 27	.01 .08 .10 03	.08 .12 .21 .20	
1983/84 1984/85 1985/86 1986/87 1987/88	0 632 1195 1137 996	0 181 208 948 1110	0 12 30 51 52	0 -21 -162 -496 -780	0 -47 -706 -395 -206	0 -243 -173 -66 -81	0 169 240 172 327	0 169 409 581 908	.00 .07 .22 .41 .58	.00	.00 21 46 64 76	.CO C4 14 25 28	.00 .03 .09 .07 06	.00 .11 .16 .20 .20	
1983 QTR 2 QTR 3 QTR 4	0 0 0	0 0 0	0 0 0	0 0 0	0 0	0 0	0 0	0,0	.00	.00	.00	.00	.00	.00	
1984 QTR 1 QTR 2 QTR 3 QTR 4	0 2 69 258	0 83 108 -76	0 -2 4 3	0 -8 -7 9	0 -87 382 -121	0 9 -108 -106	0 -5 36 76	0 -5 32 108	.00 .00 .03 .09	.00	.00 01 08 33	.00 .01 01 05	.00 01 .00 .05	.00 .11 .11	
1985 QTR 1 QTR 2 QTR 3 QTR 4	303 281 295 304	66 98 108 81	7 6 6 7	-14 -30 -28 -27	-222 -93 -155 -122	-39 -70 -65 +55	62 45 -10 65	169 214 204 269	.14 .18 .17 .22	.00	41 47 44 43	09 12 10 14	.07 .09 .07 .08	.10 .04 .10 .23	
1986 QTR 1 QTR 2 QTR 3 QTR 4	316 284 284 285	-79 195 227 262	10 11 12 13	-77 -1C8 -1C8 -1C8	-337 -66 -127 -104	17 -5 -14 -22	140 114 11 -8	409 522 533 525	.32 .40 .41 .39	.00	51 66 65 62	22 27 25 23	.11 .12 .09 .05	.27 .23 .16 .18	
-987 QTR 1 QTR 2 QTR 3 QTR 4	284 222 253 258	264 233 279 283	14 12 13 12	-172 -195 -192 -192	-97 -60 -46 -56	-25 -16 -17 -21	56 96 90 78	581 677 766 844	.43 .49 .55 .60	.00	64 72 74 76	23 26 28 30	.02 01 04 08	.21 .18 .18 .21	
1988 QTR 1	264	316	13	-201	-44	-27	64	908	.64	.00	81	30	12	23	

COLS 1 TO 10 £ MILLION NOTE: ANNUAL PERCENTAGE CHANGES ARE AVERAGES OF QUARTERLY PERCENTAGE CHANGES



#### DIFFERENCE TABLE THREE

## PERCENTAGE CHANGES FROM BASE RUN

	1 EARNINGS	2 REAL TAKE HOME PAY	3 WAGE COSTS	4 EXC EQUIL. EXPECT (RXPQ)	5 HANGE RA	6 TES EXPECT NEXT PERIOD (RXPE)	7  RETAIL	8 PR		10  IMPORTS	11 GDPM DEFLATOR	TFE DEFLATOR	REL WAGE COSTS	14 TIVENESS REL EXP PRICES	
1984 1985 1986 1987	.01 .09 .15	.05 .27 .38 .44	28 61 58 52	.19 .33 .45 .41	07 25 .11	.13 .68 1.33 1.64	03 18 19 20	04 20 24 25	04 19 30 33	.03 .16 09 17	10 32 30 30	08 21 25 27	35 85 47 36	08 26 08 10	
1983/84 1984/85 1985/86 1986/87 1987/88	.00 .02 .10 .18	.00 .10 .30 .41	.00 44 61 56 50	.00 .27 .39 .42 .41	.00 12 18 .13 .16	.00 .24 .87 1.41 1.71	.00 06 19 20 18	.00 08 21 25 25	.00 07 22 32 32	.00 .07 .12 12 18	.00 17 32 31 29	.00 12 22 26 26	.00 56 78 43 34	.00 14 21 10 09	
1983 QTR 2 QTR 3 QTR 4	3 .00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	.00	
1984 QTR QTR QTR QTR QTR G	2 .00	.00	.00 .00 45 68	.00 .14 .28 .35	.00 .11 12 26	.00 .07 .15	.00 .01 03 08	.01	.00 01 05 09	.00 06 .03 .15	.00 01 14 25	.00 02 11 17	.00 .12 57 95	.00 .10 15 27	
1985 QTR QTR QTR QTR	1 .06 2 .09 3 .10	.21 .27 .30	62 60 60 61	.32 .23 .31 .48	22 31 28 17	.45 .55 .74	14 19 20 19	21 21	14 19 21 23	.16 .20 .18 .12	29 33 34 33	19 22 22 23	85 91 88 78	22 32 29 20	
1986 QTR QTR QTR QTR OTR	1 .11 2 .14 3 .18	.32 .34 .41	61 58 55 56	.53 .47 .38 .40	.06 .12 .11	1.20 1.31 1.35 1.44	17 17 20 21	23 26	25 28 32 34	01 07 12 14	29 29 31 31	23 24 27 27	55 46 44 43	04 05 11 12	
1987 QTR QTR QTR QTR QTR	1 .20 2 .21 3 .24	.44 .42 .45	54 53 50 50	.44 .40 .38 .42	.15 .14 .14	1.54 1.60 1.66 1.75	21 19 20 18	25 26	35 34 32 31	16 16 17 18	31 30 30 28	27 27 27 26	39 38 36 33	12 12 11 08	
1988 QTR		.45	48	.44	.18	1.83	17	23		19		25	29	07	

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262405 TRSY G 21332 CB1 G 6189 84-02-22 17:39

TO GEORGE MONGER

.P. 33.84

CBI CALLS FOR FURTHER STUDY OF VAT PAYMENTS ON IMPORTS

WITH LESS THAN FOUR WEEKS TO GO BEFORE THE BUDGET, BUSINESS IS ANXIOUS TO AVOID OVER-HASTY ACTION BY CHANCELLOR NIGEL LAWSON THAT COULD REQUIRE MANY FIRMS THROUGHOUT BRITAIN, UNDER A NEW SYSTEM, TO PAY £1.5 BILLION IN VAT TWO-AND-A-HALF MONTHS EARLIER THAN THEY DO NOW.

TOP EXECUTIVES OF LEADING COMPANIES CONCERNED, INCLUDING UNILEVER, SHELL, BEECHAM PRODUCTS, IBM, GKN AND FORD WERE PRESENT TODAY (WEDNESDAY) FOR A CRITICAL DEBATE IN THE CONFEDERATION OF BRITISH INDUSTRY'S RULING COUNCIL. ALSO PRESENT WERE REPRESENTATIVES OF MANY LEADING TRADE ASSOCIATIONS, INCLUDING THOSE FROM THE ENGINEERING, TIMBER AND BREWING INDUSTRIES WHOSE INTERESTS MAY BE AFFECTED.

THE CBI HAS URGED THE CHANCELLOR TO MARK TIME ON THIS ISSUE UNTIL A DETAILED STUDY OF THE IMPLICATIONS OF CHANGE HAS BEEN UNDERTAKEN BY THE GOVERNMENT, AIDED BY THE CBI.

CBI PRESIDENT SIR CAMPBELL FRASER, SAID TONIGHT FOLLOWING THE COUNCIL MEETING: AT A TIME WHEN WE ARE FACING SEVERE INTERNATIONAL COMPETITIVE PRESSURES, ALL SIDES OF THIS SCHEME NEED CLOSER SCRUTINY: WE MUST NOT RUSH OUR FENCES ON THIS ONE.

THE BIG VAT PROBLEM AFFECTS THOUSANDS OF FIRMS THROUGHOUT BRITAIN. THIS IS WHAT IS INVOLVED. IF A KNITWEAR MANUFACTURER, FOR EXAMPLE, IS BUYING GOODS FROM ABROAD, HE IS ALLOWED UP TO TWO-AND-A-HALF MONTHS GRACE BEFORE PAYING VAT. BUT IF HE IS USING HOME-PRODUCED MATERIALS HE HAS TO PAY VAT WHEN HE PAYS FOR THEM.

UK SUPPLIERS COMPETING WITH IMPORTS ARGUE THAT THIS PERIOD OF GRACE IS ADVERSELY AFFECTING THEIR ABILITY TO SELL THEIR PRODUCTS. SOME ARGUE THAT IT COULD BE DESCRIBED AS A SUBSIDY TO IMPORTERS.

ON THE OTHER HAND. ENDING THE SYSTEM COULD ALSO HAVE A SERIOUS EFFECT FOR BRITISH BUSINESS. MANY INDUSTRIES DEPEND ON IMPORTED RAW MATERIALS AND COMPONENTS, AND WITHDRAWAL OF THE TWO-AND-A-HALF MONTHS PERIOD OF GRACE COULD ADD TO THEIR FINANCING COSTS AFFECTING THE FLOW OF CASH FOR THOUSANDS OF UK FIRMS. ABOUT £1.5 BILLION WOULD HAVE TO BE HANDED OVER TO THE EXCHEQUER EARLIER. THIS WOULD HAVE A DETRIMENTAL EFFECT ON OVERALL UK COMPETITIVENESS.

FOR MOST EUROPEAN COMMUNITY MEMBERS VAT IS PAYABLE ON IMPORTS ON ENTRY TO THE COUNTRY BUT THE COMMISSION IS PROPOSING THAT OTHER MEMBER STATES SHOULD SWITCH TO THE BRITISH SYSTEM. THIS WOULD REMOVE THE DISPARITY IN THE PRESENT ARRANGEMENTS BUT THERE IS CONSIDERABLE DOUBT ABOUT BRITAIN'S EEC PARTNERS BEING PREPARED TO MAKE THE CHANGE IN THE NEAR FUTURE.

SIR CAMPBELL SAID TONIGHT: THERE ARE WIDELY DIFFERING VIEWS ON THIS ISSUE. I AM CONCERNED THAT DECISIONS SHOULD NOT BE TAKEN BY THE GOVERNMENT WITHOUT THEM GIVING FULL CONSIDERATION TO ALL THE COMPLEX ISSUES INVOLVED. AND WITHOUT THE CBI HAVING BEEN ABLE TO CONSULT FULLY WITH ITS MEMBERSHIP. THAT IS WHAT WE NOW PROPOSE TO DO, AND WE SHALL BE ADVISING THE CHANCELLOR OF THE OUTCOME.

'IDEALLY THE SOLUTION TO THIS PROBLEM WOULD REMOVE ANY PRESENT COMPETITIVE DISADVANTAGE SUFFERED BY HOME-PRODUCED GOODS. WHILE AT THE SAME TIME NOT ADDING TO THE COSTS OF RAW MATERIALS AND COMPONENTS ESSENTIAL TO INDUSTRY WHICH ARE IMPORTED FROM ABROAD! 1.

HE ADDED: ''I AM VERY CONCERNED TO ENSURE THAT NO CHANGE IS MADE WHICH LEADS TO HIGHER COSTS THROUGH INCREASED INTEREST CHARGES FOR INDUSTRY AND GREATER PRESSURE ON ITS CASH FLOW. !!

22 FEBRUARY 1984

JOHN CAFF CBI LONDON

262405 TRSY G 21332 CBI G

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FROM: N MONCK

DATE: 2 March 1984

CHANCELLOR

cc Chief Secretary
Financial Secretary
Economic Secretary
Minister of State

Mr Middleton
Mr T Burns
Mr Bailey

Mr Cassell, Mr Byatt

Mr Battishall
Mr Lovell
Mr Monger
Mr Folger

Mr Smee Mr Ridley

Mr Lord Mr Portillo

Mr Beighton, IR

Yet another pure on this subject!

COMPANY TAX AND INVESTMENT

I attach a paper prepared by Messrs Smee and Marshall in DEU which was mentioned at your meeting yesterday. There is a brief summary at the end.

- 2. Your original question was about the growth rates of investment qualifying for first year capital allowances compared with that of investment in assets which do not. The paper suggests that there is no clear association between growth rates and the genorosity of capital allowances. Other factors, notably the change in the pattern of output from manufacturing to services, have clearly been important. Nonetheless there are signs that the allowances have affected the asset composition of investment and this is apparent within manufacturing.
- 3. Annex B contains much of the most interesting information relevant to the presentation of the business tax package. Although some other countries' tax systems provide incentive to investment and contain some discrimination in favour of plant machinery, the UK's regime is usually generous in both respects. This has coincided with a high incremental capital to output ratio and a low rate of return here. Although none of this is conclusive, it

is consistent with the presentation of the package and the emphasis on raising the quality of investment.

- 4. There is also some evidence that increased profitability and cash flow have a positive role in determining the quantity of investment. But we have no economatric basis for claiming that this effect will outweigh the increase in the pre-tax yield required to achieve/post-tax yield as a result of the Budget.
- 5. Finally, I attach a useful chart showing what has happened to the stock output ratio since the introduction of stock relief, though this does not distinguish between its original and present forms.

N MONCK

COMPANY TAX AND INVESTMENT : THE EMPIRICAL EVIDENCE

This note summarises the empirical evidence on the effect of company tax on the level and pattern of UK investment. The first part looks at time trends in investment in the light of the changing tax regimes of the last twenty-five years. The second deals with econometric studies of the effects of tax changes on investment behaviour. The third covers international comparisons of the relationship between company tax and investment.

- 2. All studies of the historical evidence have been confined to looking at the relationship between tax incentives and the quantity of investment. But given the very poor returns to investment in Britain an equally important question is the effect on the quality of investment. Only the international comparisons shed some oblique light on this issue.
  - (i) <u>Time trends in investment by type of asset</u>
    Company profits and investments have been subject to a wide range of tax regimes over the last twenty-five years. The liberality of the regime has varied between time periods and between types of asset. (See Annex A).
- 3. Since 1959 four main time periods can be distinguished:
  - (i) 1959-65. During 1959-65, both initial and investment allowances were given on investment, and companies were subject to income tax and profits tax.
  - (ii) 1965-70. 1966 to 1970 cover the period when cash grants for investment were available, and companies were subject to a classical corporation tax (introduced in 1965).
  - (iii) 1970-79. The present system of first year allowances dates from 1970. 100% investment allowances for plant and machinery have been available since March 1972, but for industrial buildings 75% initial allowances have been available only since March 1981.

/:--

- (iv) 1979-82. Since 1979 the allowance system has remained the same as in the previous period, but the cyclical influences on investment have had profound effects.
- 4. Overall the generosity of the tax treatment of company investment varied considerably during this twenty-five year period. But since the early 1970s it is probable that the treatment has been at least as liberal as at any time since 1959. The decline in total investment growth rates across the four subperiods therefore suggests that other factors outweighed the effect of tax incentives.
- 5. For the last twenty years the most generous allowances have been concentrated on plant and machinery and industrial buildings. This has been particularly true for plant and machinery since 1972 (when 100% first year allowances were introduced) and for industrial buildings since 1974 (when a 50% investment allowance was introduced). Vehicles are also subject to liberal treatment but it is estimated that company cars, which receive only a 25% allowance on a reducing balance of scale, currently account for about 80% of the investment in vehicles. Commercial buildings (other than hotels) have never received allowances. The interesting comparison therefore is between investment growth in plant and machinery and industrial buildings on the one hand, and all the other sectors.
- 6. The summary evidence in Table 1 shows that a simple examination of long-term investment trends throws only a little light on the relationship between investment and allowances for the economy as a whole. Broadly, investment in plant and machinery has grown, in real terms, at about the same rate as that in commercial buildings. Investment in industrial buildings has exhibited a long-term decline. Consequently, the share of plant and machinery in total investment has tended to remain at around 50% (although rising in recent years), the share of commercial buildings to rise slightly, and the share of industrial buildings to fall markedly. When allowance is made for the pronounced shift in the sectoral composition of output from manufacturing to services, the rising

share of commercial buildings is hardly surprising. However, the stable share of plant and equipment is a little unexpected. It suggests that capital allowances may have affected the composition of investment.

- 7. Within manufacturing industry there has been a significant switch in the asset composition of investment. Up to about 1965 the share of plant and machinery in manufacturing investment was slightly less than 65%. This proportion had risen to just under 70% by 1970 and since 1979 has been around 75%. This rise has been at the expense of the other major component of manufacturing investment, industrial buildings.
- 8. In conclusion, while other factors have undoubtedly been at work the trends in the composition of investment are not inconsistent with the expected incentive effects of the different allowance regimes.

## (ii) Econometric studies

- 1. The effects of financial variables, and the effects of tax changes on investment behaviour is still a matter of debate. The econometric evidence is not conclusive.
- 2. In broad terms, the corporate tax package could influence aggregate investment through two routes:
  - (i) The net effect of the reduction in allowances and the CT rate is to increase the cost of capital. In addition, the abolition of the NIS reduces labour costs. There is thus an incentive to substitute labour for capital.
  - (ii) Overall it increases company profits and it
- 3. The importance of the cost of capital in determining investment behaviour has not been resolved. Fundamentally, it depends on the ease with which labour and capital can be substituted for each other in the production process.

BUDGET SECRET

There are however considerable practical difficulties in isolating the effects of a cost of capital term. The most important is the problem of distinguishing between the effects of output and of the cost of capital, given that the two tend to move in a similar way over time. Models which indicate output changes as the determinant of investment may be doing so at the expense of cost of capital effects, without necessarily meaning that cost of capital effects are unimportant. The actual specification of the original model can also lead to differences in the estimates of cost of capital effects, as indeed may difficulties in defining the cost of capital term itself. One problem in the latter context is that announced tax rates are known, but not effective rates. Finally, it should be borne in mind that investment equations tend to concentrate on aggregate investment, and do not pick up the influence of the tax system in discriminating between assets.

4. Most forecasting models of investments behaviour tend (like the Treasury model) to be "flexible accelerator" models: the dominant influences on investment behaviour are lagged changes in output. Such models can incorporate a cost of capital term but, in practice, most do not. However, as noted above, this is probably because of the difficulty of separating costs of capital effects from output effects. UK studies have found that the elasticity of desired investment with respect to the relative prices of capital and labour ranges from insignificance to as much as 0.9. For the reasons noted above, further precision as to the

actual effects is difficult.

5. Some recent studies have reitcrated the importance of profitability. Again, however, there is a problem in distinguishing between the effects of output and of profitability as the two tend to move in a similar way over time. Moreover, studies which find profitability to be relatively unimportant compared to output may be ignoring the fact that output itself could depend crucially on profitability; they may be picking up only the "first-round" effects of profitability of investment, and not the potentially more important "second-round" effects via the influence of profits on output. Because of these difficulties, the precise influence of profitability on investment remains uncertain.

- 6. One aspect of the debate about the importance of profitability concentrates on the cash flow effects. Earlier studies tended to find that the flow of internal funds did not influence the long-run level but only the time-path of desired investment. It has been argued however, that falling cash balances in the later 1960's and 1970's have made internal funds more important for investment decisions. It is said that firms see alternative forms of finance such as debt or equity as having a higher cost than retained profits (because of transactions costs or the fear of bankruptcy) and so investment depends on the availability of internal funds. Whether shortage of funds does reduce or merely delay investment is still, however, a moot point.
- 7. Generally, the consensus of opinion is that profitability and cash flow have a role. But the econometric evidence of how important that is remains in dispute.

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8. The Corporate Tax package will influence the quality of investment, as well as the quantity, through reducing the extent to which the tax system distorts investment incentives. No econometric studies consider the impact of investment incentives on the quality of investment.

# (iii) International comparisons

- 1. Two major studies have compared the extent to which corporate tax systems in different countries distort investment incentives. There has also been work on national differences in the level, structure and efficiency of investment. The major conclusions from these international comparisons are summarised below. (The evidence is considered in more detail in Annex B).
- 2. The current UK company tax system appears in general to offer larger incentives to investment than the tax regimes in major competitor countries. A comparison across eight countries found that only the UK and, to a lesser extent, the US were effectively subsidising fixed investment compared to what they would be doing under a "neutral" system.

- 3. The UK tax system is also more discriminatory in favour of plant and machinery, as opposed to other assets, than are the regimes of other major countries. One outcome is that compared to other countries the UK treats investment by manufacturing industry, which is relatively plant and machinery intensive, more favourably than investment by the service industries.
- 4. Given the nature of the tax incentives it is to be expected that, other things being equal, UK investment should be both relatively high and more skewed towards plant and machinery than investment in other countries. International comparisons certainly suggest that UK investment is relatively plant and machinery intensive, both for manufacturing and for the economy as a whole. The evidence relating to the overall level of investment is harder to interpret: over the last fifteen years investment rates (in relation to GDP) have been about average by international standards, although the capital stock per worker would appear still to be higher in the UK than in most competitors, particularly in manufacturing.
- 5. The evidence on the quality of investment is clear-cut. Whether measured by the rate of return on investment, output per unit of capital or the incremental capital-output ratio the returns to investment in the UK appear to have been lower than in the USA, Germany and France, sometimes dramatically so. For example, the rate of return on investment in manufacturing in 1979 was 5% in the UK compared to 17% in both Germany and the USA.
- 6. The poor efficiency of investment in the UK can be attributed to many factors. International comparisons suggest that taxinduced distortions in investment may be one of those factors.

# Conclusion

Empirical evidence on the relationship between company tax regimes and investment behaviour is of limited help in estimating the effects of the corporate tax package. Nevertheless, the evidence suggests that:

(i) the present tax regime has affected the asset pattern of investment, particularly favouring plant and machinery;

- (ii) the corporate tax package can be expected to influence aggregate investment both through increasing profitability and through altering the relative costs of capital and labour. But the absolute and relative sizes of these effects is uncertain;
  - (iii) in comparison with other countries the distinctive feature of investment performance in Britain is the low returns received not the lack of quantity. Poor returns may be associated, inter alia, with the UK's marked tax-induced distortions in investment incentives.

GROWTH RATES AND SHARES OF INVESTMENT BY TYPE OF ASSET

				1980	PRICES		
	Per an	num growth rate of		Sub-total			
	Total	Plant/ machinery	Industri	Plant/ al machine s indust: buildir	rial	Commercial buildings	Vehicles
1959-1965	+6.7	+7.8.	+4.2_	+6.9		+9.5	+2.9
1965-1970	+5.3	+5.9.	-1.4	+4.2		+4.2	+10.5
1970-1979	+2.9	+3.6	-3.T	+2.5		+3.6	+3.5
1979-1982	-47	-3.5	-19.0	-5.0		+2.3	-12.1
1959-1982	<b>+</b> 3-4	+4.2	-3.2	+3.0		+5.1	+2.6
				100			
		Average share of Plant/ machinery	Industri	vestment ; Sub-tot al Plant/ s Machin Indust:	ery, rial	Commercial buildings	l Vehicles
				Buildi	ngs		
1959-1965		47	18	65		20	16
1965-1970		50	13	63		20	17
1970-1979		48	8	56		23	20
1979-1982		56	5	61		24	16
1959-1982		49	10	59		22	18
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# CAPITAL ALLOWANCES (1) AND COMPANY TAX RATES (2): 1959 to 1982

## 1. 1959-65

1.	1777-07		
		Industrial buildings	Plant/Machinery
	Investment allowance	10-15	20-30
	Initial allowance	5	10 .
	Company Tax Rate	49-54	49-54
2.	1966-70		
			(7)
	Initial allowance	15	r 30 <sup>(3)</sup>
	Writing-down allowance	4	25
	Investment grant	- ·	30 <sup>(3)</sup> 25 20-25 <sup>(3)</sup>
	Company Tax Rate	40-45	40-45
3.	1971-1982		
		(1)	
	Initial allowance	30-75(4)	- /->
	First year allowance		60-100(5)
	Writing-down allowanc	e 4	
	Company Tax Rate	40-52	40-52

- (1) These represent basic rates. Some of these rates have been higher in development areas and Northern Ireland.
- (2) This represents the rate on retained profits.
- (3) When a grant was received, no initial allowance was given.
- (4) 30% allowances were introduced in April 1970. They were raised to 40% in March 1972, 50% in November 1974, and 75% in March 1981.
- (5) 60% allowances were introduced in November 1970. They were raised to 80% in July 1971, and 100% in March 1972.

## ANNEX B

# TAX TREATMENT OF DIFFERENT ASSETS IN DIFFERENT COUNTRIES AND THE QUANTITY AND QUALITY OF INVESTMENT

## I. Comparisons of Effective Tax Rates

There have been two major studies of the extent to which corporate tax systems in different countries distort investment incentives.

2. A study by Kopits compared actual post-tax returns resulting from the purchase of investment equipment with the returns required under "neutral" systems. The results were:

Tax (+) on, or Subsidy (-) to Investment

	(Percentage	1973	price)		1978
UK .	-	2.4		- A	1978 4.4
Belgium	+	0.6		+	5.9
France	+	1.1		+	7.6
Germany	+	5.9		+	4.0
Italy	+	12.8		+	22.0
Japan	+	1.4		+	1.4
Netherlan	ds +	5.0		+	7.7
US		3.0:		_	0.6

Of the 8 countries considered only the UK and the US were providing subsidies in both periods.

- 3. The study also looked at the more disaggregated effects (see Annex Table 1). The results showed that while virtually all the countries taxed investment in buildings, they subsidised investment in plant and machinery. By far the greatest percentage subsidies were given in the UK.
- 4. A second study, by King and Fullerton, examined whether the favourable treatment of plant and machinery over other assets was greatest in the UK, by comparing the pre-tax and post-tax rates of return for various hypothetical cases. They found

that the UK tax-system favoured investment in plant and machinery relative to other assets more than the tax-systems in other countries. Assuming a 10% pre-tax real return, they found the 1980 post-tax returns would be as follows:

	UK	Germany	Sweden	US
Plant and machinery	13.7	5.5,	10.0	8.2
Building	6.1	5.7	_ 6.3	5.9
Difference	+ 7.6	- 0.2	+ 3.7	+ 2.3

5. As a result of this discrimination, sectors of the economy whose investment is dominated by plant and machinery are on average favoured over sectors whose investment is mainly in buildings, particularly commercial buildings. Thus manufacturing is favoured over services (over the period 1978-82 77% of manufacturing fixed investment in the UK was in plant and machinery, compared to only 40% for service industries). The international comparisons suggest that Germany and the USA do not discriminate in favour of manufacturing, and Sweden does to a lesser extent than the UK. Assuming a 10% pre-tax real return and averaging across different types of investment, the following post-tax returns are obtained for manufacturing and commerce (broadly the private service sector excluding financial companies):-

	UK	Germany	Sweden	US
Manufacturing	11.0	5.2	7.3	4.7
Commerce	6.4	5.6	6.1	
Difference	+ 4.6	- 0.4		- 1.5

These figures reflect both the less favourable treatment of plant and machinery in other countries (relative to the UK) and its smaller weight in the manufacturing capital stock.

- 6. The important conclusions which emerge from these studies are that relative to the tax regimes in other countries:
  - (i) the current UK system appears in general to offer a larger incentive to investment;

(ii) the UK system is also highly discriminatory in favour of plant and machinery as opposed to other assets; consequently it is also strongly biased in favour of manufacturing and against services.

# II Comparisons of Levels and Patterns of Investment

(i) Level of Investment

In examining the effect of tax regimes on the quantity of investment and capital, it is legitimate to look at two sorts of data: annual investment and the overall capital stock.

- 7. Over the period 1970-79, the average real growth rate of total investment in the UK was 1.1% pa, and 3.4% pa for plant and machinery; the respective figures for the major seven OECD countries were 3% pa and 5.2% pa. The growth rate of plant and machinery investment was therefore low in the UK. Expressed as a percentage of GDP, however, the picture is less clear-cut. Between 1970 and 1979 total investment averaged 18.7% of GDP in the UK, and plant and machinery investment 8.9%, compared to 21.7% and 8.7% respectively for the major seven. So, given the lower growth of GDP, the UK's investment levels, at least for plant and machinery, were not unsatisfactory. (However, this begs the question of whether the low growth rate of GDP was itself a result of the low growth in investment). in terms of the growth of investment per employee, the UK occupied a middle position among the major seven, because of its generally The conclusion to be drawn for lower level of employment growth. the recent investment figures is that the relatively generous tax provisions in the UK have not been matched by a higher investment growth rate than in other countries.
  - 8. This need not however mean that the UK is deficient in capital. Estimates of net capital stock are subject to a wide degree of uncertainty. Nevertheless, the best estimates available suggest that in manufacturing the amount of capital per worker in the UK is relatively high compared to that in Germany, France and the USA. In the economy as a whole the UK still has a higher net capital stock per worker than France or the USA, although a lower one than Germany. In short, international comparisons suggest that there is no deficiency in the quantity of capital in the UK (see

Net Capital Stock per worker, 1980 (1)

	Whole economy		Manufacturing
UK	100	V	100
Germany	120		60
France	50		80
IISA	80		80

(1) Converted to \$ at OECD PPP rates

# (ii) Patterns of Investment

9. The study by King and Fullerton suggests that the capital stock of industrial and commercial companies in the UK is more plant and machinery intensive than in other countries - notably in non-manufacturing. The percentage of capital accounted for by plant and machinery is estimated to be:

	Y.	lachin	ery a		Capital in mfg as % of			
	c	capital stock (1)			total corporate capital			1
			Mfg	Rest				
UK		47	49	43		60		
Germany		42	45	28		80		
Sweden		32	42	16		63		
US		22	20	25		44		
(1)	In th	ne pri	vate	non-financia	al sector			

10. Care is needed in interpreting these figures but they are consistent with the view that the UK's favourable treatment of plant and machinery has had some effect on the structure of the UK capital stock. They therefore reinforce the tentative conclusions about the biases of different regimes drawn in section I of this Annex.

# III <u>Efficiency Of Investment</u>

11. The UK appears to obtain a poor return on its investment. The rate of return on investment in manufacturing in 1979 was 5% in the UK compared to 17% in Germany and in the US. Moreover, output per unit of capital seems low:

(	Output per unit of	capital,	(1) 1980
	Whole economy		Manufacturing
UK	100		100
USA	170		270
Germany	110		250
France	260		230

Capital productivity in manufacturing appears to be  $2\frac{1}{2}$  times higher in France, Germany, and the US than in the UK, although again the fallibility of capital stock statistics should be borne in mind. Furthermore, between 1972 and 1982 output per unit of capital in the UK fell by about a sixth.

12. An alternative measure of the relative effectiveness of investment is the incremental capital to output ratio (ICOR). A low ICOR indicates a substantial increase in output from investment (after allowance has been made for changes in labour productivity) and a high ICOR a small increase. A negative ICOR means that output actually fell as investment rose. On this measure, the UK has fared less well than Germany, France or the USA:

11COR<sup>(1)</sup>(Labour-adjusted) 1973-79

Whole economy Manufacturing

UK 5.6 - 5.9

Germany 3.1 0.2

France 1.6 1.0

USA 1.9 1.5

## (1) Converted to \$\mathbb{g}\$ at OECD PPP rates

13. The conclusion that much investment in the UK has yielded a very low return needs to be interpreted with caution. Differences in the productivity of capital between the UK and other countries can, of course, be attributed to many factors. But the evidence presented above is consistent with tax-induced distortions in investment being one of those factors.

Annex Table 1:

Tax-Subsidy Rate on Non-residential Fixed Investment in Industrial Countries by Asset Group, Assuming Uniform Rates of Income Tax and Discount, 1980

(As percentage of asset price)

Country	on-residential Buildings	Other Construction	Transport Equipment	Non-electrical Machinery	Electrical Machinery	Other Producer Durables
		+4.9	-0.6	-1.7	-4.2	-2.4
Belgium	+7.0		-0.7	-2.4	-2.8	+0.9
France	÷5.1	-3.3	-1.1	-1.1	+0.3	-1.9
Germany	+16.8	+1.3			-7.4	-5.6
Italy	-5.8	-12.6	-4.8	-0.8	-1.1	+0.1
Japan	+11.3	+7.5	+1.8			-2.8
Netherlands	-1.7	-0.8	+0.2	-2.6	+0.1	
United Kingdom	+2.8	-13.6	-5.4	-11.2	-12.8	-12.4
United States	+8.4	-9.7	-5.3	-8.4	-8.7	-10.7

Note: A positive value indicates a tax; a negative value represents a subsidy. It is assumed that the income tax rate is 46 per cent, the nominal discount rate is 10 per cent, and the inflation-adjusted discount rate is 5 per cent.

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C14 company

FROM: A P HUDSON
DATE: 7 March 1984

PRINCIPAL PRIVATE SECRETARY

CORPORATION TAX PACKAGE: OUTSTANDING ISSUES:

A. SHORT-TERM ASSETS;

B. FORESTALLING

cc Chief Secretary
Economic Secretary
Sir P Middleton
Mr Byatt Sir T Burns
Mr Cassell
Mr Monck Mr Odling-Smee
Mr Battishill
Mr Monger
Mr Lovell
Mr Ridley
Mr Lord
Mr Green - IR
PS/IR
Mr Beighton - IR

#### A. CAPITAL ALLOWANCES: SHORT TERM ASSETS

- 1. The Financial Secretary has seen Mr Green's 6 March minute, and the paper attached.
- 2. The Financial Secretary sees no prospect of a solution following the short-lived asset.
- 3. He thinks, therefore that we need to pursue the route of treating assets of up to 3 years life as on revenue account, rather than as capital assets. But this should be considered in detail after the Budget. In the meantime, a form of words is needed for the Budget to be ready for use if pressed, it show that we know there is a problem, and that we are looking for a solution.

# B. CORPORATION TAX: FORESTALLING EXPENDITURE ON INVESTMENT

- 4. The Financial Secretary has seen Mr Beighton's 5 March submission.
- of doing a great deal to prevent this. However, he is not sure that the cost will be as great as the estimate of about £100m in the first year. This takes no account of projects which will be cancelled because of the non-availability of 100% allowances,

whereas earlier advice has been that there would be some such cancellations. The Financial Secretary's judgement is that there will be some cancellations, if only because firms already looking for an pretext to cancel projects will use the reducation in allowances as an excuse. This would offset the cost of economic forestalling somewhat.

6. On financial forestalling, the Financial Secretary recommends adopting Mr Beighton's proposal (his paragraph 8) for a "straddle mechanism", ie the maximum first year allowances available should be those which would have been due if the expenditure had been equally spread over the life of the contract. The Financial Secretary realises that this is a rough and ready route, but thinks it must be adopted. It is estimated that the "straddle mechanism" should recoupe at least half of the £200m first year cost from financial forestalling, and possibily more.

#

A P HUDSON

#### BUDGET CONFIDENTIAL

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FROM: A M ELLIS DATE: 8 March 1984

MR WATTS

cc PPS PS/Chief Secretary PS/Minister of State Sir P Middleton Sir T Burns Mr Cassell Mr Battishill Mr Lankester Mr Monger Mr Hall Mrs Lomax Mr Pirie Mr Ridley Mr Lord Mr Bush - IR PS/IR Mr Gilbert - DNS

DNS GROSS INTEREST PAYING FACILITIES: REVENUE MANPOWER INTEREST

The Economic Secretary was grateful for your minute of 5 March. He has commented that it is a question for further consideration as we get closer to the implementation of the composite rate.

A M ELLIS

C14 company

BUDGET SECRET

1. SIR PETER MIDDLETON

2. CHANCELLOR

The definitive

FROM: C J RILEY
DATE: 8 March 1984

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paper on companies

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Sir Terence Burns
Mr Cassell
Mr Monck
Mr Battishill
Mr Evans
Mr Monger
Mr Odling-Smee
Mr R I G Allen
Mr Mowl
Mr Norgrove
Mr Ritchie
Mr Beighton
Mr J Walton
Mr F Fitzpatrick ) Rever

#### REVENUE EFFECTS OF THE CORPORATION TAX

The Inland Revenue have now reconsidered their assessment of the revenue effects of the corporation tax changes in the light of the post-Budget forecasts of profits and investment, and our revised estimates for the likely extent of forestalling.

- 2. In making the estimates of forestalling we have taken into account the formula suggested in Mr Beighton's note of 5 March to limit the extent of financial forestalling. In total we have assumed forestalling of some £1 $^{1}$ 4 billion in 1984-85, fairly evenly split between financial and economic, and less than half of that in the next year.
- 3. The estimated revenue effects are now as follows:

	1984-85	1985-86	1986-87	1987-88	1988-89
Capital allowances/					
stock relief	-	+ 650	+ 2500	+ 4700	+ 5500
CT rate changes	- 280	- 1100	- 2500	- 4300	- 5300
Total net effect	- 280	- 450		+ 400	+ 200

- 4. No change has been made to the estimate for 1984-85, which shows a revenue loss of £280 million. In 1985-86, the estimated revenue loss has been reduced by £150 million compared with the scorecard dated 2 March: this reflects the lower estimate of forestalling we are now making, and a number of other small changes. In the later years there is estimated to be a net revenue gain which is now put very slightly higher than in previous estimates. Nevertheless, the picture is still one of broad revenue neutrality taking the five years together.
- 5. It is worth stressing the uncertainty surrounding these numbers. The net effect is the difference between two very large changes in opposite directions, and so must be regarded as particularly uncertain. As well as depending on the forecasts of profits and investment, the figures depend on a number of assumptions for example the distribution of net profits between gross profits and gross losses, and the proportion of allowances which 'bite' for tax purposes some of which are inevitably rather heroic given the scale of the changes involved. It is very important to bear this in mind in looking at the figures.
- 6. In keeping with the sentiments in the latest version of your Budget speech, the estimates given here are deliberately on the cautious side. It would not be difficult to arrive at estimates showing a cumulative yield from the changes of, say, £1 billion over the whole period, by varying the underlying assumptions in a not implausible way. But even so, our view remains that it would be quite legitimate to present the changes as broadly revenue neutral over the period in view of the large margins of error involved in the calculations. In this context it is worth remembering that a yield of £1 billion spread over the last three years of the period would be worth no more than 112 points of the main CT rate.
- 7. The revised figures shown above do not change the presentation in paragraph 17 of block J in the version of the speech circulated by Miss O'Mara on 6 March. The first sentence of that paragraph would now read: "The corporation tax measures I have just announced will cost £280 million in 1984-85, and some £450 million made up of about £1,100

million by way of reductions in the rates only partially offset by £650 million reduction in the value of the reliefs - in 1985-86". The remainder of the paragraph is unaffected.

- 8. The statement in the speech that the estimates have been drawn up on a cautious basis invites people to to ask what "cautious" means in this context. To give a direct answer would lead into a discussion of the figures for the later years. So we suggest that a reply might be along the lines that it should be possible to finance at least the CT rate you have announced without calling on the fiscal adjustment indicated in the MTFS for those years.
- 9. Lastly, there is the question of the footnote to Table 4.2 of the FSBR dealing with the revenue effects of the company tax changes in later years, which Mr Battishill was asked to consider. This will replace footnote (1) in the FSBR extract attached below, and will refer to the entires in the table for the corporation tax rate reductions for financial years 1985 and 1986 (marked with an X) and for the further reductions in rates of first year and initial allowances (marked with a Y). In view of the uncertainty over the precise numbers for the later years, Mr Battishill recommends that the footnote should be in very general terms, with any additional gloss left for the Budget Speech. He has agreed the following wording with the Inland Revenue:

"The changes in tax liabilities in later years resulting from the proposed further reductions in the main rate of corporation tax will be affected by the proposed further reductions in capital allowances. The precise net effects of the combined changes will depend on the levels of profits and investment at the time."

If you are content with this, we can include it when the proofs are returned to the printers at the weekend.

C J RILEY

	-	£ million
	Forecast for 1984–85	Forecast for a full year (a)
INLAND REVENUE		
Income tax		
Increase in single allowance of £220 and married allowance of £360	-1 615 (b)	-1990(b)
Increase in additional personal allowance and widow's bereavement allowance of £140	-20(b)	-20(b)
Increase in age allowance of £130 (single) and £200 (married) and income limit of £500	-80 (b)	-100(b)
Increase in basic rate limit of £800 to £15,400	-45 (b)	-75 (b)
Increase in further higher rate thresholds Abolition of investment income surcharge	-35 (b)	-65 (b)
Abolition of life assurance premium relief for new policies	-25 (b) +90	- 360 (b) + 180 (c)
Fringe benefits—car and car fuel scales	Nil	+35 (d)
Withdrawal of relief from foreign earnings	+15	+60 (e)
Withdrawal of relief from foreign emoluments	+7	+15(f)
Composite rate scheme for bank interest	Nil	(g)
Increase in limit on contributions to savings-related share option schemes	Nil	(h)
Extension of instalment period for unapproved share options granted before 6 April 1984	Negligible	-5
Exclusion of farming from the "Business Expansion" scheme	Negligible	Negligible
Minor life assurance changes  Application of mortgage interest relief limit—bridging loans	Negligible	Negligible
Employee secondments to charities	Negligible Negligible	Negligible Negligible
*Extension of mortgage interest relief to certain borrowers	-6 ( i )	-5
*Limit for assessment of apportioned income	Negligible	Negligible
*Capital and income bonds	Nil	Nil
*Offshore life assurance	Nil	Nil
*Relaxation of interest relief for employee buy-outs	-1(i)	-2
*Fringe benefits—scholarships	Negligible	Negligible
Income tax and corporation tax		
Abolition of stock relief	Nil	+900 (j)
Reduction in rate of first year allowance for machinery and plant	Nil (k)	+250(j)(k)
Reduction in rate of initial allowance for industrial buildings and assured tenancies	Nil (k)	Negligible $(j)(k)$
Further reductions in rates of first year and initial allowances	Nil	(1)
Northern Ireland corporation tax relief grant and other grants	Negligible	-2
Application of Schedule B	Negligible	-2
[Friendly Societies	Negligible	Negligible
*Extension of stock relief for housebuilders for 1983–84  *Payment of Eurobond interest without deduction of tax	Negligible Negligible	-1 -2
*Offshore and overseas funds	Negligible	+60 (m)
*Allowances for cars leased to recipients of mobility supplements	Negligible	Negligible
Income tax, corporation tax and capital gains tax		
Relief for housing associations in Northern Ireland	Nogligible	Modicible
*Reliefs for furnished holiday lettings	Negligible -2	Negligible -5
*Deep discount securities	Negligible	-15 (n)
Income tax and capital gains tax		
Changes in employee share option reliefs	Nil	(0)
Corporation tax	000	[ 260] (a)
Reduction in main rate for financial year 1983  Reduction in main rate for financial year 1984	-200 Nil	[-360] (p) [-1050] (p)
Reduction in main rate for financial year 1985 and 1986	Nil	[-1030] (β) (/) ]
Reduction in "small companies" rate	-80	-140
Extension of carry back period for advance corporation tax	-1	-30(q)
Extension of consortium relief	Negligible	-10(r)
*Treatment of TSB's as bodies corporate	Nil	-5
*Relief for discounts etc on bills of exchange	Negligible (i)	-1
*Incidental costs of obtaining loan finance	Negligible	Negligible
*Change in arrangements for setting off advance corporation tax and double taxation relief	Negligible	-5
*Provision against avoidance through group etc relief  *Charge to tax in respect of controlled foreign companies	Negligible Nil	+10 (r) +25 (s)
Corporation tax and capital gains tax  Exemption of certain corporate fixed interest stock	Negligible	Negligible (t)
Oil taxation		450 ( )
Abolition of ACT repayments	+100	+150 (u)
New rules for farm-outs and minor changes	Nil	+35 (v)

#### Table [4.2] Direct effects (a) of changes in taxation (continued)

- \* Items so marked were announced before Budget Day (see paragraph 4.01) and are not included in the preceding paragraphs even though in some cases the original proposals are being varied. Where significant changes are being announced on Budget Day the item is not starred and a description of the revised proposal is included in the preceding paragraphs.
- (a) The direct effects of tax changes are generally estimated by applying the new and old tax rates and allowances to the taxable income and expenditure expected in the post-Budget forecast, in certain cases including estimates of the immediate effects of the changes on taxpayers' behaviour. For example, the estimates for Customs and Excise duties allow for the effects of relative price changes on the composition of consumers' expenditure and stamp duties now allow for changes in the volume of transactions following from changes in rates. For the meaning of a full year see the note on page 9 of the Financial Statement and Budget Report 1981-82. A fuller description of the estimation of the direct effects of expenditure tax changes is provided in an article in Economic Trends, March 1980.
- (b) Taxes subject to statutory indexation. The table below shows the direct revenue effects of indexing the income tax main allowances and thresholds, the capital gains tax exempt amount and the capital transfer tax threshold and bands by reference to the increase in the general index of retail prices between December 1982 and December 1983 (5·3 per cent), rounded in accordance with the statutory provisions, together with the costs of the proposed changes on top of indexation:

	Direct Revenue Costs			(£ million)
	Indexation	Proposed changes on top of indexation		
	1984–85	Full Year	1984–85	Full Year
Income tax			Control of the Control	
Main allowances	-800	-980	-915	-1 130
Basic rate limit	-45	-75	0	0
Further higher rate thresholds	-35	-65	0	0
Investment income surcharge	Negligible	-20	-25	-340
Total income tax	-880	-1 140	-940	-1 470
Capital gains tax				
Exempt amount	Nil	-15	Nil	Nil
Capital transfer tax				
Thresholds and bands	-16	-40	-3	-9

- (c) The full year yield is the amount of relief which would have been due on a full year's premiums for policies commencing in 1984-85. The eventual effect will be substantial (the cost of premium relief in 1983-84 was £700 million).
- (d) Effective from 1985-86; the yield in 1985-86 will be £30 million.
- (e) Withdrawal of the relief will be fully effective from 1985-86; the yield in 1985-86 will be some £55 million.
- (f) Withdrawal of the relief will be completed by 1989-90; the eventual yield will be some £100 million.
- The composite rate scheme is designed to collect tax, which, taking one year with another, is equivalent to the normal basic rate tax liability of all depositors concerned. Deduction at source will however ensure that the full amount of tax due is collected, including tax which for one reason or another is not collected under present arrangements. This should mean some additional Exchequer yield, although this cannot be quantified. On the other hand, in 1985–86 there is the possibility of transitional net cash flow loss to the Exchequer mainly because banks will be able to get earlier set off of tax deducted from interest they receive.
- (h) Costs will not arise until 1989-90. The yield from taxation of gains arising in respect of rates of contribution in 1984-85 above the previous limit might approach £5 million.
- (i) Includes some delayed costs for 1983-84.
- (j) Represents the difference, at the pre-Budget rates of corporation tax between the effect of the relief or allowance on tax liability in 1984-85 before the change (that is, at the levels of stocks and fixed capital formation expected before the change) and the effects on tax liability after the change (that is, at the levels of stocks and fixed capital formation expected as a result of the change).
- (k) Effect after taking into account the abolition of stock relief.
- (1) It is expected that the changes in stock relief and capital allowances, combined with the further reductions in the main rate, will be broadly revenue neutral in their effect, taking one year with another.
  - (m) Based on the estimated holdings by United Kingdom taxpayers in the funds in September 1983.
  - (n) Effect on tax liabilities for 1984-85; over a period of years there will be some deferment of tax liabilities. This estimate is highly uncertain.
  - (o) Highly uncertain, since revenue effects depend upon exercise of options and their value. The cost in respect of 1989-90 (the first year in which qualifying options granted in 1984-85 could be exercised) might be some £35 million.
  - (p) Represents the difference between tax at the pre-Budget rates for financial year 1982 (52 per cent and 38 per cent) and tax at the rates now proposed on the chargeable profits now expected in 1984-85. The amounts covered by this footnote and footnote (j) above broadly represent in total, the difference between the tax liabilities in respect of 1984-85 (in both cases including the second-round effects on the level of profits) expected before and after the changes in rates of corporation tax, stock relief and capital allowances.

C14 Company



FROM: R I MCCONNACHIE
INLAND REVENUE
POLICY DIVISION
SOMERSET HOUSE
8 March 1984

1. MR GREEN QUILL 8/3

2. CHANCELLOR OF THE EXCHEQUER

BUSINESS TAX REFORM PACKAGE: EXAMPLES OF "BAD INVESTMENTS"

- 1. At last week's overview meeting there was some discussion of whether Ministers could quote in debate examples of "bad investments" which the previous tax regime had encouraged, in particular the subsidy element in the capital allowances for plant and machinery and industrial buildings.
- 2. By examples of "bad investments" we understand that Ministers had in mind cases where the post-tax rate of return was higher than the pre-tax rate of return, in particular where:
  - a. because of the tax subsidy, the pre-tax rate of return was negative but the post-tax rate of return was positive; or
  - b. because of the tax subsidy an alternative investment offering a higher pre-tax rate of return had been crowded out.
- 3. Anecdotal evidence suggests a number of possibilities over the last decade:

CC Chief Secretary
Financial Secretary
Economic Secretary
Minister of State
Sir Peter Middleton
Sir Terry Burns
Mr Byatt
Mr Monck
Mr Cassell
Mr Battishill

Mr Lovell Mr Monger

Mr R I G Allen

Mr Ridley
Mr Lord

Mr Portillo

Sir Lawrence Airey

Mr Green Mr Beighton

Mr Painter Mr Corlett

Mr P Lewis

Mr Weeden Mr McConnachie

PS/IR

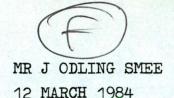
Mr Jennings (Bank of

England)

- a. the aluminium smelter at Invergordon;
- b. the Wiggins Teape pulp mill at Fort William;
- c. the Chrysler/Talbot plant at Linwood;
- d. perhaps some of the Ford expansion on Merseyside;
- e. more generally over-investment by the UK chemical industry, particularly in man-made fibres in the 1970s;
- f. over-investment in steel refining eg at Ravenscraig/ Llanwern;
- g. perhaps much investment in shipping (including, specifically, the replacement for the "Atlantic Conveyor"; and
- h. overseas leasing, which was contained when the rate of allowance was reduced to 25%, but not knocked completely on the head until the rate was further reduced to 10%.
- 4. On a smaller scale there is some evidence that the capital allowances regime has encouraged the putting up of speculative industrial buildings which have lain empty for long periods. It is also commonplace in the farming industry that if a farmer has a good harvest he buys an additional tractor or other item of capital equipment, often (it is alleged) which he does not really need, to shelter his profits.
- 5. Certain future projects have been put to us on the basis that, without first year allowances, they will not be able to go ahead:
  - a. the Severn barrage;
  - b. Unisat the direct broadcasting satallite (BAe, BT and GEC joint project);

- c. Singapore Mass Transit system;
- d. Cable;
- e. and, of course, Nissan.
- 6. We have not in the time available been able to "prove" these cases (apart from 3.h. above). To do so would involve a lot of detailed work and in some cases access to the company's own investment calculations. And tax is not by any means the only factor in these decisions. While it is true that availability of 100% first year allowances in particular has no doubt encouraged some investment projects to go ahead which it would have been better had not been undertaken, non-tax factors, such as over-supply eg of steel worldwide, failure of estimated demand, poor commercial judgment by the company concerned etc, may be equally important; and it would be difficult to fix blame on the tax system in any precise proportion for projects going bad.
- 7. More generally, we would counsel great caution in any public use of these examples. It would be better for Ministers to avoid being drawn into citing individual recognisable cases because quite apart from the problem of confidentiality it would no doubt be asked on what basis precisely Ministers had come to the judgment that an investment was bad, particularly if the company concerned thought differently. And undoubtedly the regional policy (and grants) of previous Governments have played a part in some of these investment decisions.
- 8. If anything is to be said, it would be safest for Ministers to stick to the general line already settled for briefing purpose that one effect of the corporate tax reform package, in particular the cutting back of the capital allowances, is that some marginal projects of heavy capital investment eg in plant and machinery will not now go ahead, and as a result the overall quality of investment will rise.
- 9. The Bank of England, with whom we have discussed the substance of this advice, are in agreement.





FROM

DATE

CHANCELLOR OF THE EXCHEQUER

cc: Chief Secretary Financial Secretary Economic Secretary Minister of State Sir Middleton Sir Airey Mr Fraser Sir Burns Mr Littler Mr Bailey Mr Cassell Mr Monck Mr Battishill Mr H Evans Mr Monger Mr Lankester Mr Ridley Mr Hall Mr Lord Mr Portillo

#### LONG-TERM FISCAL PROSPECTS

My minute of 17 February presented some early estimates of the fiscal adjustment in the second five years of the LTPE period. It showed how the Corporation Tax package might alter the fiscal adjustment. At the overview meeting on 20 February you asked me to repeat the calculations when we had revised the projections.

- 2. We now have a set of numbers consistent with the final figures in the FSBR and the long-term Green Paper. Although they are final, there remains of course a wide margin of error around them. The projections of the effect of the Corporation Tax package are particularly uncertain.
- 3. The estimated change in revenue from the CT package is shown in Table 1. The figures for stock relief and capital allowances are slightly smaller in the earlier years than those in my minute of 17 February, partly because of the effects of the forestalling that we are now assuming. The effects of the tax rate reduction are now estimated to be significantly less,

mainly because of new estimates of the impact on tax payments of tax exhaustion and the stock of unused allowances, downward revisions in taxable profits and the adoption of 35 per cent rather than 33 per cent as the assumed final tax rate.

- 4. The package is revenue neutral over the MTFS period. Beyond that it begins to cost money because the impact on revenues of the tax rate reduction goes on rising with the growth in the tax base, whereas the impact of stock relief and capital allowances begins to decline as inflation falls and the writing-down allowances accumulate. However the cost of the package builds up only slowly. It is estimated to reach about £2 billion a year at current prices by 1993-94.
- 5. The average annual fiscal adjustments available in the five year period from 1989-90 to 1993-94 inclusive are shown in Table 2. There are four separate figures corresponding to the two assumptions for public expenditure growth and the two assumptions for GDP growth. The upper part of the Table shows the total fiscal adjustment that would be available if the Corporation Tax package were not introduced. The lower part shows the fiscal adjustment that is available after allowing for the CT package.
- 6. The CT package reduces the annual fiscal adjustment from 1988-89 to 1993-94 by about £4 billion in 1982-83 prices. The remaining fiscal adjustment varies from £4 billion to £2½ billion depending on the expenditure and growth assumptions. This is less than is estimated for the last three years of the MTFS period (about £3 billion a year in 1982-83 prices), mainly because of:
  - (a) slower output growth (in the  $1\frac{1}{2}$  per cent case only);
  - (b) faster public expenditure growth (in the 1 per cent case only);
  - (c) the cost of the CT package itself.

7. The fiscal adjustment after 1988-89, before allowing for the CT package, is now estimated to be much the same as in my minute of 17 February. Because of the downward revision of the cost of the CT package, the estimate of the fiscal adjustment that would be available if the CT package were not introduced has increased slightly.

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MR J ODLING SMEE

Table 1
Corporation Tax Package

## Revenue Effects (£ billion)(1)

		of a control of the control of		
	Stock Relief and Capital Allowances	Tax Rate reduction	Total	Main CT rate <sup>(2)</sup> ( <u>per cent</u> )
1983-84	-		-	52
1984-85		- <sup>1</sup> 2	- 12	50
1985-86	12	-1	- <sup>1</sup> 2	45
1986-87	212	-2 <sup>1</sup> 2		40
1987-88	4 <sup>1</sup> 2	-412	12	35
1988-89	5 <sup>1</sup> 2	-5 <sup>1</sup> 2	-	35
1989-90	5 <sup>1</sup> 2	-5 <sup>1</sup> 2	-	35
1990-91	5 <sup>1</sup> 2	-6	- <sup>1</sup> <sub>2</sub>	35
1991-92	5 <sup>1</sup> 2	<b>-</b> 6	- <sup>1</sup> 2	35
1992-93	5	<b>-</b> 6	-1 <sup>1</sup> 2	35
1993-94	4 <sup>1</sup> 2	-6 <sup>1</sup> 2	-2	35

<sup>(1)</sup> Rounded to nearest  $\mathfrak{L}^1_2$  billion; totals and components rounded independently.

<sup>(2)</sup> Small companies' CT rate reduced from 38 to 30 per cent in 1984-85.

#### Table 2

## Fiscal Adjustment, 1989-90 to 1993-94

(average year-to-year change, £ billion in 1982-83 prices)

Growth of public expenditure, 1988-89 to 1993-94

Growth of GDP 1988-89 to 1993-94

Zero 1 per cent a year

#### Including cost of CT package in the fiscal adjustment A.

1½ per cent a year 27 2 per cent a year 23 13

#### Excluding cost of CT package from the fiscal adjustment B.

1½ per cent a year 2 34 2 per cent a year 27 17

C14 company

SIR TERRY BURNS

FROM: C J RILEY

DATE: 12 March 1984

cc Mr Byatt

Mr Cassell

Mr Monck

Mr Evans

Mr Monger

Mr Odling-Smee

Mr R I G Allen

Mr Shields

Mr G P Smith

Mr Aaronson

Mr Ritchie

Mr Bayoumi

## THE CORPORATION TAX CHANGES: FORESTALLING

I attach a note which sets out some illustrative calculations of the incentives provided by the CT package to bring forward investment in plant and machinery. The calculations seem broadly consistent with the effects we have assumed for total forestalling in arriving at the revenue effects and in the forecast.

2. I understand from Sir Peter Middleton's office that he does not favour putting a note on this to the Chancellor.

C J RILEY

400

#### THE CORPORATION TAX CHANGES: FORESTALLING

This note describes some illustrative calculations of the incentives provided by the CT changes in the Budget to bring forward investment. It sets out the pattern of tax payments and allowances for a £100 investment in plant and machinery under various different assumptions.

- 2. It is assumed that the accounting period of the company undertaking the purchase is the financial year, ie April to March. This is the assumption which most strongly favours forestalling, but it applies to only about 25% of companies. The bulk of the remainder have accounting periods ending in December, and for them the incentives would be slightly less since they have to bring forward investment further in order to get early benefit from higher allowances and CT rates. A nominal interest rate of 10% is assumed throughout: to the extent that this is too high, so also are the incentives which come out of the calculations.
- 3. The incentives to financial and economic forestalling are in principle different. In the latter case, the income stream from the investment may also be brought forward. However in order to simplify the calculations it is assumed, somewhat heroically, that any bringing forward of the income stream in the case of economic forestalling is offset by a higher purchase cost for the investment. Under this assumption the two types of forestalling are equivalent.

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#### Present System

4. The first thing to remember is that there is an incentive to bring forward investment under the existing system. The situation is set out in Table 1. Simply bringing forward the present allowances at the present CT rate reduces the net present value of tax payments. Bringing forward payment from 1985-86 to 1984-85 reduces the net present value of tax payments, calculated in March 1985, by  $2^1\mu-3^1\mu\%$  of the price of the asset, depending on whether it is financed by debt or equity. Bringing payment forward from 1986-87 to 1984-85 yields a reduction of  $4^1/2-6^1/4\%$ .

#### The Proposed New System

- 5. Under the new system, companies can obtain additional benefit from advancing investment because they can claim:
- higher first year allowances
- higher rates of CT to apply to given allowances.

Table 2 sets out the position, and the table below sets out the potential gain to companies from the change in the system.

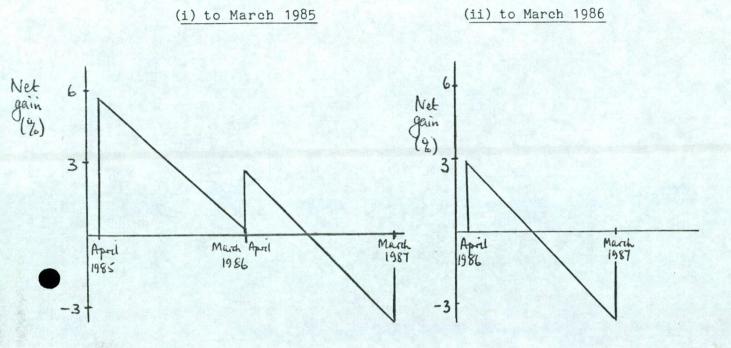
# Net Gain from bringing forward investment into 1984-85 (Net present value in March 1985, %)

#### Project advanced from:

	1985	5-86	1986-87		
	Debt	Equity	Debt	Equity	
Existing System	+ 2.3	+ 3.2	+ 4.5	+ 6.2	
New System	+ 8.7	+ 8.9	+ 14.1	+ 14.4	
Change	+ 6.4	+ 5.7	+ 9.6	+ 8.2	

6. The gains which these calculations indicate have to be set against the cost in terms of additional interest (net of tax relief) of bringing the investment forward. The potential net gain is greatest for a company bringing forward investment only from the very beginning of 1985-86 to March 1985 - around 6% of the asset price. Bringing forward investment from progressively later dates within 1985-86 to March 1985 means a steady reduction in the net gain as the additional interest cost builds up: by March 1986 the net gain is virtually zero. However, bringing the investment forward by one additional month, from April 1986, means that the net gain increases once again to 2-3% because of the reduction in the value of allowances which the investment would otherwise attract. Thereafter the net gain diminishes, eventually becoming negative. Similar considerations apply to investment brought forward to March 1986. The diagram below illustrates the possibilities, assuming a normal proportion of debt and equity financing.

## Potential Net Gain from bringing Investment forward (% of asset price )



#### Conclusion

- 7. These calculations cover only alimited range of possible assumptions. Inevitably they suggest questions about how the figures would look on slightly different assumptions. But at least as important, if not more so, is how companies will actually react to incentives of the order of magnitude suggested here. Any estimates are inevitably highly uncertain.
- 8. Short term forestalling say from April to March 1985 and, to a lesser extent, from April to March 1986 look very attractive on these numbers. But the benefit which a company would obtain from advancing a project by more than a few months would need to be weighed against the risks involved. It seems very doubtful, for example, that a company would want to advance a project by more than a year in order to gain a mere 3% of the value of its investment. In the light of these figures it seems plausible that the majority of projects affected would be brought forward by 6 months or less. Given also the Inland Revenue's formula for limiting financial forestalling, the estimates of total forestalling underlying the revenue calculations and the forecast £1 $^1$ 4 billion in 1984-85 and £ $^1$ 2 billion in 1985-86 still seem reasonable.

TABLE 1: THE PRESENT SYSTEM

					Later			ent value ch 1984
	1984-85	1985-86	1986-87	1987-88	Years	Total Deb Fina 100 100 100 100 52 52 52 52 52 52 -52 -47.	Debt Finance	Equity Finance
CT rate (%)	52	52	52	52	52			
Rate of Capital Allowance(%)								
Investment in 1984-85 Investment in 1985-86 Investment in 1986-87	100	100	100		- - -	100		
Value of allowances accrued								
Investment in 1984-85 Investment in 1985-86 Investment in 1986-87	52	52	52		=	52 52 52		
Effect on tax payments								
Investment in 1984-85 Investment in 1985-86 Investment in 1986-87		<b>-</b> 52	<b>-</b> 52	-52	<u>-</u>	-52 -52 -52	-50.0 -47.7 -45.5	-49.1 -45.9 -42.9
Discount factor (Jan of each year)								
Debt finance Equity finance		1.040 1.058	1.090 1.132	1.142				

TABLE 2: PROPOSED NEW RATES AND ALLOWANCES

	4001: 07	4005.05	4005.00		Qog oo Later			Net present value in March 1984	
	1984-85	1985-86	1986-87	1987-88	Total   In   Debt   Debt   Finance	Debt Finance	Equity Finance		
CT rate (%)	45	40	35	35	35				
Rate of Capital Allowance(%)									
Investment in 1984=85 Investment in 1985-86 Investment in 1986-87	75	6.25 50	4.69 12.50 25	3.52 9.38 18.75	28.12	100			
Value of allowances accrued									
Investment in 1984-85 Investment in 1985-86 Investment in 1986-87	33.75	2.50 20.00	1.64 4.38 8.75	1.23 3.28 6.56	9.84	37.50			
Effect on tax payments									
Investment in 1984-85 Investment in 1985-86 Investment in 1986-87		-33.75	-2.50 -20.00	-1.64 -4.38 -8.75			-39.0 -30.3 -24.9	-38.6 -29.7 -24.2	
Discount factor (Jan of each year					400				
Debt finance Equity finance		1.050 1.058	1.117	1.190	1.499 1.550				

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5. Frostalling.





MISS J C SIMPSON FROM:

DATE: 12 March 1984

SIR T BURNS

Mr Smoe to collect numbers

PS/Chief Secretary PS//Financial Secretary PS/Minister of State PS/Economic Secretary Sir P Middleton

Mr Cassell

Mr Battishill

Mr Evans

Mr Odling-Smee

Mr Folger

Mr Allen Mr Smee

Mr Smith

Mr Norgrove

Mr Ridley

Mr Lord

Mr Portillo

The Change 1: The Chancellor has seen and was grateful for the two notes attached to your minute of 9 March. He has that useful figures should be extracted and circulated to substantiate the points in paragraph 4 of the note on the importance of investment productivity: ie that the UK has a high capital stock per worker, and that the incremental output associated with new investment and the output per unit of capital are very low compared to those in other western countries.

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MISS J C SIMPSON

FROM: A M W BATTISHILL

DATE: 3 April 1984

C14 compa

MR BYATT

cc Mr Peretz Sir P Middleton Sir T Burns Mr Monck Mr Lovell Mr Monger Mr Odling-Smee Mr G P Smith Mr Andren Mr Hartley Mr Beighton ) IR

COMPANY TAX MEASURES SELECT COMMITTEE:

I mentioned to you this morning that I had a few small suggestions to make on the draft paper you put last night to the Chancellor. Several of them are only matters of language and precision; but since I guess the academics are likely to scrutinise the paper fairly carefully when it is published we ought to aim for maximum accuracy.

I have spoken to Mr Beighton at the Revenue and he is content 2. with the following points:

Page 2, first paragraph, sub-para (ii). This should read "progressive reduction of first year and initial allowances".

Page 2, second paragraph. I suggest in the first line "October 1984"; in the second line "in capital allowances" and in the fifth and sixth lines "as writing-down allowances build up."

Page 2, third paragraph. In the first line the reference should presumably be to "pre-Budget".

Page 3, second paragraph, sub-para (ii). The purists would, I think, take issue with the notion that dividends are "deductable" from profits under the imputation system. Rather it is that ACT on them is allowable against the companies' own corporation tax bill. Mr Beighton would prefer to re-draft the first sentence to read:

"Interest is fully deductable, whilst dividends can only be partially offset through the imputation system."

And then the third sentence might begin:

"Under the imputation system, dividends can be offset by the company at 30 per cent ..."

Page 5, top of the page, third line. I do not think the word "incentives" is quite right: do we mean "decisions".

Page 5, second paragraph. The royal "we" in the second sentence could be a little awkward if someone mischievously took the sentence out of context. It might be safer to say "Nor is the argument here concerned with ...". And in the next sentence you have probably spotted the mistype: "is" for "it".

Page 7, top of the page. There is an intrusive bracket.

Page 8, top of the page. The Revenue would prefer not to refer to "true economic depreciation", in case that is taken to mean depreciation on a replacement cost basis. Could we say "... more generous than commercial depreciation".

Page 10. Could we re-draft the first sentence on Stocks to read:

"The abolition of stock relief will simplify the system and allow the extra revenue to be used in a more beneficial way: any cost ..."

Page 10 (the section on Economic benefits). At the end of the third line "partly" should presumably read "fully" or "wholly".

Page 11, the section on Transitional effects. There are several points here.

line 2: insert "first year and" after "high";

line 3: insert "fully" before "phased out";

final sentence: this is rather important since at least one member of the Committee thought there was a permanent acceleration to investment under the new arrangements. I think it needs to be spelled out fairly carefully. My suggestion would be as follows:

"During the transition to the new system, there will be an even greater incentive to bring forward investment so as to attract residual first year and initial allowances before they cease altogether and to use them to reduce tax liabilities before the rate of corporation tax falls to 35 per cent. Companies can also look forward to the future returns on investment being taxed at a lower rate of corporation tax."

Page 11, second main paragraph. Two points on this. First, the opening sentence is really rather a technical qualification to the acceleration argument, and needs to be a bit more explicit. Mr Beighton's suggestion (with which I agree) is that it would be better to start the paragraph with the second sentence ("The gains which can be obtained etc."); to put an asterisk at the end of that; and then put the first sentence as a footnote. It could then be expanded somewhat to read:

"The scope for claiming higher initial and first year allowances where the investment itself (rather than simply the payment arrangements in respect of it) is not brought forward will be restricted by the provisions in Part II of Schedule 12 of the Finance Bill, described in paragraph 5 of the Inland Revenue Budget Day press notice on capital allowances.

Second, I have some worries about the next sentence dealing with investment advanced from the beginning of one tax year to the end of the previous one. As it stands, I suspect it is only unambiguously true of a company whose accounting period coincides with the fiscal year. For other cases sums need to recognise that companies pay corporation tax in relation to the profits of their accounting year, with apportionment where that straddles more than one financial year. I have discussed this briefly with Mr Beighton; but a complete answer gets pretty complicated. My suggestion would be to delete the sentence which is not strictly needed for the argument.

Page 12, second paragraph. The Revenue were a little surprised to see that investment brought forward from 1986-87 to 1985-86 was put as low as a quarter per cent. Perhaps someone could just check that the figure is correct. Finally, I have a small query about the basis of all the figures underlying the wedge calculations. As I recall it from my days at the Revenue, the timing delay in paying corporation tax (on average 15 months after the end of the period of account) is not insignificant when one is talking of fairly fow rates of inflation and real returns. Several references in the text suggest that we may have ignored these timing differences in the interests of simplicity. If so, it might just be worth making that point for the academic reader, perhaps in Annex III. It arises, for example, at the end of the third paragraph. There, one might add as a minimum "(ignoring timing differences)".

and

A M W BATTISHILL

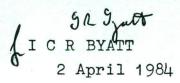
#### CHANCELLOR OF THE EXCHEQUER

c Sir P Middleton
Sir T Burns
Mr Monck
Mr Battishill
Mr Lovell
Mr Monger
Mr Odling-Smee
Mr G P Smith
Mr Andren
Mr Hartley
Mr Beighton (IR)
Mr Weeden (IR)

#### SELECT COMMITTEE: COMPANY TAX MEASURES

At last Monday's session, officials were asked about the effect of the Budget measures on the cost of capital. A paper was promised.

- 2. As we know, the relevant sense in which the Budget raised the cost of capital was by raising the hurdle rate on presently subsidised projects. Some projects benefited from a reduction in tax. The effect of the Budget on other elements in the cost of capital as it is currently understood by most people, i.e. on interest rates, on the cost of equity finance and on the level of retained profits, was either neutral or favourable.
- 3. So I think the best way to reply to the Select Committee is to put the changes in a wider context. We have therefore polished up the briefing material you saw a week ago and which you thought would be helpful for the Select Committee. I enclose a copy. If you approve, I suggest that Mr Battishill should, when writing to the Clerk, draw his attention to the need to look at the company tax measures in the context of the Budget as a whole.
- 4. We have included annexes on international comparisons of taxes and subsidies on investment and the productivity of investment in the UK. There is a small problem about publishing the IMF figures in the first annex. They come from an internal memorandum. But the author has published on this subject and we hope to get references from that.



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DRAFT

#### THE COMPANY TAX MEASURES

This note sets out the main elements of the discrimination which currently exists between different types of investment and between different forms of financing, as a result of the pre-Budget structure of company taxation. It illustrates the ways in which the distortions introduced into decision-making by the tax system are substantially reduced by the Budget proposals. It shows for a number of hypothetical investments the consequences which Budget tax changes will have on the pre-tax returns required if projects are to achieve a given post-tax yield - a measure of the cost of capital. It also discusses some aspects of the consequences of the transition to the new system. Annexes show comparisons with other countries and set out evidence of the productivity of capital in the UK.

In assessing the wider consequences of the Budget for companies and for investment it is necessary to look at the Budget measures as a whole.

## Main elements

The main elements of the package are:

- (i) progressive reduction in CT rates to 35%
- (ii) progressive reduction of allowances;
- (iii) abolition of Stock Relief;
- (iv) abolition of NIS.

Companies gain from the abolition of NIS from October 84. The changes in the rate of corporation tax, in allowances and stock relief are broadly revenue neutral during the transition period, but in the longer run tax bills will fall with lower CT rate as allowances build up again. This implies considerable gains to companies over longer term.

## Background

It is common ground that the Budget tax system treats different kinds of investment very differently. Some investments receive a substantial subsidy through the tax system: others bear a substantial penalty.

The UK system is more disciminatory than in many countries and is especially favourable to plant and machinery. (See Annex I)

Overall, the UK tax system subsidiæs investment more than in other countries. But this has not led to good investment performance, nor a good profit record. (Annex II) The basic aim of the Budget proposals is to reduce distortions and to have a simpler system which makes investment decisions more responsive to market as distinct from tax signals.

## The old system-

The main sources of discrimination and potential distortion at the company tax stage are:-

- (i) Capital allowances. Eg plant and machinery, gets 100 per cent first year allowances (FYA), while commercial buildings get no allowance.
- (ii) Source of finance. Interest is fully deductible, dividends only partially so (via the imputation system). Thus the effective cost of borrowing to the company, with interest rates at 10% (nominal) is only 5% when the CT rate is 50% (assuming company can take full tax advantage of deductibility). Under the imputation system, dividends are deductible for the company at 30 per cent (the imputation rate) again assuming that it has enough profits to be able to offset ACT payments on dividends fully against its mainstream tax liability. So the equivalent effective cost of equity finance would be 7 per cent (ignoring risk etc).

These differences are explicitly embodied in the present tax rules. But there are other factors which affect the degree of discrimination.

- (i) The CT rate the same rate applies to taxable profits earned from all assets and financed from all sources. But because of the deductibility provisions (ii) above, the level of the CT rate affects the cost of financing differentially. At high CT rates, debt finance has a bigger tax advantage over equity than at lower CT rates. The difference narrows as the CT rate approaches imputation rate; so the lower planned CT rate reduces the bias towards debt.
- (ii) Inflation the tax system is not indexed. So the deductibility of nominal interest is advantageous to companies when inflation is high (though of course disadvantageous to lenders who are taxed on nominal interest receipts). Again because of deductibility differences in (ii) above inflation affects the tax advantage of debt relative to equity. But with a lower CT rate the differential effect will be reduced.

The effects can be conveniently illustrated by comparing the pre-tax return which a number of hypothetical investments in particular assets would have to earn in order to give a 5 per cent real return to the suppliers of

finance. Figures of this kind measure what is often referred to as the company's (pre-tax) 'cost of capital'. This is the relevant concept for investment incentives - a higher cost of capital means that the marginal project has to pass a stiffer hurdle - and for choices about using capital in relation to labour (whose marginal cost is reduced by the abolition of NIS).

Note that the changes in cost of capital considered below arise from changes in the tax system, and not from changes in market interest rates or the equivalent rate of return on dividends. Nor are we concerned with the possible longer term consequences of the lower tax rate and higher post tax profitability on companies use of their own retained funds rather than external finance. For purposes of illustration is is assumed that interest rates remain unchanged. The cost of capital measure does however take account of the cost - at given interest rates - of any additional finance required because of lower capital allowances under the new system.

Obviously such figuring\* is stylised - no simple set of numbers can capture the full complexity of the system. In particular it must be remembered that tax liability depends on the overall tax position of the company or group. The post tax return on the same physical investment could vary widely because of this (see for example Fiscal Studies July 1982). It is assumed here that companies are full taxpayers. Inflation is assumed to be 5 per cent.

<sup>\*</sup> A brief account of the method is given in Annex III

Table 1

	Plant	industrial buildings	commercial buildings
Debt finance	-0.2	-0.1	3.2
Equity finance	2.0	2.2	7.7

The main points are:-

- (i) Many projects shown can (on the assumptions made) deliver 5 per cent to suppliers of finance from an investment yielding <u>less</u> than 5 per cent pre-tax. Thus the tax system is subsidising these investments.
- (ii) The range of tax subsidy/penalty is wide.

  An equity financed commercial building

  would have to earn pre-tax about 8 points

  more than a debt financed machine to cover

  a (real) 5 per cent cost of finance.
- (iii) For equity financing the projects generally require a higher pre-tax return; ie equity is at a fiscal disadvantage compared with debt. (Plant and machinery and industrial buildings are still subsidised however.)

Figures of this kind depend interalia on the inflation assumption - 5 per cent in Table 1. The system has in fact been operating when inflation has been much higher. This increases the tax subsidy to companies (and the tax penalty to suppliers of finance). Thus with 10

per cent <u>real</u> interest assumption) the figures of table 1 would be:

## Table 2

	Plant	industrial buildings	commercial buildings
Debt finance	-2.8	-2.8	-2.3
Equity finance	0.5	0.7	4.6

Thus the tax subsidy is substantially increased (or the tax penalty reduced) at higher inflation notably for commercial buildings, and generally for debt financing.

## Effects of the measures

When the measures are fully implemented, the main effects will be as follows. Note that the figures below assume companies paying tax in full.

- (i) For taxpaying companies the changes will tend to reduce the largest tax subsidies (on plant and machinery) and to reduce the largest tax penalties (on commercial buildings). The system will thus treat fixed assets in a more even handed manner. (Stocks are treated below.)
- (ii) There will still be an element of subsidy largely due to the inflation assumed (it would be lower at lower levels of inflation expected in future). With low and falling

inflation the 25% writing down allowance (WDAs) for plant and machinery will on average remain more generous than true economic depreciation.

(iii) The lower CT rate will reduce the present bias in favour of debt financing.

The effects can be illustrated on the lines of Table 1 above. The figures in Table 3 below show on the same assumptions (and with the same qualifications) as before how the pre tax returns in a number of specimen cases would need to change in order to maintain a 5 per cent real yield to suppliers of finance. The figures assume main CT rate at 35 per cent, and WDAs of 25 per cent for plant and machinery and 4 per cent for industrial buildings. (Companies are assumed to be paying tax in full.)

## Table 3

		Debt Finance		Ī	Equity Finance	<u>e</u>
	Plant	Industrial buildings	Commercial buildings	Plant	Industrial buildings	Commercial buildings
Present System	-0.2	-0.1	3.2	2.0	2.2	7.7
New System	2.5	2.7	4.1	3:1	3.4	4.8
Change	+2.7	+2.8	+0.9	+1.1	+1.2	-2.9

A + sign means that investments need to pass a stiffer hurdle than under the old system, ie that the marginal cost of capital has risen for these investments. This is because the large subsidies under the old tax system are substantially reduced.

But while the cost of capital has risen at the margin, some highly profitable projects will do better under the new system. (The extra profit, after providing for tax, depreciation and cost of financing at market rates, will be higher than before.) This is because while the reduction in the value of allowances affects marginal and highly profitable (intra marginal) projects alike, the highly profitable projects benefit more from the reduction in the CT rate.

The figures above assume 5 per cent inflation as in Table 1. At the lower rates expected in future the required pre-tax returns would be higher (the non-indexed system will of less benefit to companies). With inflation at zero, they would be:

Table 4

		Industrial buildings	Commercial buildings
Debt finance	3.9	4.3	6.8
Equity finance	4.2	4.7	7.2

Stocks - The abolition of stock relief will simplify
the system and use the extra revenue in a more beneficial
way: any cost penalty will disappear as inflation falls
to zero, and it would be inappropriate to continue stock
relief in a world of falling inflation.

It is worth noting that even in theory stocks financed

It is worth noting that even in theory stocks financed by debt do not need relief: the tax system already allows for deduction of <u>nominal</u> interest and hence allows adequately for inflation. To give stock relief in addition is in fact subsidising stockholding in this case.

## Economic benefits

Structural changes of the kind proposed cannot be evaluated in terms of numbers. In qualitative terms the economic benefits when the changes have partly worked through will be:

- (i) the lower tax bite on profits will stimulate firms to undertake more innovatory expenditure and activity and so raise economic performance generally;
- (ii) the more even handed pattern of incentives should improve the overall productivity of investment. Subsidised low yielding investment will be discouraged and higher yielding investment encouraged; but on

average, investment will at the margin have to earn a higher rate of return pre-tax than at present;

(iii) the changes in CT reinforced by the
abolition of NIS will provide an incentive
to increased employment, especially in
the medium term.

## Transitional effects

Some companies may find it profitable to bring investment forward in order to take advantage of the high initial allowances before they are phased out. Of course, there has always been an incentive to bring forward investment, even under the arrangements in existence before the Budget, because the earlier that allowances are taken into account in calculating tax liabilities the lower the net present value of tax payments. During the transition to the new system, the incentive to bring forward investment is greater because companies can then claim higher first year allowances and higher rates of corporation tax to apply to any given allowance.

The scope for claiming higher allowances will be restricted by the provisions in Part II of Schedule 12 of the Finance Bill (described in paragraph 5 of the Inland Revenue press notice on capital allowances).

The gains which can be obtained from bringing investment forward have to be set against the cost in terms of additional interest (net of tax relief) of bringing the investment forward. The potential net gain is greatest for companies which bring forward investment from the beginning of one tax year to the end of the previous tax year (eg from April 1985 to March 1985). But the benefits which can be obtained from advancing investment by more than a few months would need to be weighed against the risks involved. It seems very doubtful, for example, that a company would want to advance a project by much more than a year in order to gain a few percentage points of the value of its investment.

There is little empirical basis for assessing the extent to which companies will respond to the incentive to bring investment forward. It has been assumed that about 2 per cent of total company investment in 1985-86 might be brought forward into 1984-85, and about \( \frac{1}{4} \) per cent of investment in 1986-87 might be brought forward into 1985-86.

## Conclusion

The changes in company taxation should be seen in the context of the MTFS as a whole. Whereas the MTFS is set to provide a stable financial framework within which inflation and interest rates will continue to fall, the changes in company taxation will contribute to the

improvement of the efficiency and productivity of the economy. Together they provide the conditions for the achievement of lower inflation and higher levels of output and employment.

HM TREASURY

2 April 1984

## TAX TREATMENT OF DIFFERENT ASSETS IN DIFFERENT COUNTRIES

There have been two major studies of the extent to which the corporate tax systems of different countries affect investment incentives.

2. A study by George F Kopits\* compared the value of capital allowances and grants resulting from the purchase of investment equipment with the allowances required under a neutral system. The results were:-

	1973	1978
UK	-2.4	-4.4
Belgium	+0.6	+5.9
France	+1.1	+7.6
Germany	+5.9	+4.0
Italy	+12.8	+22.0
Japan	+1.4	+1.4
Netherlands	+5.0	+7.7
USA	-3.0	-0.6

Of the eight countries considered only the UK and the USA were providing subsidies in either period.

<sup>\*</sup> IMF Staff Papers 1980

- 3. The study also looked at the more disaggregated effects. The results suggested that in virtually all countries investment in buildings was taxed more heavily than investment in plant and machinery. On common assumptions about inflation rates, etc, by far the greatest subsidies to plant and machinery were given in the UK.
- 4. A second study by M A King and D Fullerton, examined whether the favourable treatment of plant and machinery over other assets was greatest in the UK, by comparing the pre-tax and post-tax rates of return for various hypothetical cases. They found that the UK tax system favoured investment in plant and machinery relative to other assets more than tax systems in other countries. Assuming a 10 per cent pre-tax real return, they found that in 1980 the post-tax returns would have been as follows:

(percentages)

	UK	Germany	Sweden	USA
Plant and machinery	13.7	5.5	10.0	8.2
Buildings	6.1	5.7	6.3	5.9
Difference	+7.6	-0.2	+3.7	+2.3
	-			

5. As a result of this discrimination, sectors of the economy where investment is dominated by plant and machinery were on average favoured over sectors where investment is mainly in buildings, particularly commercial buildings. Thus manufacturing was favoured over services

<sup># &</sup>quot;The Taxation of Income from Capital: A Comparative Study of the UK, US, Sweden, and Germany" by M A King and D Fullerton (Chicago, 1984)

(the study suggested that half of the manufacturing capital stock in 1980 was in plant and machinery, against 30% in the commercial sector).

6. The international comparisons suggest that
Germany and the -USA did not discriminate in favour of
manufacturing, and Sweden did to a lesser extent than
the UK. Assuming a 10 per cent pre-tax real return and
averaging across different types of investment while
using shares of capital stock as weights, the following
post-tax returns were obtained for manufacturing and
commerce (broadly the private service sector excluding
financial companies):

(percentages)

	UK	Germany	Sweden	USA	
Manufacturing	11.0	5.2	7.3	4.7	
Commerce	6.4	5.6	6.1	6.2	
Difference	+4.6	-0.4	+1.2	-1.5	
					-

These figures reflect both the less favourable treatment of plant and machinery in other countries (relative to the UK), and its smaller weight in the manufacturing capital stock. If assets had been weighted by shares of investment rather than of capital stock, the gap between manufacturing and commerce in the UK would have been smaller, but it would still have been significant.

7. The conclusions which emerge from these studies are that relative to the tax regimes in other countries:

- (i) the pre-Budget UK system appeared in general to offer a larger incentive to investment;
- (ii) the UK system was also highly
  discriminatory in favour of plant
  and machinery as opposed to other
  assets; consequently it was strongly
  biased in favour of manufacturing and
  against services.

#### THE RELATIVE PRODUCTIVITY OF UK INVESTMENT

- 1. What is striking about the performance of the UK economy is not that the amount of capital per worker has been insufficient, but that poor use has been made of the capital we have. This Annex considers the information which is available about the efficiency with which capital has been used.
- 2. The obvious starting point is to look at rates of return on fixed capital. These figures show that UK firms have tended to earn significantly less than those in other major countries:

#### Rates of Return

(per cent, averages for years specified)

	Non-financial corporations			Ma	nufacturin	<b>E</b> .
	1968-71	1972-75	1976-80	1968-1971	1972-75	1976-80
UK	9	6	6	11	8	6
Germany	na	na	na	23	17	16
France	14	13	9	na	na	na
USA	17	14	14	24	20	18

Source: "International comparisons of profitability 1955-81",
British Business, 19 August 1983

3. Another way of looking at the problem is by way of Incremental Capital-Output Ratios (ICORs) - the ratio of net investment to changes in output. These figures again suggest that the UK performance has been poor (a high ICOR means that the output achieved per additional unit of capital has been low):

#### ICORS

	Whole eco	Whole economy		acturing
	1964-73	1973-79	1964-73	1973-79
UK	3.8	5.0	2.2	negative*
Germany	2.9	3.1	1.1	0.2
France	1.2	1.5	0.9	1.0
USA	1.6	1.7	0.6	1.5
Canada	1.7	2.6	1.1	1.9

Source: UK: "National Income and Expenditure, 1983 Edition", and some unpublished details of net capital stock

Other countries: "Flows and Stocks of Fixed Capital" (OECD, 1983) and "National Accounts 1964-1981, Volume II" (OECD, 1983)

<sup>\*</sup>Manufacturing output in UK fell between 1973 and 1979

4. A problem with ICORS is that it may be wrong to associate all the increase in output over a given period with the increase in capital, particularly if employment has been rising. An adjustment can be made for changes in employment by assuming that as employment changes, output changes in line with average labour productivity: the result is a set of adjusted ICORs - ICOR(L)s. The general picture of poor UK performance remains:

# ICOR (L)s

	Whole e	conomy	Manufacturi	
	1964-73	1973-79	1964-73	1973-79
UK	3.8	5.4	1.9	13.3
Germany	2.9	2.8	1.1	0.1
France	1.3	1.6	0.9	0.9
USA	2.5	3.6	0.8	2.0
Canada	2.3	6.5	1.2	2.5

Source: as for ICORs

Note: UK manufacturing capital stock adjusted to allow for leasing

5. An alternative approach is to look at output per unit of capital stock. These figures again broadly support the suggestion that capital has been poorly used in the UK compared with other countries - though the picture is clearer for manufacturing than for the economy as a whole (which is not surprising given that manufacturing is fairly homogeneous, whereas the whole economy figures reflect different patterns of investment in, for example, social infrastructure):

#### Output per unit of net capital stock, 1980

		(UK = 100)
	Whole economy	Manufacturing
UK	100	100
Germany	105	195
France	245	175
USA	160	210

Source: as for ICORs; PPPs from "National Accounts 1952-1981,

Volume I" (OECD, 1983)

Note: UK manufacturing capital stock adjusted to allow for

leasing

- 6. These figures are however the product of a number of assumptions. Capital stock figures have been converted to a common basis by the use of the OECD's estimates of purchasing power parities (PPPs): the alternative would have been to use current exchange rates, but neither approach is without problems. The comparison also relies on various countries' own estimates of capital stock, and there are significant, though not necessarily unreasonable, differences in the assumed lives of assets. These qualifications mean that the above figures should be treated only as broadly indicative: they are, however, consistent with information from other sources.
- 7. It is, for example, helpful to be able to supplement aggregate data with information derived from industry case studies. One such study is that by C Pratten\* a detailed comparison of the operations of international companies in the UK and elsewhere (particularly USA, Germany and France). This reached the conclusions that "differences in the performance of managers and workers did account for substantially lower productivity in the UK than in Germany, France and USA", and that differences in capital equipment "were not considered the major cause of differences in productivity". Thus, "circa 1979 managers were getting a lower level of output from the resources they employed in the UK". In addition, "the view that lack of investment is not the prime cause of low productivity is also supported by the experience of companies in the sample which greatly increased productivity in 1980/81 without heavy investment".
- 8. These findings are paralled by other studies of UK productivity growth. For example, the conclusion of one is that "the growth of labour productivity is more dependent upon improvements in the quality and efficiency of factor inputs than the addition of more capital per worker".\*\*

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<sup>&</sup>quot;Labour Productivity Differentials within International Companies: Final Report" by C Pratten, (University of Cambridge Department of Applied Economics, mimeo, 1982).

<sup>\*\* &</sup>quot;Post-war trends in employment, productivity, output, labour costs and prices by industry in the United Kingdom" by Richard Wragg and James Robertson, (Department of Employment Research Paper No 3, 1978).

ANNEX III

#### Rate of return calculations

The figures given in the tables in the main text are the minimum pre-tax returns that hypothetical investments would need to earn in order to give a 5% real return to the suppliers of finance (persons or institutions). The methodology used is based on recent work by King and Fullerton (see references below).

Assumptions have to be made about inflation. The main discussion assumes that the nominal interest rate is 10% and the rate of inflation is 5%. Tables 2 and 4 show the effect of varying the inflation assumption.

To illustrate the nature of the calculations, consider a debt-financed investment in plant. Nominal interest is fully deductible for corporation tax purposes so that the net of tax cost of debt finance to the company at a 52% corporation tax rate is 4.8% in nominal terms.

Under the old system this investment attracts 100 per cent first year allowance, so the company has to borrow only £48 to finance the purchase of a £100 asset. (The rest is provided by the Government which forgoes £52 worth of immediate tax receipts.) Thus the £100 asset need only yield 4.8 per cent before tax (nominal) in order to pay the assumed 10% market rate of interest on the £48 of new borrowing. This is a pre-tax yield of -0.2 per cent in real terms with inflation at 5 per cent.

More generally, however, the minimum pre-tax return exceeds the net of tax cost of finance to the company to an extent depending on the degree of acceleration of depreciation (the rate of tax depreciation relative to true economic depreciation) and the inflation rate. This is taken into account in the tables.

The calculations relate to hypothetical investments in specific types of asset but clearly in practice an investment project will consist of a mixture of these assets. Furthermore, it is assumed that companies pay corporation tax at the full rate, whereas some will be tax-exhausted under the old system and others will have surplus advance corporation tax (and therefore pay corporation tax at the effective mainstream rate, 22% under the old system but 5% under the new system).

These and other complications cannot be summarised as simplified calculations used in the tables.

#### References

M A King

"The effective marginal tax rate on income from capital in the UK" in (ed) W E Martin - The Economics of the profits crisis HMSO 1981

(ed) M A King and D Fullerton

The taxation of income from capital Chicago University Press 1984

c Sir T Burns o.r.
Mr Monck
Mr Lovell
Mr Monger
Mr Odling-Smee
Mr G P Smith
Mr Smee
Mr Beighton (IR)

BUDGET: COMPANY TAX MEASURES

I attach completed briefing on the company tax measures for use - as appropriate - with the Select Committee and with other informed critics.

- 2. The paper does not contain much in the way of new material although Mr Smee has added more material on the relationship between investment and efficiency in the UK. The material is similar to that which Mr Monck is assembling for the Chancellor's NEDC presentation but being more of a quarry, it provides more material. The paper uses the "wedge" concept and provides some illustrative figures, as does the material being assembled by Mr Monck. I am not sure whether the Chancellor wants to use this but my advice is that we cannot sustain an intellectual defence of the measures without getting into this territory. The briefing shows a number of wedges, which, as they are illustrations, depend on the assumptions made.
- 3. The paper is concerned with the structural aspects of the tax changes and does not include any estimates of the effect on the volume of investment or of the extent of any forestalling. I have discussed this with Mr Odling-Smee. He feels, and I agree, that we should not be prepared to release any estimates of the volume and forestalling effects. Any such estimates would be subject to a wide range of error and could be misleading. The Treasury model has not been designed to look at supply side effects and is generally ill equipped to look at policy changes which involve substantial changes in relative prices.
- 4. Nor does the paper cover the revenue effects of the measures. I understand that these are covered in Mr Walton's letter to you of 21 March.



105/13

# THE CORPORATE TAX PACKAGE

## I - Main elements

- (i) progressive reduction in CT rates to 35%;
- (ii) progressive reduction of allowances;
- (iii) abolition of Stock Relief;
- (iv) abolition of NIS.

NIS net gain from October 84. S.R. net loss from 1985-6.

(Do not intend to say much about these.) CT, allowances and S.R. broadly revenue neutral during transition, but in longer run tax bills will fall with lower CT rate as allowances build up again. Implies considerable gains to companies over longer term.

### II - Background

- (i) Common ground that tax system treats
  different kinds of investment very
  differently. Some investments receive
  a substantial subsidy through the tax
  system: others bear a substantial
  penalty.
- (ii) UK system more discriminatory than in many countries; especially favourable to P&M. (See Annex figures including asset mix of capital stock and investment.)

(iii) Overall, the UK tax system subsidises
 investment more than in other countries.
 But this has not led to good investment
 performance, a good profit record etc.
 (Annex figs).

These points are elaborated in Annex.

Basic aim of proposals is to reduce distortions and have a simpler system which makes investment decisions more responsive to market as distinct from tax signals.

### III - Present system

The sources of discrimination and distortion at the company tax stage are:-

- (i) Capital allowances. Eg P&M gets 100 per cent FYA, commercial buildings get no allowance.
- (ii) Source of finance. Interest is fully deductible, dividends only partially so (via the imputation system). Thus the effective cost of borrowing to the company, with interest rates at 10% (nominal) is only 5% when the CT rate is 50% (assuming company can take full tax advantage of deductibility). Dividends are deductible for the company at 30 per cent (the imputation rate) again

assuming that it can take full advantage of ACT offset. So the equivalent effective cost of equity capital would be 7 per cent (ignoring risk etc).

These differences are explicitly embodied in the present tax rules. But there are other factors which affect the degree of discrimination:

- (iii) The CT rate the same rate applies to taxable profits earned from all assets and financed from all sources. But because of the deductibility provisions (ii) above, the level of the CT rate affects the cost of financing differentially. At high CT rates, debt finance has a bigger tax advantage over equity than at lower CT rates. Difference narrows as CT rate approaches imputation rate, so lower planned CT rate reduces bias towards debt.
  - (iv) Inflation the tax system is not indexed. So deductibility of nominal interest advantageous to companies when inflation is high (but disadvantageous to lenders who are taxed on nominal interest receipts). Again because of deductibility differences in (ii) above inflation affects the tax advantage of debt relative to equity. But with a lower CT rate differential effect reduced.

The effects can be conveniently illustrated by comparing the pre-tax return which a number of 'typical' investments would have to earn in order to give a 5 per cent real return to the suppliers of finance. (It is assumed below that inflation is 5 per cent.) Obviously such figuring is stylised - no simple set of numbers can capture the full complexity of the system. In particular it must be remembered that tax liability depends on the overall tax position of the company or group. The post tax return on the same physical investment could vary widely because of this (see for example Fiscal Studies July 1982). It is assumed here that companies are full taxpayers.

# Table 1

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Equity finance	2.0	2.2	7.7

The main points are:

(i) Many projects shown can (on the assumptions made) deliver 5 per cent net to suppliers of finance from an investment yielding less than 5 per cent pre tax. Thus the tax system is subsidising these investments.

- (ii) The range of tax subsidy/penalty is wide. An equity financed commercial building would have to earn pre-tax about 8 points more than a debt financed machine to cover a (real) 5 per cent cost of finance.
- (iii) For equity financing the projects generally require a higher pre-tax return; ie equity is at a fiscal disavantage compared with debt. P&M and industrial buildings are still subsidised however. The subsidy would be reduced but not eliminated if inflation were zero rather than 5 per cent, (on assumptions made here).

Figures shown depend inter alia on inflation assumption (5 per cent). System has in fact been operating when inflation much higher. This increases tax subsidy to companies (and tax penalty to suppliers of finance). Thus with 10 per cent inflation (and retaining 5 per cent <u>real</u> interest assumption) the figures of table 1 would be:

Table 2

	Plant	industrial buildings	commercial buildings
Debt finance	-2.8	-2.8	-2.3
Equity finance	0.5	0.7	. 4.6

Thus the tax subsidy is substantially increased (or tax penalty reduced) at higher inflation notably for commercial buildings, and generally for debt financing.

# IV - Effects of package

- (i) For taxpaying companies the changes will tend to reduce the largest tax subsidies (on P&M) and to reduce the largest tax penalties (on commercial buildings). The system will thus treat fixed assets in more even handed manner. /Stocks treated below7
- (ii) There will still be an element of subsidy
  largely due to the inflation assumed (it
  would be lower at lower levels of inflation
  expected). With low and falling inflation the
  25% WDA for P&M will on average remain more
  generous than true economic depreciation.

  /Since there is only one rate of WDA for P&M
  the changes will introduce an element of
  discrimination within the P&M category against short-lived assets.7
- (iii) The lower CT rate will reduce the present bias in favour of debt financing.

NB: figures assume companies paying tax in full.

The effects can be illustrated on the lines of Table 1 above. The figures in Table 3 below show on the same assumptions (and with the same qualifications) as before how the pre tax returns in a number of specimen cases would need to change in order to maintain a 5 per cent real net of tax yield to suppliers of finance. The figures assume main CT rate at 35 per cent, and WDAs of 25 per cent for P&M and 4 per cent for industrial buildings.

## Table 3

		Debt Finance			Equity Finance		
	Plant	Industrial buildings	Commercial buildings	Plant	Industrial buildings	Commercial buildings	
Present System	-0.2	-0.1	3.2	2.0	2.2	7.7	
New System	2.5	2.7	4.1	3.1	3.4	4.8	
Change	+2.7	+2.8	+0.9	+1.1	+1.2	-2.9	

A+ sign means that investments need to pass stiffer hurdle than under the present system (because the present large subsidies are substantially reduced).

The figures above assume 5 per cent inflation as in Table 1.

At the lower rates expected in future the required returns would be higher (the non-indexed system will be of less benefit to companies). With inflation at zero, they would be:

#### Table 4

	P&M	Industrial buildings	Commercial buildings	
Debt finance	3.9	4.3	6.8	
Equity finance	4.2	4.7	7.2	_

#### STOCKS

The abolition of S.R. is based not so much on the need to reduce distortions as to simplify the system and use the extra revenue in a more beneficial way.

NB at present stocks financed by debt do not need S.R.: the system already allows for deduction of <u>nominal</u> interest and hence allows adequately for inflation, so that to give S.R. in addition is in fact subsidising stockholding.

Annex shows stock/output ratio high perhaps because of tax subsidy.

Effect of abolition will depend on inflation, and any penalty will disappear as inflation falls to zero.

#### V - Economic benefits

Structural changes of the kind proposed cannot be evaluated in terms of numbers. In qualitative terms the economic benefits when the changes have partly worked through will be:

- (i) the lower tax bite on profits will stimulate
   firms to undertake more innovatory expenditure
   and activity and so raise economic performance
   generally;
   (ii) the more even handed pattern of incentives
   should improve the overall productivity of
  - should improve the overall productivity of investment. Subsidised low yielding investment will be discouraged and higher yielding investment encouraged; but on average, investment will at the margin have to earn a higher rate of return pre-tax than at present;
- (iii) the changes in CT reinforced by the abolition of NIS will provide an incentive to increased employment, especially in the medium term.

DEU 23 March 1984

# TAX TREATMENT OF DIFFERENT ASSETS IN DIFFERENT COUNTRIES AND THE QUANTITY AND QUALITY OF INVESTMENT

# I. Comparisons of Effective Tax Rates

There have been two major studies of the extent to wnicn corporate tax systems in different countries distort investment incentives.

2. A study by Kopits compared actual post-tax returns resulting from the purchase of investment equipment with the returns required under "neutral" systems. The results were:

Tax (+) on, or Subsidy (-) to, Investment
(Percentage of asset price)

	(Percentage of asset price)	<u>1978</u> - 4.4
UK	- 2.4	- 4.4
Belgium	+ 0.6	+ 5.9
France	+ 1.1	+ 7.6
Germany	+ 5.9	+ 4.0
Italy	+ 12.8	+ 22.0
Japan	+ 1.4	+ 1.4
Netherla	nds + 5.0	+ 7.7
US	- 3.0	- 0.6

Of the 8 countries considered only the UK and the US were providing subsidies in both periods.

- 3. The study also looked at the more disaggregated effects (see Annex Table 1). The results showed that while virtually all the countries taxed investment in buildings, they subsidised investment in plant and machinery. By far the greatest percentage subsidies were given in the UK.
- 4. A second study, by King and Fullerton, examined whether the favourable treatment of plant and machinery over other assets was greatest in the UK, by comparing the pre-tax and post-tax rates of return for various hypothetical cases. They found

that the UK tax-system favoured investment in plant and machinery relative to other assets more than the tax-systems in other countries. Assuming a 10% pre-tax real return, they found the 1980 post-tax returns would be as follows:

	L 4	UK	Germany	Sweden	US
Plant and machinery		13.7	5.5,	10.0	8.2
Building		6.1	5.7	6.3	5.9
Difference	• 4	7.6	- 0.2	+ 3.7	+ 2.3

whose investment is dominated by plant and machinery are on average favoured over sectors whose investment is mainly in buildings particularly commercial buildings. Thus manufacturing is favoured over services (over the period 1978-82 77% of manufacturing fixed investment in the UK was in plant and machinery, compared to only 40% for service industries). The international comparisons suggest that Germany and the USA do not discriminate in favour of manufacturing, and Sweden does to a lesser extent than the UK. Assuming a 10% pre-tax real return and averaging across different types of investment, the following post-tax returns are obtained for manufacturing and commerce (broadly the private service sector excluding financial companies):-

	UK	Germany	Sweden	US
Manufacturing	11.0	5.2	7.3	4.7
Commerce	6.4	5.6	6.1	6.2
Difference	+ 4.6	- 0.4	+ 1.2	- 1.5

These figures reflect both the less favourable treatment of plant and machinery in other countries (relative to the UK) and its smaller weight in the manufacturing capital stock.

- 6. The important conclusions which emerge from these studies are that relative to the tax regimes in other countries:
  - (i) the current UK system appears in general to offer a larger incentive to investment;

(ii) the UK system is also highly discriminatory in favour of plant and machinery as opposed to other assets; consequently it is also strongly biased in favour of manufacturing and against services.

# II Comparisons of Levels and Patterns of Investment (i) Level of Investment

(i) Level of Investment

In examining the effect of tax regimes on the quantity of investment and capital, it is legitimate to look at two sorts of data: annual investment and the overall capital stock.

Over the period 1970-79, the average real growth rate of total investment in the UK was 1.1% pa, and 3.4% pa for plant and machinery; the respective figures for the major seven OECD countries were 3% pa and 5.2% pa. The growth rate of plant and machinery investment was Expressed as a percentage of GDP, however, therefore low in the UK. the picture is less clear-cut. Between 1970 and 1979 total investment averaged 18.7% of GDP in the UK, and plant and machinery investment 8.9%, compared to 21.7% and 8.7% respectively for the major seven. So, given the lower growth of GDP, the UK's investment levels, at least for plant and machinery, were not unsatisfactory. (However, this begs the question of whether the low growth rate of GDP was itself a result of the low growth in investment). in terms of the growth of investment per employee, the UK occupied a middle position among the major seven, because of its generally lower level of employment growth. The conclusion to be drawn for the recent investment figures is that the relatively generous tax provisions in the UK have not been matched by a higher investment growth rate than in other countries.

8. This need not however mean that the UK is deficient in capital. Estimates of net capital stock are subject to a wide degree of uncertainty. Nevertheless, the best estimates available suggest that the amount of capital per worker in the UK is comparable to that in Germany, France and the USA. (See Table below).

#### NET CAPITAL STOCK PER WORKER 1980

	Whole economy	Manufacturing
UK	100	100
Germany	120	75
France	55	95
USA	90	90

- 9. These are however fallible figures. They reflect national depreciation conventions, and we know that the UK assumes longer asset lives than other countries, though the UK figures have been adjusted to allow for new (1983) CSO assumptions (and an allowance has been made for leased assets in manufacturing).
- 10. The table has been constructed using OECD purchasing power parity figures which overcomes the major distortions resulting from fluctuating exchange rates. But precise figures will be affected by major shakeouts of labour thus in 1980 the UK capital/labour ratio was increased by the labour shake-out.
- 11. The most reasonable conclusion from these estimates is, therefore, that UK capital per worker is at least not out of line with that elsewhere. But the average age of the UK stock is probably greater than that of competitor countries. A further reason for caution is that some OECD estimates (in the last UK country report) suggest that the effective UK manufacturing capital stock has fallen during the recession.
- 12. One piece of related evidence is the finding, in a recent OECD study "Investment, Capacity, Utilisation and the Rate of Growth of Productivity", that only in UK and USA did the rate of growth of the capital/labour ratio increase during the 1970s (it fell markedly in Germany).

#### II The Relative Productivity of UK Investment

. 13. Comparisons of the efficiency of UK investment fall into two main categories: those at the national level and those at the industry and company level.

#### (i) National level

- 14. There are a number of indicators of the comparative efficiency of investment at the national level. Because of the well known problem of international comparisons none should be given too much weight on its own, but together they present a consistent picture.
- 15. The following table gives indexes of output per unit of capital. These use the net capital stock figures. The picture presented is of poor UK capital productivity (except for the whole economy comparison with Germany which is an oddity).

#### OUTPUT PER UNIT OF CAPITAL\* 1980

	Whole economy	Manufacturing		
UK	100	100		
USA	160	210		
Germany	105	195		
France	245	175		

<sup>\*</sup>converted at OECD PPP rates.

16. Another indicator is the Incremental Capital -Output Ratio (ICOR). Two ICORs are given in the table below - the first is simply the ratio of the increase in net capital stock to the increase in output; the second adjusts the increase in output for changes in employment (so that if employment increases the increase in output 'due to' new capital is reduced). Again this indicator suggests that UK performance has been poor - and worse between 1973-79 than 1964-73. (Another set of ICORs - this time referring to industrial output but giving the same/picture - has been published by NEDO). It should be noted that ICORs are a a somewhat artificial construct since the increase in output over a given period will not necessarily be the result only of the net increase in capital stock during the same period, even if the effect of other factors of production is taken out.

ICORS, 1964-73 and 1973-79

	Whole economy					Man	ufacturi	ng
	ICOR		ICOR(L)		ICOR		ICOR(L)	
	63-73	73-79	64-73	73-79	64-73	73-79	64-73	73-79
UK	3.8	5.0	3.8	5.4	2.2	negativ	re* 1.9	13.3
Germany	2.9	3.1	2.9	2.8	1.1	0.2	1.1	0.1
France	1.2	1.5	1.3	1.6	0.9	1.0	0.9	0.9
USA	1.6	1.7	2.5	3.6	0.6	1.5	0.8	2.0
Canada	1.7	2.6	2.3	6.5	1.1	1.9	1.2	2.5

<sup>\*</sup>manufacturing output in UK fell between 1973 and 1979

# NET RATES OF RETURN\*

	Non-fi	nancial corpo	Manufacturing (per cent)			
	1968-71	1972-75	1976-80	1968-71	1972-75	1976-80
UK	9	6	6	11	8	6
Germany	•		-	23	17	16
France	14	13	9	-	-	-
USA	17	14	14	24	20	18

<sup>\*</sup>average for years specified.

<sup>17.</sup> Figures showing <u>rates of return</u> to fixed capital show that the UK has since the mid-1960s consistently performed worse than other countries.

# (ii) Firm and Industry Level Studies

- 18. The general picture of poor use of capital is confirmed by various studies at firm or industry level:
  - (i) Cliff Pratten's study "Labour Productivity Differentials within International Companies" (1981). This was a detailed comparison of the UK and overseas operations of international companies. Pratten concluded that differences in capital equipment were not generally the major cause of differences in productivity, and that "the view that lack of investment is not the prime cause of low \_UK\_7 productivity is also supported by the experience of companies in the sample which greatly increased productivity in 1980/81 without heavy investment". He concludes that a lower performance by managers and workers in like—for—like situations is an important factor and that the origins of Britain's productivity problem lie deep in the social system".
  - (ii) A study by the Centre for Inter-firm Comparisons,
    "How do some firms manage better?" (1981) analysed the
    reasons for differences in company performance (by means of
    a questionnaire and by analysis of business ratios).

    Factors identified as leading to corporate success included
    quality control, strong market research and planning,
    strong financial skills, good management training and so on.

    Successful firms tended to have high R & D/sales ratios;
    high value added per head; low current asset, stocks,
    work-in-progress to sales ratios; and low fixed assets to
    sales intensity. No relationship was found between investment growth and company success.
  - (iii) A US study (by the <u>Marketing Science Institute</u>) also found that investment intensity was inversely related to profitability. The authors suggest that this might be because of the heavy emphasis placed on achieving high volume, and thus high capacity utilisation, in investment-intensive industries.

- (iv) A <u>DTI</u> study "UK Trade in Manufacturing: The Pattern of Specialisation During the 1970s" (by S R Smith, G M White, N C Owen and MR Hill) concluded that capital intensity was associated with <u>below-average</u> trade performance. One explanation put forward is that high capital-intensive/low human capital-intensive operations tend to be mature products which are best produced in developing countries.
- The February 1984 NEDO paper "Trade Patterns and Industrial Change" also concluded that while "capital investment is important" to trade performance "there is no unique relation between high investment and successful trade performance - the UK in the latter half of the 1970s maintained a level of investment in manufacturing which compared quite favourably with our competitors, and since then, though weak, has held up better than might have been expected". work at the sectoral level suggested that chemicals and clothing, for example, had shown high rates of investment, increases in capital productivity and improvement in export But "in the engineering sectors and iron and steel, whilst investment has again been quite strong and labour productivity has improved strongly, increases in capital producitivity have been negligible, suggesting that innovation has been relatively weak" and "export shares have fallen".

Annex Table 1

# Tax-Subsidy Rate on Non-residential Fixed Investment in Industrial Countries by Asset Group, Assuming Uniform Rates of Income Tax and Discount, 1980

(As percentage of asset price)

Country	Non-residential Buildings	Other Construction	Transport Equipment	Non-electrical Machinery	Electrical Machinery	Other Producer Durables
	+7.0	+4.9	-0.6	-1.7	-4.2	-2.4
Belgium	+5.1	-3.3	-0.7	-2.4	-2.8	+0.9
France	+16.8	+1.3	-1.1	-1.1	+0.3	-1.9
Germany Italy	-5.8	-12.6	-4.8	-4.9	-7.4	-5.6
Japan	+11.3	+7.5	+1.8	-0.8	-1.1	+0.1
Netherlands	-1.7	-0.8	+0.2	-2.6	+0.1	-2.8
	+2.8	-13.6	-5.4	-11.2	-12.8	-12.4
United States	+8.4	-9.7	-5.3	-8.4	-8.7	-10.7

Note: A positive value indicates a tax; a negative value represents a subsidy. It is assumed that the income tax rate is 46 per cent, the nominal discount rate is 10 per cent, and the inflation-adjusted discount rate is 5 per cent.

c Sir T Burns o.r. —
Mr Monck
Mr Battishill
Mr Lovell
Mr Monger
Mr Riley
Mr Smee
Mr G P Smith
Mr Beighton (IR)

BUDGET: COMPANY ELEMENTS

In your notes of 19 March to Sir T Burns and Mr Smith, you suggest that material on forestalling would best fit into Mr Smith's note.

- 2. I think that it would be much better to handle the structural and conjunctural elements of the company tax measures separately. The structural effects are best presented in a largely timeless way, using wedges as the key analytic concept. The effects on investment and in particular forestalling are much more concerned with the time path of adjustment. Also different analytic concepts are used in handling those issues.
- 3. I therefore suggest that Mr Smith should not incorporate Mr Riley's material in his note but that we should revert to my earlier suggestion of a separate MP dossier.
- 4. On timing, I am planning to get the DEU material completed by Friday, so that the Chancellor could see anything which might be used at next week's Select Committee hearings, so that he can decide what he feels should be used and how.
- 5. Meanwhile, we have the Chancellor's idea of a slide show for NEDC on 4 April. Mr Monck is master-minding this. I think it should concentrate on the structural effects of the company tax measures, international comparisons and the "quality" of investment. I do not think it should go into forestalling and aggregate effects on investment.



I C R BYATT

21 March 1984