Options for 1995

The Green Budget

Gavyn Davies
Andrew Dilnot
Christopher Giles
David Walton

with additional contributions from

Stephen Bond
Martin Brookes
Lucy Chennells
Ian Crawford
Alissa Goodman
Rachel Griffith
John Hall
Paul Johnson
Julian McCrae
Najma Rajah
Stephen Smith
Sarah Tanner
Steven Webb

and

Chantal Crevel-Robinson (word-processing)
Judith Payne (copy-editing)

Editors: **Andrew Dilnot and Christopher Giles**

The Institute for Fiscal Studies
7 Ridgmount Street
London WC1E 7AE

Published by

The Institute for Fiscal Studies
7 Ridgmount Street
London WC1E 7AE
(Tel. 071-636 3784)
(Fax 071-323 4780)

ISBN 1-873357-41-9

Printed by TRINITY PRESS LIMITED London E1

Contents

List of Tables

Appendix Tables

List of Figures

1 The 1995 Budget

As Mr Clarke approaches his second Budget, there is a less obvious need for fiscal action than in either the March or November Budgets of 1993. In 1993, budgetary tightening was clearly necessary to bring the public finances back under control. However, there are those who believe that tightening went too far last year, and that the rapid subsequent improvement in the public finances justifies some tax reduction in the Budget on 29 November.

This Green Budget outlines the macroeconomic background to the Budget, and considers at length whether fiscal tightening has gone too far. We then consider a wide range of areas where change and reform might be or should be on Mr Clarke's pre-Budget agenda.

We conclude that the overall package will be broadly neutral in revenue terms in 1995-96, with the Chancellor thus opting to leave his tax cut powder dry until at least next year. On tax reform, little change seems likely in income tax or corporation tax, but the Chancellor could conceivably choose to cancel the second leg of the VAT increase on fuel. He may also seek to improve work incentives for those on low incomes.

Macroeconomic Background

The UK is now clearly into its third year of recovery and most aspects of the economic outlook appear encouraging. GDP growth in 1994 at around 3.5%, a current account deficit of less than 1% of GDP, and underlying inflation at around 2.5% in the fourth quarter would all be much better than expected a year ago. Looking ahead, a central question is whether growth will remain strong, and, if so, will underlying inflation remain firmly within its target range of 1-4%?

Factors tending to retard economic growth include the recent tightening of monetary policy, the slackness of the housing market and the cumulative impact of the pre-announced tax increases. But the economy is still supported by the lagged effects of the considerable monetary loosening that took place from September 1992 until early this year. Taken together with an unusually large financial surplus for the private sector, rapid growth in UK export markets as growth in the OECD area improves, and upbeat business surveys, it seems likely that growth can continue at close to recent rates. The Goldman Sachs forecast points to growth of 3.5-3.75% both this year and next.

With such strong growth forecasts, there is naturally a concern about the future path of inflation. Much of the uncertainty about the inflation outlook concerns doubts about the degree of spare capacity that exists in the economy. One view is based on a projection of long-run trend growth through mid-cycle GDP levels, and suggests that the output gap is currently as high as 5%. This implies that the economy could grow at 4% per year for another three years before trend output is reached. Another view relies on evidence on capacity utilisation from the CBI Industrial Trends Survey, which shows that the proportion of firms working at full capacity is already above its historical average, suggesting that the output gap has already disappeared.

Both these views seem too extreme. A more plausible view is that during the recession, potential GDP grew more slowly than its long-term trend as physical capacity was scrapped and unemployment rose. This may mean that the level of spare capacity is currently lower than is commonly thought, thereby bringing the period of disinflation to an end before long. However, this does not mean that a further period of above-trend

growth will automatically lead to higher inflation. During the upswing, both actual and potential GDP should be able to grow more quickly than trend, as new capacity is installed and unemployment falls.

This process can only go on for so long. At some point, if growth remains above trend, inflationary pressures will become apparent as the economy begins to run short of adequately skilled labour. The time it takes for this to happen will clearly be dependent on how fast the economy grows. For example, if GDP were to grow by 4% per year from now on, we would expect inflation to breach the 4% target sometime in mid-1996 and to go on rising through 1997 and 1998. If, on the other hand, GDP were to grow by 3.6% in 1994, 3.7% in 1995 and 2.7% thereafter, we would expect inflation to remain within the target range until the second half of 1998.

Monetary Policy and the Monetary/Fiscal Mix

The task for policy is to ensure that inflation does remain within its target range. In principle, any future policy tightening could come on either the fiscal or the monetary side. Indeed, if we accept that some further tightening in the overall macroeconomic stance appears optimal, then the same arguments that applied last year for focusing primarily on the fiscal side are still relevant. A tighter fiscal stance, with monetary policy correspondingly easier than it would otherwise be, remains the best way of rebalancing the economy away from consumption towards investment, and away from domestic demand towards net trade.

While this would probably be the optimal policy response for the economy, it would obviously be a very difficult course of action politically for the Chancellor to pursue. If, instead, the Chancellor chooses to rely on monetary policy, then interest rates will probably need to rise quite a bit further over the next year. A rise in base rates to 7% by the middle of next year would probably be enough to slow growth from just under 4% in 1995 to 2.5-3% in 1996. But further rate increases in late 1995 or early 1996 might well be necessary if the Chancellor decided to cut taxes aggressively in next year's Budget.

Financial Imbalances in the UK Economy

The private sector in the UK is now running an almost unprecedented financial surplus, with a very large public sector deficit and quite a small current account deficit. It seems unlikely that the private sector will continue indefinitely to run so large a surplus, so it is important to ask how these financial balances are likely to change as the private sector surplus falls. If the public sector deficit shrinks to absorb most of the change, the medium-term financial outlook would be satisfactory, while a rapid deterioration in the current account deficit would obviously be worrying. The tax increases announced in 1993 will ensure that at least part of the change in the private sector surplus leads to a reduction in the public sector deficit, and will help to reduce the chance of a sudden surge in consumer demand which might lead to a worsening of the current account.

Given this potential concern, recent trade figures have been encouraging, with the current account deficit running at an annual rate of only £4 billion in the first half of 1994, according to official statistics. But the improvement has come from two sources: a widening of the oil surplus and also of the invisible surplus. There is little sign of any underlying improvement in non-oil trade performance, which implies that earlier and less benign trends in the trade account may eventually reassert themselves.

In the past, the trend rate of growth for the UK has been below the OECD average, and this seems to have been necessary to prevent an unsustainable worsening in the current account deficit. The Goldman Sachs trade model suggests that UK GDP needs to grow by just under 1% per year less than the OECD average to leave the current account deficit unchanged. Alternatively, if the UK grows at the same rate as the OECD area, competitiveness must improve by approximately $1^{1}/_{2}$% per year. These trends work only slowly, and are subject to considerable variation, but do seem in the long run always to reappear.

The implications of this are that on our central growth assumption and without any further improvement in competitiveness, the current account deficit might be around 2% of GDP by 1996 and 3% of GDP by 1998. With more rapid growth, of 4% per year over the medium term, the current account deficit might reach 4% by 1998, which would also see inflation well above the top of the 1-4% target range before the end of this Parliament.

In the central growth case, the key question for government is 'should it be concerned about the build-up in external debt?'. If the debt was matched by a rise in capital investment in UK businesses, the answer is probably no. If the debt was being incurred to sustain consumption, the answer is probably yes. It is much too early to judge which of these caricatures is most apt, but past experience suggests that if the current account were to worsen steadily, some response would be appropriate. If government were at some stage to decide to act, the correct policy response would probably be to tighten fiscal policy and ease monetary policy; simply to reduce the exchange rate would cause inflation to exceed the target band, so should be ruled out.

The Public Finances

The PSBR peaked in 1993-94 at £46 billion and is now firmly set on a downward path. We expect the PSBR for 1994-95 to be £32 billion compared with forecasts in the last FSBR of £38 billion and in the Treasury's Summer Economic Forecast of £36 billion. Most of the reduction will reflect a lower nominal level of public spending, without any real cuts in public spending programmes. For 1995-96, we forecast a PSBR of £24 billion (3.4% of GDP) if public spending is allowed to grow by 2% in real terms, or of £21 billion (3% of GDP) if previous real spending plans are maintained despite the approaching general election.

Beyond 1995-96, we expect the PSBR to continue to fall, to reach less than 1% of GDP by 1998-99 on our central economic and public spending forecasts. If growth is more rapid, at 4% per year, the public sector could return to surplus in 1997-98. The speed of decline in the PSBR reflects the very strong growth experienced this year and expected next year.

Policy Implications

Taking all this as background, a number of policy conclusions seem reasonable. If domestic demand slows markedly, taking GDP growth to below its trend rate, monetary policy can safely be eased. If domestic demand speeds up, or stays at levels close to 4%, policy will need to be tightened, preferably on the fiscal side, but possibly also using monetary tools. But if GDP grows in the medium term at around 3%, there is no compelling need to adjust policy rapidly.

In this central growth case, the conditions for achieving debt sustainability will have been met by 1995-96, and the 'Golden Rule', where public borrowing is only undertaken to finance public investment, would be satisfied the following year. But we would emphasise that the rapid decline in the PSBR does not indicate that the fiscal tightening announced in 1993 was unnecessary or inappropriate. The PSBR will reach the levels appropriate at trend output - 2-3% of GDP - nearly two years earlier than expected, but only because output will reach its trend level nearly two years earlier than expected a year ago. The decline in the PSBR in the last year is not evidence of higher output at full capacity than was believed last year, and therefore does not imply decisions that were appropriate last year are no longer so now. The November 1994 Budget need not be characterised by fiscal tightening, but no more is this a time for loosening. Mr Clarke may announce many measures on 29 November, but they are likely to be offsetting in their impact on the government budget.

Change and Reform

Although we argue that there should be no change in the overall level of taxation in the forthcoming Budget, we would not argue that this inevitably means no change in individual tax and spending programmes, although it is certainly easier to introduce change when there is money with which to lubricate it.

Company Taxation

Dissatisfaction with the taxation of companies is a perennial item on the agenda in the run-up to the Budget. Certainly the current corporation tax system creates a tax bias against investment, distorts the allocation of investment between different forms of capital, distorts the choice over forms of finance, and distorts decisions over dividend payout ratios. We discuss the dividend issue which Mr Dorrell raised while he was Financial Secretary to the Treasury, and conclude that there is evidence that the tax system leads to higher dividends than would otherwise be the case, and that this in turn leads to lower investment, but that these effects are quite small, and certainly unlikely to be large enough to persuade a Conservative Chancellor at this stage in the electoral cycle to introduce major reform. In particular, the possibility of abolishing advance corporation tax and using the money to reduce the main corporation tax rate, which seemed quite high in the early summer, has now become very small.

There have again been calls for enhanced capital allowances, which are likely to be ignored, although we could see some scheme targeted specifically at small companies, which would be relatively cheap but politically expedient. We do not expect to see any changes to the foreign income dividend (FID) scheme, which is as yet too new for a proper assessment of its impact to be made.

The other major business tax, non-domestic rates, has been the subject of much debate because of falling revenues. While some of the suggested explanations seem incorrect, the use of local authorities to collect what is now a national tax seems plainly anomalous. Reform of the administrative structure of non-domestic rates must be a possibility.

Personal Income Tax

The full effects of the income tax changes in the 1993 Budgets have yet to be felt. In April 1995, the rate at which both the married couple's allowance and mortgage interest relief are allowed will be cut from 20% to 15%, implying losses of up to £3.95 per week for a married couple with a mortgage. Further large changes seem unlikely since this is not a year either for further tax increases or for the beginning of pre-election tax cuts. Minor measures, such as a further extension of the 20p reduced-rate band, paid for by freezing the allowances and higher-rate threshold, are possible. Freezing the higher-rate threshold again would further increase the number of higher-rate taxpayers, already up from around three-quarters of a million in 1979-80 to an estimated 2.5 million in 1994-95. Further restriction in the value of allowances could raise significant revenue but seems likely to wait until a year when the standard rate of tax could be cut.

The taxation of savings is once more a subject of debate, both because of concern about the overall level of savings and because of questions about schemes such as TESSAs and PEPs. We argue that the tax system is unlikely to be an effective means of achieving higher savings, and that the success of TESSAs and PEPs is to be welcomed despite this. Extending the life of TESSAs is one sensible short-term policy, but in the long run it would be wise to integrate PEPs and TESSAs into a single scheme.

Indirect Taxation

April 1995 is scheduled to see the second half of the imposition of VAT on fuel. While it seems clear that Mr Clarke would much prefer simply to go ahead, there are strong political pressures which may be enough to force a reversal of this policy. And although further widening of the VAT base is a policy favoured by the Chancellor in principle, any change this year seems unlikely.

There have been suggestions that, with the removal of fiscal frontiers within Europe, cross-border shopping is now enough of a threat to revenue from excise duties that reductions could lead to an increase in revenue. We show this to be extremely unlikely.

Taxation and the Environment

Tax is now often thought of and used as an instrument of environmental policy. In this Green Budget, we consider the principles that should lie behind any such use, before examining specific policy proposals in the areas of motoring taxation, congestion charging, and household waste and recycling.

Incentives to Work

The Chancellor has declared an interest in minimising disincentives to work and in particular in the positive use of the social security system. Too much of the debate in this area is based on anecdote, so we begin our discussion with an analysis of precisely what taxes and benefits households pay and receive. This shows that the number of people in the classical 'poverty trap' facing very high overall marginal tax rates is quite low. But this is *not* necessarily evidence that there is not a problem, because this low population facing high marginal tax rates could reflect a rational behavioural response: individuals may deliberately be working just little enough to maximise benefits, or beyond the level where benefits run out.

Family credit exists quite explicitly to encourage work by rewarding low-paid work through the benefit system. Although family credit appears to have achieved some success, which will be enhanced by the new child-care disregard, a number of problems remain. Firstly, the administration can be slow and there is much uncertainty; integration with income support to provide a single administration system and greater assurance that income would not fall in the transition from unemployment to paid work would help here. Secondly, those without children are excluded, yet can face similar though less acute problems. Thirdly, for those on very low wages, family credit may not be enough to guarantee a higher income in work than out of work.

Housing benefit can now also cause disincentive problems, which have worsened as rents in the social sector have moved towards market rents. As we stress throughout the discussion of work incentives, there is no 'solution', since if we are to support those with low incomes, we have somehow to take that support away as incomes rise. But the rate at which housing benefit and council tax benefit are withdrawn (85p for an extra £1.00 of net income), the structure of earnings disregards, and the interaction with family credit are all worthy of consideration as possible areas for improvement.

2 The Economic Forecast

2.1 The World Economy

Growth prospects in the OECD area appear much better now than they did at last year's Green Budget. At that time, only the 'Anglo-Saxon' economies (the US, Canada, Australia and the UK) were clearly recovering while continental Europe and Japan were both bumping along the bottom. The contrast in growth rates last year was striking - the Anglo-Saxons grew by 3%, continental Europe declined by 1% while Japan stagnated. During the course of this year, though, the global economic recovery has gained momentum. OECD industrial production is now growing at an annualised trend rate of around 6%, with particularly strong rises being recorded in several continental European economies. Within Europe there has also been a strong pick-up in business and consumer confidence and this should help to sustain the recovery in the coming months. The exception to this picture of buoyant economic activity is Japan which, while past the trough, is not yet into a strong upswing.

The recovery in economic activity around the world has occurred despite the fact that government budgets are, on average, being tightened. The OECD area as a whole will probably see a reduction in the governments' structural budget deficit from 2.7% of GDP last year to 2.5% in 1994, and several countries plan further fiscal retrenchment next year. Taken together, these budgetary plans imply that the upswing in the OECD area will be subject to a greater drag from fiscal policy than was the case at the same stage in the recovery of the early 1980s. From 1982 to 1986, for example, US fiscal policy was eased by 1.8% of GDP and this was more than sufficient to offset moves towards tightening in several other economies, leaving the overall OECD budget stance broadly neutral over that period.

This makes the world recovery heavily dependent on a boost from monetary policy. The stance of monetary policy can be measured in many ways - real interest rate levels, monetary growth, yield curve shapes and so on - and it is unfortunately rare for all of these to give signals which point simultaneously in the same direction. This confusion is apparent now. Real yields are at historically high levels in most countries, and real monetary growth has generally remained subdued in relation to real GDP. Against this, the current steepness of the yield curve in many countries, which in the past has proved to be quite a reliable indicator of future GDP changes, is pointing to robust economic growth in the OECD area in 1995.

Figure 2.1

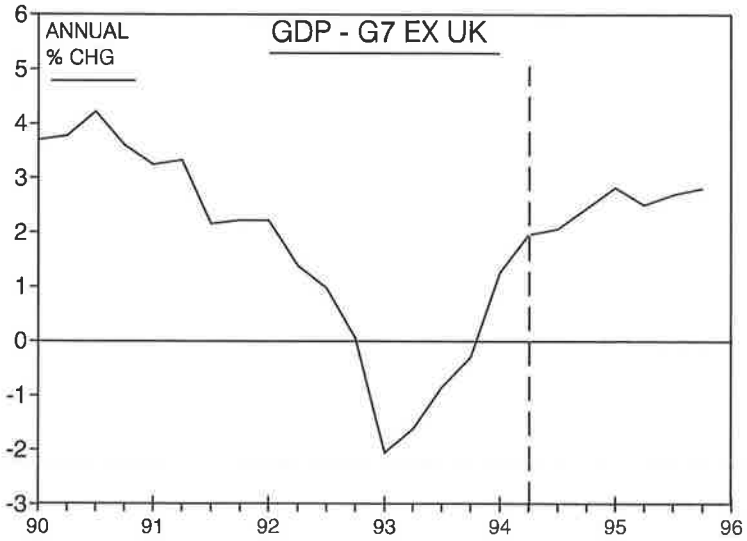


Table 2.1. Forecasts for the World Economy

(% change from previous year)	1993	1994	1995
OECD real GDP			
HMT	1.3	2.5	2.8
OECD	1.2	2.6	2.9
Goldman Sachs	1.2	2.7	2.6
OECD consumer prices			
HMT	2.5	2.3	2.8
OECD	3.5	3.5	3.4
Goldman Sachs	2.8	2.3	2.5
UK export markets			
HMT	1.8	5.8	7.5
OECD	0.5	5.7	6.9

Notes: Goldman Sachs and HMT figures for GDP and inflation relate to G7 only. HMT figures for inflation relate to Q4. OECD inflation forecasts relate to consumers' expenditure deflators. HMT and OECD figures for UK export markets relate to manufactures only.

Sources: HMT - HM Treasury, Summer Economic Forecast, June 1994.
OECD - *Economic Outlook*, June 1994.
Goldman Sachs - *International Economics Analyst*, September 1994.

There is likely to be much less difference in the growth rates of individual economies next year than there has been in the recent past. The Goldman Sachs forecast is for US GDP to grow by only 2.6% in 1995, down from 3.6% this year, while growth in continental Europe is expected to rise from 2.2% to 3.0%. For the OECD area as a whole, GDP is expected to rise by 2.5-3% both this year and next. Overall, the expected rate of growth in OECD GDP is only fractionally above trend both in 1994 and 1995, which implies that the output gap is unlikely to narrow significantly. Moreover, with the exception of the US, unemployment rates remain well above their 'natural' rates and physical capacity is not yet under strain. In addition, the rise in commodity and oil prices seen in the summer has now been partly reversed. For all these reasons, the outlook for OECD price inflation appears encouraging. Recent running rates for consumer and producer price inflation have continued to subside, and there is no sign of rising labour cost pressure. This should enable consumer price inflation in the major industrialised economies to continue to run in a 2-2.5% range over the next year.

2.2 The Domestic Economy

The UK economy is now firmly into its third year of recovery. By the middle of 1994, non-oil GDP had grown by almost 5% from the trough recorded in the first quarter of 1992. Compared with the previous peak achieved in mid-1990, non-oil output was 1% higher while total GDP, boosted by strong growth in North Sea oil production, was almost 2% above its previous high. In the latest year, the recovery has both strengthened and broadened. GDP increased by 3.8% in the year to 1994Q2, helped by rises of 2.6% in consumer spending, 5.4% in fixed investment and 9.5% in exports.

Other aspects of the economic situation have been encouraging. Inflation has remained extremely subdued. Excluding mortgage interest payments, underlying retail price inflation fell to a 27-year low in July of 2.2% and, despite edging up slightly in August, inflation remains comfortably in the lower half of the government's 1-4% target range. Net trade has made a strong contribution to growth over the past year and this has also helped to keep the current account deficit on a slightly improving trend.

All in all, 1994 has been a year of pleasant surprises on growth and inflation. At the time of last year's Green Budget, the consensus forecast was for GDP to grow by 2.7% this year; it is now likely to rise by around 3.5%. Underlying inflation was expected to edge up to 3.7% by the fourth quarter; now a fall to 2.5% or lower seems on the cards. The current account deficit was expected to widen to around £16 billion; an out-turn less than half this size seems feasible.

Will Growth Remain Strong?

Strong growth cannot automatically be taken for granted in the months ahead. Although the longevity of the recovery means that the economy should by now have developed a certain resilience to adverse shocks, the economy has nevertheless been subject to a

sizeable fiscal contraction this year. On existing budgetary plans, the fiscal stance will remain restrictive in 1995. Monetary policy has also begun to be tightened following the half percentage point rise in base rates on 12 September.

There is mounting evidence that tax increases are adversely affecting growth in parts of the economy. After rising strongly during 1993, new car sales have been broadly stable through much of this year. More recently there appears to have been a softening in the strong upward trend in retail sales apparent since early 1993. The housing market also remains relatively subdued. House prices have barely increased over the past 12 months and housing market activity appears to have slowed slightly over the summer, although the level of activity is still well up on last year. If the patchiness evident in the demand for housing and consumer durables were to become more widespread, then base rates might be expected to remain at 5.75% for a prolonged period.

Against this, it is doubtful whether the Governor of the Bank of England would have recommended any increase in base rates to the Chancellor in September if he believed that a rise of half a percentage point was all that was needed to keep the lid firmly on inflation. Underlying his advice is likely to have been a belief that growth could turn out to be a little too strong for comfort in the period ahead. Indeed, there are a number of reasons for believing that the recent rapid rate of growth in the economy can be sustained and could even pick up slightly in the months ahead.

Firstly, it is not axiomatic that a fiscal tightening leads to slower growth. Looking back at the last example of a comparable fiscal tightening, which was in 1981-82, the economy managed to grow quite strongly in the quarters following the 1981 Budget. Whether the economy continues to grow depends in large part on the overall policy stance. On Goldman Sachs estimates, this is still slightly expansionary. While there is no doubt that the economy is presently subject to a substantial fiscal contraction, which other things being equal would curb GDP growth by an estimated 1.5% this year and 0.8% next, this is more than matched by the virtual halving of interest rates and the 12% depreciation in the exchange rate that has taken place since September 1992. These monetary effects are still affecting the economy. On existing policy settings, taking into account the further tax increases already announced and in the pipeline, the overall policy stance may be imparting a boost to GDP growth of around 0.5% in both 1994 and 1995.

Secondly, the private sector is in good financial shape to deal with tax increases. Last year, the private sector's financial surplus - its free cash flow - was running at a record high of 6% of GDP. Higher taxes are worth around 2% of GDP by the end of 1995-96. If we subtract these from the private sector's financial surplus, this would still leave it running at around 4% of GDP, comfortably in excess of the average of 2% of GDP recorded over the past 30 years. Over the next couple of years, it would be typical to see a run-down in the private sector's financial surplus as spending rises faster than post-tax income. This could provide considerable support for the economy.

Thirdly, UK exporters will benefit from a recovery in economic activity outside the UK. After rising by 3% in 1993, the Treasury estimated in its summer forecast that world trade in manufactures would grow by 7% this year and by 7.8% in 1995. UK export markets are expected to grow more slowly, reflecting a more modest pace of recovery in Europe,

Britain's main export market. Nevertheless, the boost to growth this year and next may be more striking as UK export market growth is projected to pick up from 1.8% in 1993 to 5.8% in 1994 and 7.5% in 1995.

Fourthly, business surveys point to continued buoyancy in output growth in the months ahead. Business confidence and output expectations in the CBI Industrial Trends Survey, which historically have been useful predictors of GDP growth, are running at levels associated with growth being maintained at or above current rates. Taken together, these factors point to the possibility of some pick-up in growth in the coming quarters and, reflecting this, the Goldman Sachs forecast shows GDP rising by 3.6% this year and by 3.7% in 1995. The pick-up in growth between 1994 and 1995 is more striking if the oil sector is excluded: non-oil GDP growth is projected to increase from 3.1% to 3.8% over this period.

Table 2.2. Demand Prospects

(Annual % change, volume)	1993	1994	1995
Private consumption			
HMT		3.0	3.0
Goldman Sachs	2.6	2.3	2.6
Consensus		2.8	2.4
Total fixed investment			
HMT		4.0	4.0
Goldman Sachs	0.3	4.9	7.5
Consensus		5.0	5.7
Exports of goods and services			
HMT		6.0	5.5
Goldman Sachs	3.0	8.0	7.0
Consensus		6.5	5.9
Imports of goods and services			
HMT		5.8	5.3
Goldman Sachs	2.9	5.2	7.1
Consensus		5.1	5.5
Real GDP			
HMT		2.8	2.8
Goldman Sachs	2.0	3.6	3.7
Consensus		3.2	3.0

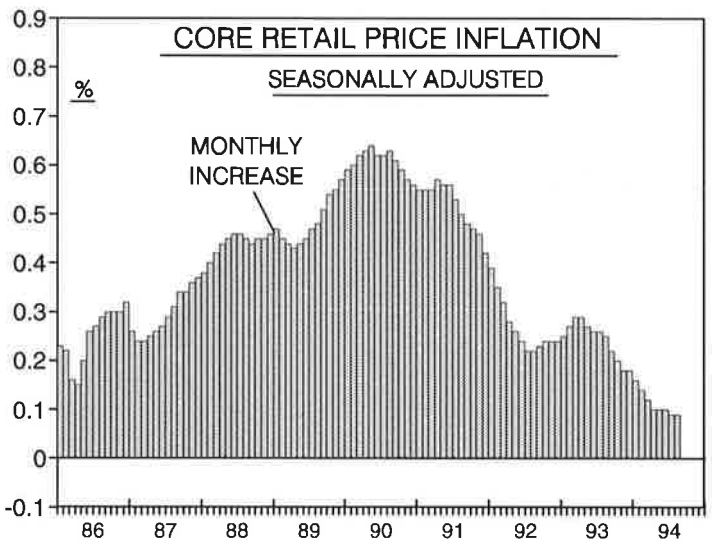
Note: HMT figures for 1994 are for first half only.
Sources: HMT as Table 2.1.
Goldman Sachs - *UK Economics Analyst*, October 1994.
Consensus - 'Forecasts for the UK Economy', HM Treasury, September 1994.

These growth forecasts are a little stronger than the consensus, especially for 1995. Most forecasters expect 1994 to prove the peak year for growth as the effects of higher taxes are felt. But there is also a non-negligible risk that growth could turn out stronger than the 3.7% expected by Goldman Sachs. In particular, this forecast relies on no significant pick-up in housing market activity or prices. Such a development would tend to put further, possibly significant, downward pressure on the personal savings ratio as rising housing wealth encouraged people to hold less savings. Instead, the forecast assumes that, after falling sharply in the second quarter, the savings ratio is unlikely to fall very much further. Consumer spending will increasingly be driven by rising real incomes which are likely to increase by around 2-2$^1/_2$% next year. In these circumstances, a strong recovery in the housing market would give an unwelcome further boost to consumer spending and GDP growth.

Will Inflation Rise?

If the economy were to grow at a 4% annualised rate in the quarters ahead, this would obviously increase the risk of higher inflation, although any rise would come from a very low base. Underlying retail price inflation picked up marginally between July and August but the monthly running rate is still very subdued. Taking a core measure which excludes mortgages, the council tax, petrol and the rise in VAT, and seasonally adjusting this, underlying retail price inflation increased at an annualised rate of only 1.2% in the six months to August. This suggests the possibility of a further decline in the annual inflation rate in the next few months.

Figure 2.2



However, it seems likely that underlying retail price inflation is now close to a trough. During the course of the year, there has been a gradual increase in cost pressures. Underlying average earnings growth has risen from a low of 3% in late 1993 to 3.75% in July. Over this period, basic pay settlements have crept up by around one percentage point from just under 2% to slightly less than 3% and this would be consistent with a further small rise in average earnings growth by the end of the year. There has also been a rise in raw material prices. Commodity prices rose sharply during the first half of the year and this is now being reflected in producer input prices. Input prices rose by 3.4% in the year to August and at a seasonally adjusted annualised rate of 10.9% in the latest six months. Taken together, the growth in unit costs probably troughed in the first half of this year.

Even if a trough in underlying inflation is close at hand, this does not mean that a renewed burst of inflation will automatically ensue thereafter. Rather, a period of broad stability is likely. The inflation process in the UK and many other countries is such that when inflation is shocked, forces within the labour and goods markets act to take inflation to a new equilibrium which may be higher or lower than the original starting-point. There is then usually no great tendency for inflation to move away from this new equilibrium unless it is shocked again. These shocks can come in many forms, most obviously from an overheating of the economy when output rises above potential or from a sharp rise in import prices induced by a decline in the exchange rate.

Table 2.3. Other Key Indicators

	1993Q4	1994Q4	1995Q2	1995Q4
Price inflation (%)[a]				
HMT		2.5	-	2.8
Goldman Sachs	2.7	2.3	2.6	2.9
Consensus		2.5	-	3.3
	1993Q4	**1994Q4**	**1995Q2**	**1995Q4**
Unemployment (million)				
Goldman Sachs	2.81	2.52	2.33	2.19
Consensus	-	2.55	-	2.35
	1992	**1993**	**1994**	**1995**
Current account (£ billion)				
HMT			-9.5	-9.5
Goldman Sachs	-9.8	-10.3	-5.8	-8.3
Consensus			-8.3	-10.4

[a] RPI excluding mortgage interest payments.

In this regard it is worth recalling the experience of the 1980s. By mid-1983, the bulk of the disinflation triggered by the 1980-81 recession was in place. Thereafter, inflation was broadly stable until the end of 1987 despite several years of above-trend growth. It was only when output rose above its long-term trend in 1988 and the economy found itself running into physical capacity and labour shortages that there was a sustained move up in inflation. On top of this broadly stable trend was imposed a mini-cycle in inflation caused by the sharp drop in the exchange rate during 1984.

Thus, provided the exchange rate is broadly stable, it should be possible for the economy to enjoy a fairly prolonged period of rapid growth without any significant deterioration in the inflation outlook. Even if the economy grows by almost 4% next year, as Goldman Sachs expects, underlying inflation is expected to creep up only to 3% by the end of next year. Problems with inflation would start to emerge if this 4% growth rate persisted for too long thereafter, since the margin of spare capacity would be eliminated fairly quickly. But if policy is tightened sufficiently over the next 12 months to bring growth in the economy down to a more sustainable rate, several years of broadly stable inflation may then be in prospect.

External Trade

Even if inflation does not rise significantly in the months ahead, things could still come unstuck if rapid growth were to lead to an unsustainable deterioration in the current account of the balance of payments. At the beginning of this year, many feared that as the recovery strengthened, a renewed worsening in the current account deficit would be set in train which, given the adverse starting position, would bring the recovery to a premature end.

However, the evidence so far seems encouraging. Recent trade figures have actually shown a slight improvement in the visible trade deficit, while the current account deficit was reduced to just £2.0 billion in the first half of 1994, helped by an unexpected and probably erratic improvement in the invisibles balance. There are still considerable doubts about the reliability of the trade statistics following the introduction of the Intrastat system to monitor intra-EU trade in January 1993. But while this may have affected comparisons between 1992 and 1993, the comparisons between 1993 and 1994 should be fairly reliable.

Although growth in the UK is proving stronger than anticipated, projections for the current account deficit have steadily been revised down. There are several reasons for this. Firstly, there have been downward revisions to the current account deficit in 1993. At this time last year, for instance, the consensus forecast was for the current account deficit to worsen to over £15 billion in 1993, compared with an out-turn of £10.3 billion. Secondly, the invisibles surplus has been much higher than anticipated so far during 1994. Thirdly, growth forecasts for overseas economies have steadily been revised up. It now seems quite possible that the current account deficit could be as low as £5-6 billion (0.8% of GDP) in 1994, which is less than half the deficit expected by the consensus this time last year.

If the economy grows by close to 4% in 1995, it is likely that a renewed deterioration in the current account deficit will follow. Exports will benefit from a further strengthening in the world economy but the competitive boost secured after Britain left the ERM will be on the wane; the net effect is likely to be a modest slowing in export volume growth between 1994 and 1995. Meanwhile, import volume growth is likely to strengthen on the back of firmer growth in total final expenditure. Nevertheless, the size of any worsening in the current account next year is likely to be modest. The Goldman Sachs forecast, which is slightly lower than the consensus, is for the current account deficit to widen to £8 billion (1.2% of GDP) in 1995.

3 Monetary Policy and the Monetary/Fiscal Mix

3.1 The Framework of Monetary Policy

Upon leaving the ERM in September 1992, the government moved swiftly to put in place a new policy framework for its counter-inflation strategy. At the centre of this framework is an explicit target range of 1-4% for underlying retail price inflation (all items excluding mortgage interest payments). More specifically, the aim of policy is to bring inflation down to the lower part of this range by the end of the present Parliament. On the limited evidence available so far, the new framework for monetary policy has to be judged a success. The UK economy has emerged strongly from recession, unemployment has fallen by close to 400,000 from its peak, while underlying retail price inflation has been in the lower half of the target range in every month since February.

Figure 3.1

Given these favourable developments, the Chancellor's decision to lift base rates from 5.25% to 5.75% on 12 September may at first sight seem overly hawkish. However, low inflation now is no guarantee of low inflation in the future. Monetary policy influences inflation with a long lag, and the government needs to set interest rates on the basis of the prospects for inflation in one or two years' time. The Bank of England argued in its August *Inflation Report* that, on the policy setting then in place, underlying inflation would rise to above the mid-point of the government's target range before the end of this Parliament. The Chancellor, in agreeing to a base rate rise, seems

implicitly to have accepted this. Essentially, the authorities have come to the view that with the economy now growing strongly, the inflation outlook could easily deteriorate if recent rates of growth were to persist for too long.

Moreover, as the Governor pointed out in his Mansion House speech in June, the risks are asymmetric. If the economy does slow and inflationary pressures subside, then it should be possible for the government to cut base rates again without lasting damage to the economy. But if inflation were allowed to take hold, the damage to the anti-inflationary credibility of the government would take much longer to repair, and ultimately require much higher interest rates. By acting early, the government is hoping to maximise the chances of achieving a sustained period of non-inflationary growth.

Decisions about interest rates are taken after consideration of a range of monetary indicators and other data. The factors cited most often by the Treasury and the Bank of England as being important are the behaviour of the monetary aggregates, narrow and broad; of asset prices, particularly house prices; the exchange rate; inflation expectations; estimates of the extent of spare capacity in the economy; and the overall stance of fiscal policy. There are no formal targets for these 'indicator' variables. Rather, they are monitored by the authorities in the hope that they will provide information regarding the current state of the economy and the chances of achieving the inflation target. If an indicator variable suddenly takes on an unusually high or low value, this might be used to indicate that the appropriate level of interest rates should be reconsidered. The government's decision to adopt 'monitoring ranges' for the monetary aggregates, M0 and M4, is the most obvious example of the government's use of indicator variables. There is no necessary presumption that growth rates outside the monitoring ranges would trigger policy action but they would trigger alarm bells.

There are potentially a vast number of indicator variables that are available to the authorities. Not all of these will give the same signal at the same time, and some will undoubtedly be more useful than others in foreshadowing future inflationary trends. The difficulty for the authorities is knowing which indicators to rely on, and at which time, since historically no single variable could have been relied upon at all times to indicate a rise in inflationary pressure. Indeed, this is the main reason for the abandonment of formal monetary targets during the 1980s.

However, when an increasing number of these variables simultaneously flash the same message, this has historically proved a fairly reliable indicator of future inflationary trends. In recent months, it has been possible to point to a large number of factors urging caution in the conduct of monetary policy. Among these are M0, wages, commodity prices, tender prices and rising capacity utilisation. By early September, it seems that the accumulation of these inflationary warning signals was enough to persuade the Chancellor to sanction a base rate increase.

3.2 Medium-Term Prospects for Inflation

Although underlying inflation may be at or close to a turning-point, this does not imply that inflation is suddenly about to embark on a sustained rise. Indeed, the objective of monetary policy is to ensure that it does not. The extent of any further rise in interest rates in the months ahead is therefore crucially dependent on the authorities' assessment of the outlook for inflation.

Most economists are agreed that the prospects for inflation are heavily influenced by the degree of spare capacity that exists in the economy. Unfortunately, that is where the agreement stops. The main difficulty is that the output gap - the difference between potential and actual output - is unobservable. At any point in time, it is impossible to know with certainty the economy's potential level of GDP, and there is no entirely satisfactory method of measuring it.

There are now two polarised views. The first argues that, over time, the economy has tended to grow on average at a rate of about 2.3% per year. If this long-run trend is projected through the middle of the last cycle and extended, it suggests that there is still an output gap of around 5%. On this reasoning, the economy could grow at a 4% rate for a further three years before the output gap is eliminated. During this period, inflation would at worst be stable and could conceivably fall significantly further.

A second view relies more heavily on evidence of capacity utilisation from the CBI Industrial Trends Survey. According to the July CBI survey, 54% of firms are now working below full capacity compared with 59% in April and a historical average of 58% over the period since the survey began in 1958. On this view, if the economy continues to grow at its present rate, underlying inflation will very shortly begin to rise, leading to an almost inevitable breach of the ceiling of the inflation target range next year.

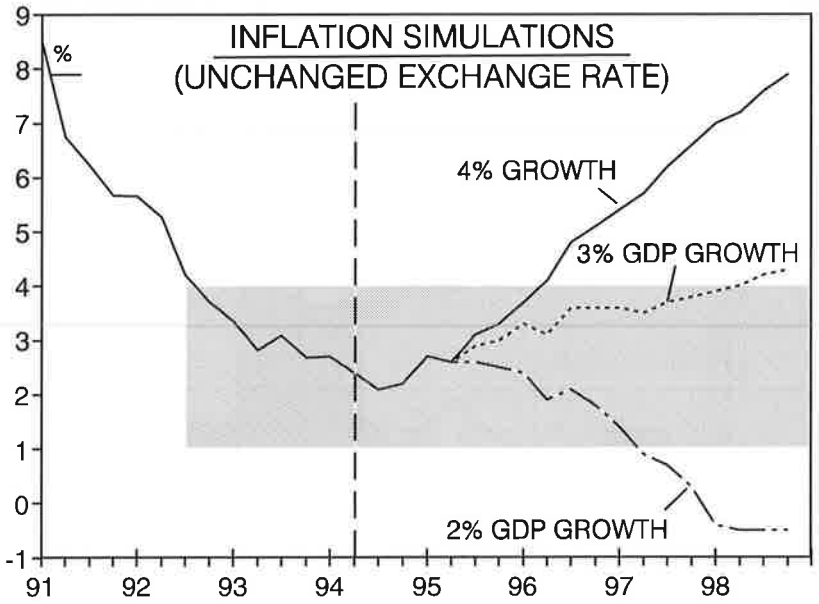
Both of these views seem too extreme. A more plausible view is that potential GDP grows more slowly than its long-term trend of 2.3% per year during recessions as physical capacity is scrapped and unemployment rises but faster during upswings as new capacity is installed and unemployment falls. This means that the size of the output gap currently may be a lot smaller than is commonly thought, thereby bringing the period of disinflation to an end before long. However, it also means that both actual and potential GDP should be able to rise faster than their long-term trend over the next few years while leaving inflation broadly stable.

This process can only go on for so long. Eventually, as the economy approaches its long-term trend, spare labour will become scarcer and most of the profitable investment opportunities will have been exploited. There would be no problem if actual GDP growth subsided automatically to around 2.3% per year at this point. Unfortunately, though, the UK economy has rarely demonstrated such sensitivity. All too often, strong growth has persisted for too long, allowing inflation once again to take hold.

The sensitivity of underlying inflation to growth can be illustrated using equations estimated by Goldman Sachs to explain the inflation process; the results are shown in Figure 3.2. The central case assumes that the economy grows by 3.6% in 1994, 3.7% in 1995 and 2.7% per year thereafter, giving average growth of approximately 3% per year between 1994 and 1998. On this scenario, and assuming an unchanged exchange rate, underlying inflation creeps up slowly but is still within the target range until the second half of 1998. In particular, despite growth of almost 4% next year, underlying inflation is estimated to rise only to 3% by the end of next year.

If growth were to slow of its own accord from 3.6% this year to a below-trend rate of 2% in each of the next four years, the Goldman Sachs inflation model suggests that this would lead to a further marked improvement in underlying inflation over the medium term, as the output gap actually widens. Under such a scenario, there would be no need for interest rates to rise further. On the contrary, there would seem to be ample scope for the recent base rate increase eventually to be reversed.

Figure 3.2



Problems with inflation would start to emerge if growth were to remain too rapid for too long. Specifically, if GDP were to grow by 4% next year and then continued growing at this rate in subsequent years, underlying inflation would probably breach the top of the target range some time around the middle of 1996 and continue to rise through 1997 and 1998. The task facing policymakers must therefore be to ensure that growth does not remain too rapid during 1996.

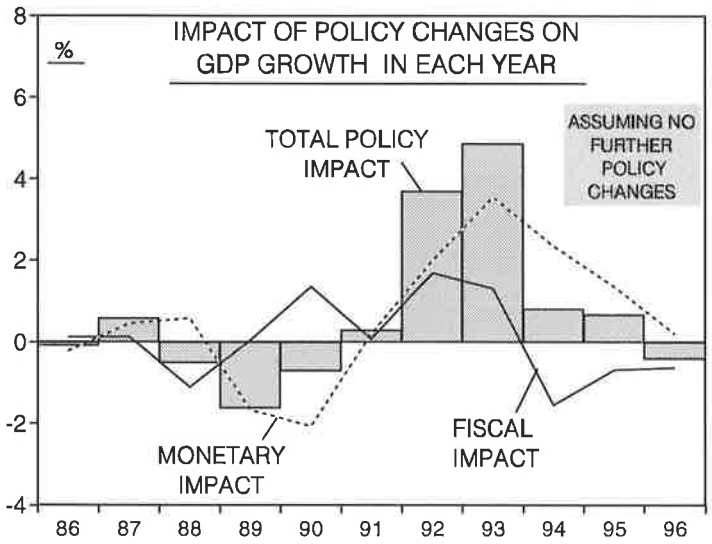
3.3 The Monetary/Fiscal Mix

To ensure that growth slows in 1996, it is necessary to act in good time given the lags between changes in the policy stance and economic activity. In principle, any policy tightening could come on either the fiscal or the monetary side. Indeed, if we accept that some tightening in the overall macroeconomic stance appears optimal, then the same arguments that applied last year for focusing primarily on the fiscal side are still relevant. A tighter fiscal stance, with monetary policy correspondingly easier than it would otherwise be, remains the best way of rebalancing the economy away from consumption towards investment, and away from domestic demand towards net trade. Although the trade deficit no longer looms as a near-term threat (partly because of the policy adjustment undertaken last year), nor has it entirely disappeared as a medium-term issue.

Figure 3.3 shows the total estimated impact of fiscal and monetary policy changes on GDP growth in each year. It assumes that no further fiscal or monetary changes are made on top of those that have already been announced. Although the fiscal impact will be modestly negative in both 1995 and 1996, as tax rises take effect and public expenditure declines as a share of GDP, this policy tightening will be more than offset

by the delayed impact of the monetary policy easing which proceeded until February 1994. With real GDP looking likely to grow by $1^1/_2$-2% more than trend next year, it could be argued that the overall policy stance should now be tightened further to protect the medium-term inflation and balance of payments outlook.

Figure 3.3



It is possible to ask what level of interest rates would be needed to bring the growth rate down to a more sustainable rate in 1996. Assuming no further discretionary fiscal tightening in the Budget, a rise in interest rates to around 7% by the middle of next year would probably be sufficient to deliver a neutral policy stance next year and would be contractionary by around 1-$1^1/_2$% of GDP in 1996. Other things being equal, this would seem consistent with a slowing in growth from just under 4% next year to around $2^1/_2$-3% in 1996.

Of course, if the Chancellor were to decide to tighten the fiscal stance further in November (by introducing a genuine reduction in real public expenditure compared with previous plans, for example), this might enable him to limit, or even avoid altogether, any further significant tightening in monetary policy in the next 12 to 18 months. This would perhaps be optimal for the economy but politically it would obviously be a very difficult course of action for the Chancellor to pursue.

It seems rather more likely that he will choose to portray the automatic reduction in public expenditure which has followed the reduction in inflation as a fiscal tightening, and he might partially offset this by eliminating part of last year's tax increases. By next year, with the PSBR still falling rapidly, it may be too much to expect the Chancellor to resist the temptation to make renewed income tax reductions. The result of such a strategy would be to limit the degree of fiscal tightening in 1995 and actually to move towards fiscal ease in 1996. If this is what the Chancellor chooses to do, then he will probably need to tighten monetary policy quite sharply during the course of 1995 in order to continue to hit the inflation target by the end of the Parliament.

4 Financial Imbalances in the UK Economy

4.1 Introduction

In last year's Green Budget, we focused most attention on the main issue of the day, which was whether the very high level for the PSBR at that time constituted a serious threat to the prospects for a balanced medium-term recovery. This year, with the PSBR declining quite quickly, there has been more focus on whether the current account deficit might pose a threat to the recovery. However, this too has faded as an issue with the recent revelation by the CSO that the current account deficit was only £2 billion (0.6% of GDP) in the first half of 1994. It now seems most improbable that the balance of payments will prove to be a significant constraint on the recovery for at least the next two years.

Despite these much improved PSBR and current account figures, the financial balances in the UK economy today remain highly unusual. There is a huge private sector financial surplus, which is almost unprecedented in an era of such low inflation. Furthermore, the PSBR, though declining, is still very high.

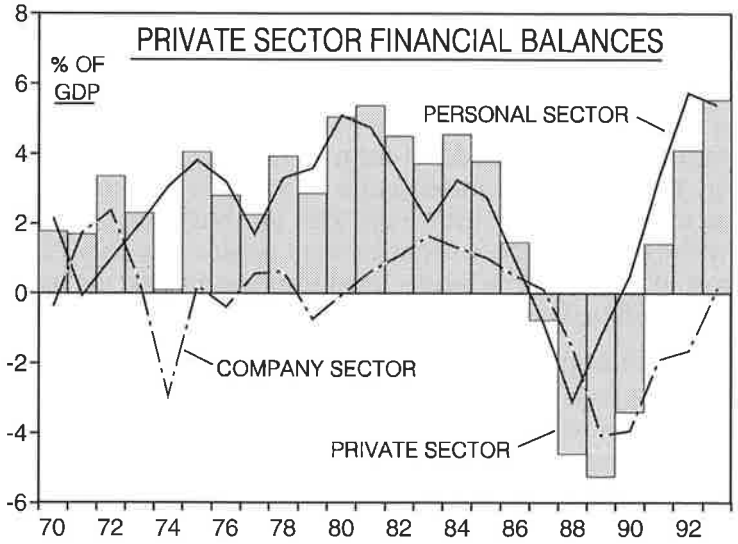
By definition, the private sector surplus is equal to the public sector's financial deficit minus the current account deficit. Since it would be surprising if the current exceptional level of the private sector surplus remained in place indefinitely, it is important to ask what the consequences might be when this surplus shrinks. Obviously, this event will, when it occurs, be accompanied either by a sharp deterioration in the current account deficit or by an equivalent improvement in the public sector deficit. If the private sector surplus is distributed primarily to the latter, then the economy will be in good shape; if primarily to the former, then the recovery could yet hit a balance of payments crisis before output has risen sufficiently to cure the PSBR. Much therefore hinges on this issue.

4.2 The Private Sector Surplus

In 1993, the financial surplus of the private sector reached 5.5% of GDP, the highest figure in recent history. Only twice in the last 25 years has the private sector's surplus even approached these levels: in 1975, it touched 4% of GDP, while in 1980-81 it temporarily exceeded 5% of GDP. However, on both of these occasions, inflation was running at over 15%, and real interest rates were sharply negative. The private sector was therefore forced to run a very high surplus in order to replenish the real value of its savings. On this occasion, inflation is low and real interest rates are high, so the level of the private sector's financial surplus is the more unusual.

The private sector consists of two subcategories - the personal sector (mainly households) and the company sector. Large swings in the private sector's financial balance have in the past been mainly driven by the personal sector, and this has certainly been true in recent years. The personal sector was in surplus to the tune of 5.4% of GDP last year, while companies were approximately in balance. For comparison, the personal sector was in deficit by 3% of GDP in 1988, so there has been a swing of over 8% of GDP in five years. This, of course, is the financial counterpart in the economy to the huge deterioration in the PSBR over the same period.

Figure 4.1

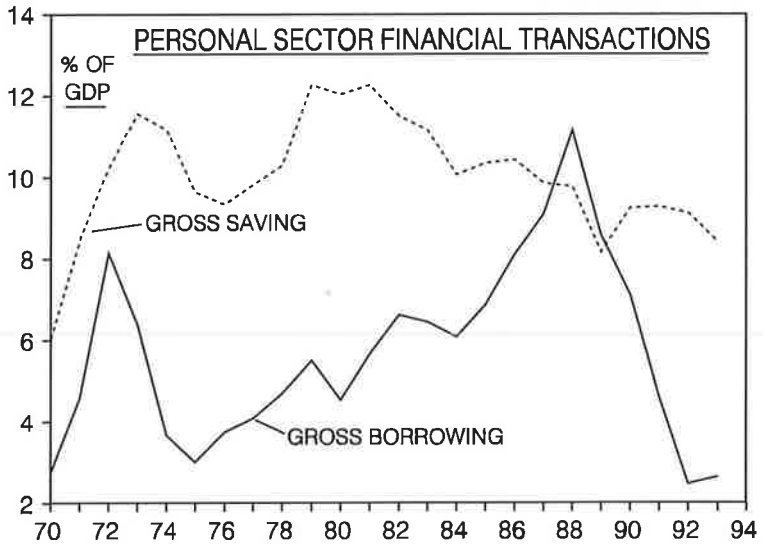


Further examination of the personal sector's financial situation reveals the following interesting facts. Firstly, the prime reason for the large financial surplus is that personal incomes have held up very well during the recession. The share of personal disposable income in GDP has risen from 67% in 1988 to over 73% in 1993 - an all-time high. Secondly, very little of this strength in personal incomes has been allocated to either current or capital expenditure. This latter fact has in turn been connected to a very sharp decline in personal borrowing, which has dropped from 11% of GDP in 1988 to under 3% in 1992 and 1993 - an all-time low.

It is likely that the drop in borrowing has been triggered by unpleasant memories of the impact of high interest rates on household free cash flow in the early 1990s, and by the weakness of house prices, which has depressed the asset side of the personal sector's balance sheet in recent years. These factors could continue to keep borrowing relatively depressed for several more years, but it would be surprising if it did not rise a little from the present historic lows. This is likely to lead to some decline in the personal sector's financial surplus. In addition, the surplus could decline if households decide to spend more out of income - something they can finance quite comfortably without any recourse to borrowing.

One of the problems for the authorities is to decide how fast the personal sector's surplus might decline, since this will be the prime determinant of the growth in domestic demand, and therefore of the threat to inflation and the balance of payments. The Goldman Sachs model suggests that most of the impact of reduced interest rates on the savings ratio has now come through, and that any further decline in the savings ratio will be quite slow. This implies that the major force tending to reduce the personal sector surplus in the next two years will be the impact of tax increases, which will add 2% of GDP to the personal sector tax burden between 1993 and 1995, and will presumably reduce the surplus.

Figure 4.2



Without these tax increases, there would be a much greater risk of a sudden surge in consumer demand in the next few years as households potentially decide that their financial surplus is unnecessarily large. Even with the tax increases, it is possible that this could take place, especially if the housing market were to recover, encouraging a rise in borrowing to more normal levels. Higher interest rates may be needed to prevent any such rise in borrowing, though the efficacy of rising interest rates in preventing the personal sector from spending a greater share of its current income is more questionable. This is why the tax rises are necessary as well, regardless of the behaviour of the PSBR.

4.3 Recent Trade Statistics

As noted above, a crucial question for the economy is how any decline in the private surplus may be allocated between the PSBR and the current account. So far, there seems little to worry about. The sterling devaluation of September 1992 seems to have prevented any deterioration in the current account balance as the private sector surplus has started to decline. In fact, if recent official statistics are to be taken at face value, the current account deficit has shrunk to an annual rate of only £4 billion (0.6% of GDP) in the first half of 1994. This represents an improvement of around £6 billion (at an annual rate) since 1992. As Table 4.1 shows, the whole of this improvement has come from two sources. Firstly, the oil surplus has widened by about £3 billion. Secondly, the invisible surplus has risen by £3.5 billion, all of which has come from a gain in net investment income.

The non-oil visible balance, which is the most important determinant of the medium-term trend in the current account, has barely changed since 1992. Even this, however, is quite encouraging in view of the fact that, to the first half of this year, UK GDP has risen by 5.3% since the trough of the recession in 1992H1. Over the same period, OECD GDP has

Table 4.1. How the Current Account Improved

(£ billion)	1991	1992	1993	1994H1[a]	Change 1992 to 1994H1
Visible Trade					
Exports					
- Oil	6.7	6.7	8.0	8.8	+2.1
- Non-oil	96.7	100.7	113.4	122.0	+21.3
- **Total**	103.4	107.3	121.4	130.8	+23.5
Imports					
- Oil	5.5	5.1	5.5	4.4	-0.7
- Non-oil	108.1	115.3	129.1	137.2	+21.9
- **Total**	113.7	120.4	134.6	141.6	+21.2
Visible balance					
- Oil	1.2	1.5	2.5	4.4	+2.9
- Non-oil	-11.5	-14.7	-15.7	-15.2	-0.5
- **Total**	-10.2	-13.1	-13.2	-10.8	+2.3
Invisible balance					
- Services	3.7	4.1	4.9	4.0	-0.1
- Investment income	-0.2	4.3	3.1	8.6	+4.3
- Transfers	-1.4	-5.1	-5.1	-6.0	-0.9
- **Total**	2.1	3.3	2.9	6.8	+3.5
Current account	-8.2	-9.8	-10.3	-4.0	+5.8

[a] At an annual rate.

risen by 3.5% and EC GDP has risen by only 1.7%. In the past, these relative growth rates have tended to produce a deterioration in the UK's current account position but, on this occasion, the normal adverse trends have been offset by the effects of devaluation.

From the first half of 1992 to the equivalent period this year, non-oil export volume rose by 9.1%, while UK trade weighted export markets grew by 6.7%. Meanwhile, non-oil import volume was up by 10.5%, as compared with growth in UK domestic demand of 4.7%. These growth rates in non-oil trade volumes have been close to those predicted by the Goldman Sachs trade model, given the competitiveness, world trade and domestic demand figures that have been recorded in the last two years. This suggests that there has been little, if any, improvement in trade volume performance, relative to that estimated in the equations of the Goldman Sachs trade model, in the past two years.

As noted above, the main reasons for the surprisingly low current account deficit this year have been the strong invisible surplus - which on the basis of recent experience is quite likely to be revised downwards - and the gains in net oil trade. In the non-oil trade sector, export volume has been stronger than we anticipated a year ago, but this has been due to an underestimate of world trade growth and not to an improvement in export performance. Meanwhile, import performance has also been about normal. The one major surprise in

non-oil trade has been the improvement of 2.6% in the terms of trade from 1992H1 to 1994H1, mainly resulting from very rapid rises in recorded export prices. These gains in the terms of trade - if accurately recorded - are very unusual in the wake of a significant devaluation. It is possible that they may be reversed if importers' margins recover as domestic activity expands.

Figure 4.3

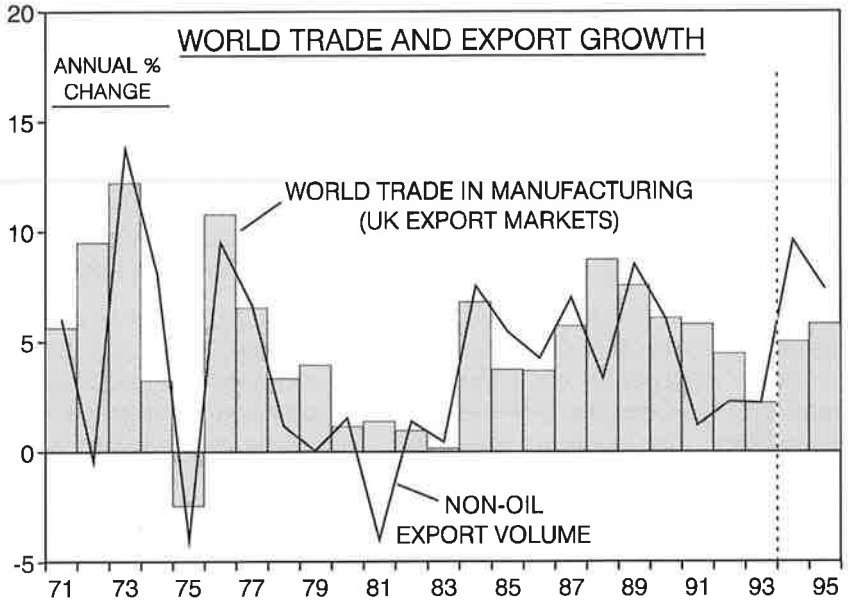
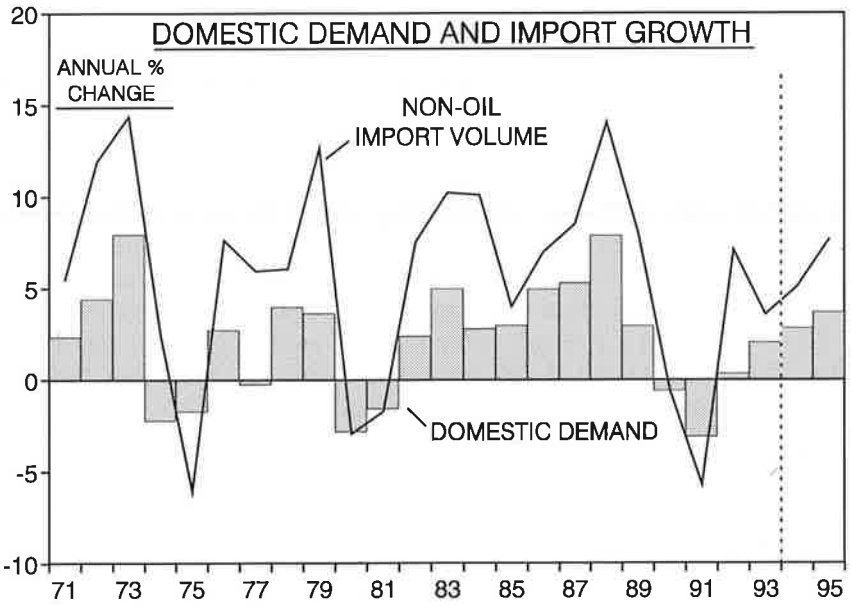


Figure 4.4



Therefore, while the behaviour of the current account has clearly been very surprising this year relative to earlier forecasts, it is not obvious that this has been due to an underlying improvement in non-oil trade performance. This implies that earlier trends in the trade account may eventually reassert themselves.

4.4 Future Trends in the Current Account

What really matters for the UK economy is not the trade figures in 1994, but whether the underlying trends are so adverse that trouble will inevitably re-emerge in the medium term. Certainly, over long periods in the past, the trends look grim. Although there has been no clear trend in the UK current account balance over very long periods, this is only because recurrent crises have forced repeated policy adjustments - devaluations, recessions and so on - which have kept the current account roughly in balance. Furthermore, the trend rate of growth in UK real GDP has been below the OECD average, and this seems to have been necessary to prevent an unsustainable worsening in the current account deficit, assuming a constant level of price competitiveness.

The equations in the Goldman Sachs trade model suggest that at any given level of UK price competitiveness, UK GDP needs to grow by just under 1% per year less than the OECD average in order to leave the current account deficit unchanged. This is because of the relativity between the UK's elasticity of demand for imports with respect to total final expenditure, the elasticity of export volume with regard to world trade, and the relationship between the growth of OECD GDP and world trade volume. If the OECD area grows at its trend rate of 3% per year, then the UK needs to grow at about $2^1/_4$% per year - also close to its long-term trend - in order to leave the trade account unchanged assuming constant competitiveness.

Alternatively, if the UK grows at the same rate as the OECD area - say 3% per year - then competitiveness must improve by approximately $1^1/_2$% per year in order to leave the current account unchanged.

Although these long-term trends seem inexorable, they work only very slowly, and are subject to considerable variations from one year to another as the terms of trade and other variables are subject to shocks. Consequently, the long-term trends can be masked for several years at a time, but they have an unnerving tendency to reappear eventually.

We can use the Goldman Sachs trade equations to estimate the future path for the current account deficit using different assumptions about the pace of economic growth and the path for the exchange rate. Without wishing to be too precise about extent or (especially) timing, Table 4.2 shows what these forces may mean for the development of the economy over the next few years. The table makes the relatively conservative assumption that OECD GDP grows at $2^1/_2$% per year for the next two years and then at 3% per year thereafter. If the UK grows at 3% per year over this period (our main forecast), then in the absence of any further improvement in competitiveness, the current account deficit may come in at about 1-2% of GDP in 1995 and 1996 as the lagged effects of the improvement in competitiveness seen since Britain left the ERM continue to work through. After 1996, there may be a tendency for the current account deficit to rise, perhaps reaching 3% of GDP by 1998.

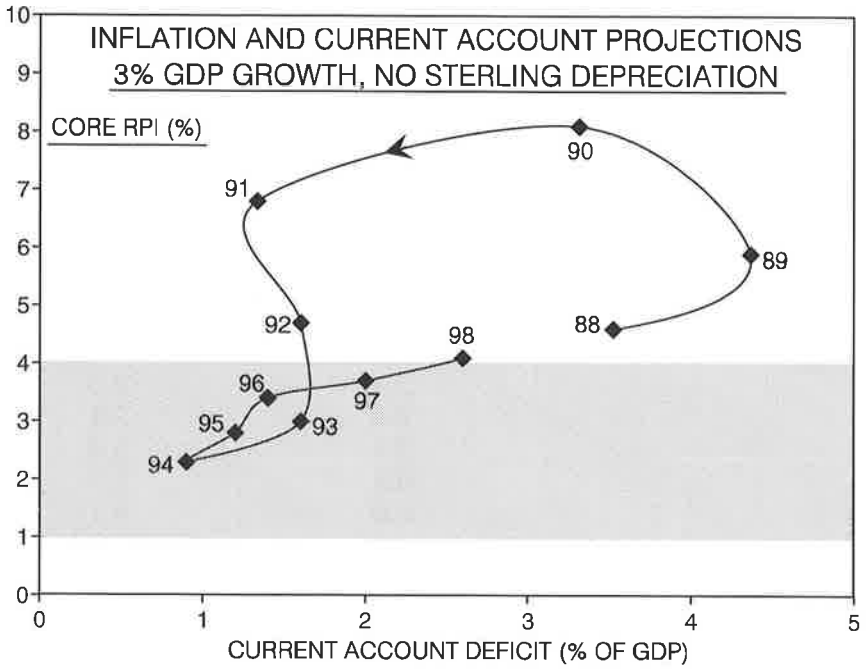
Table 4.2. Medium-Term Simulations (Exchange Rate Unchanged)

	Slow GDP growth (2%)	Central GDP growth (3%)	Fast GDP growth (4%)
Average earnings (%)			
1994	3.9	4.0	4.2
1995	4.9	5.2	5.6
1996	4.7	6.3	8.0
1997	3.2	6.6	9.5
1998	1.8	6.9	10.6
Price inflation (%)			
1994	2.3	2.3	2.3
1995	2.6	2.8	3.0
1996	2.1	3.4	4.5
1997	0.8	3.7	6.0
1998	0.0	4.1	7.4
Current account deficit (% of GDP)			
1994	0.9	0.9	0.9
1995	0.7	1.2	1.3
1996	0.5	1.7	2.1
1997	0.7	2.0	3.2
1998	0.9	2.8	3.8
PSBR (% of GDP)[a]			
1994	4.7	4.7	4.7
1995	3.7	3.4	3.1
1996	3.5	2.3	1.5
1997	3.3	1.3	-0.2
1998	3.6	0.5	-1.8
Unemployment rate (%)			
1994	9.4	9.3	9.3
1995	8.6	8.1	7.7
1996	8.4	7.3	6.2
1997	8.4	6.5	5.0
1998	8.4	5.7	4.2

[a] Financial year.
Source: Goldman Sachs.

We can consider variations on this main case scenario. Firstly, suppose the economy grows at 4% per year over the medium term - i.e. at roughly the rate achieved in the last 12 months. This would probably lead to a sharp deterioration in the current account deficit, which could reach 4-4$^{1}/_{2}$% of GDP in 1998. Even with an unchanged exchange rate, this

Figure 4.5



would push inflation well above the top end of the government's 1-4% target range by the end of this Parliament. If the exchange rate were to depreciate in this scenario, inflation could approach 10% by 1998.

This, of course, indicates that further devaluation would be expected to have a significant effect on price inflation over the medium term, even though the 1992 devaluation appears on the surface not to have affected inflation very much so far. This is because the domestic recession has severely dampened the normal inflationary effects of the devaluation. Now that the economy is clearly recovering, the effects of any further sterling depreciation would quickly become apparent.

Alternatively, we can consider a scenario in which the economy grows much more slowly than our 3% central forecast. It is clear from the left-hand column of the table that the projections for inflation and the current account deficit are very sensitive to the UK's rate of growth. If the economy were to grow by only 2% per year over the next five years, then the current account deficit would be little changed in the next five years. Even with a modest depreciation, inflation would remain firmly within the government's target range.

4.5 The Current Account and Debt Sustainability

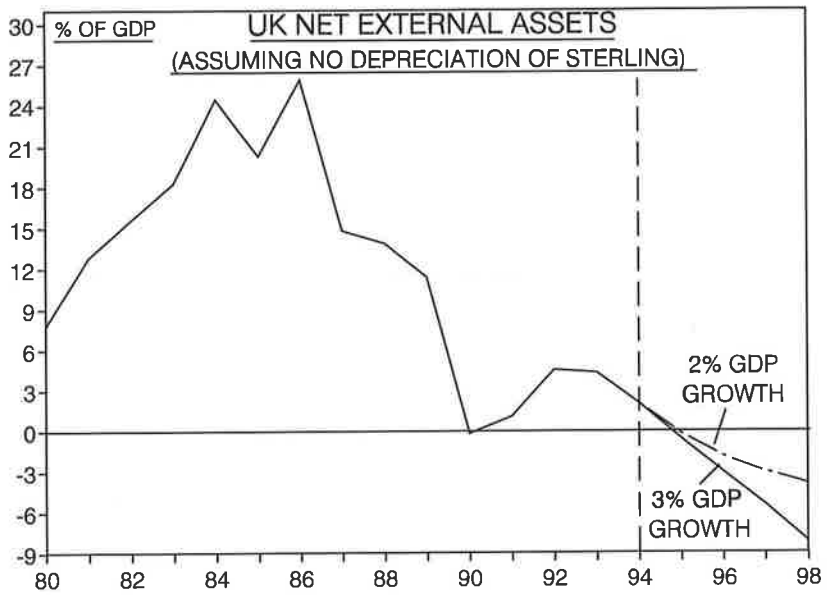
Appendix 4 discusses the question of the current account and the sustainability of external debt. It explains that the external debt position of the UK is simply the sum total of the debt positions of the public and private sectors of the economy. It is now common ground among economists that if the public sector is in an unsustainable position, then actior

should be taken over the medium term to correct this. However, there is no agreement about whether the authorities should be concerned about an unsustainable debt position for the private sector.

The most likely development for domestic demand in the medium term is that growth is robust but not explosive - perhaps sufficient to produce GDP growth of around 3% per year. As we shall see below, this is the trickiest outcome for policy-setting. If domestic demand growth slows markedly from present rates, then monetary policy should be eased; while if it speeds up, then both fiscal and monetary policy should be tightened.

In the difficult intermediate case, as we have seen, the current account deficit is likely to worsen if the real exchange rate remains broadly unchanged. The key question for the government in this case would be whether or not to show concern about the build-up in external debt. Although this would not be sustainable in the long run, it would initially result in only a fairly slow rise in the debt ratio. If the build-up in external debt were matched by a rise in capital investment in UK businesses, then there would be a case for arguing that this would lead to supply-side improvements in the long term which would eventually correct the primary current account deficit. The UK would then move to a new sustainable equilibrium in which net external debt would be higher, and the interest outflow would be correspondingly increased, but in which the primary current account surplus offset the interest outflow.

Figure 4.6



In this scenario, the authorities would therefore need to attempt to distinguish between the benign situation just described, and a much more malign rerun of the late 1980s, in which the private sector was incurring debt mainly in order to maintain consumption at high levels, and in which foreign lenders were essentially being short-sighted in allowing a situation to develop which would prove unsustainable in the end.

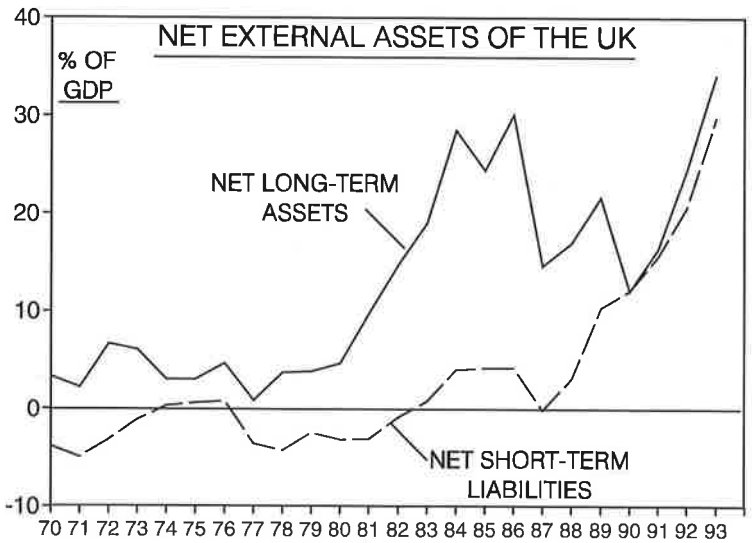
At present, it is too early to judge which of these caricatures may prove nearest to the truth; indeed, we do not yet know for sure whether the policy adjustments of the last two years will be enough to head off the problem altogether. Certainly, it seems quite unlikely that there will be any form of crisis in the next year or two. However, if the current account were to worsen slowly in the medium term, there is a strong case for attempting to correct this development, rather than assuming that it would automatically solve itself as a private sector phenomenon. This is for the following three reasons.

Firstly, private credit markets have not in the past been good at enforcing smooth adjustments on the private sector in such circumstances. Experience in the UK and in other medium-sized economies suggests that a current account deficit of up to about 4% of GDP can be readily financed for a while, but that abrupt and unpleasant adjustments occur at some stage.

Secondly, the omens are not good on the investment/consumption split. Although this split has improved recently, consumption is still at an all-time high relative to GDP, with investment unusually low. This is not the symptom of an economy which is engaged in a smooth transition to a new sustainable external debt equilibrium in which supply-side improvements are able to pay for the additional interest incurred on the debt.

Thirdly, the build-up in UK liabilities in recent years which has accompanied the current account deficit has been heavily concentrated in short-term maturities. In fact, there has been an increasing liability mismatch in the UK's balance sheet between rising long-term assets and exploding short-term liabilities. This is a very vulnerable position if a shock occurs in which foreigners decide suddenly to reduce their holdings of UK debt.

Figure 4.7



If the government decides that these risks are not worth running, then what could it do? An easing in monetary policy, with the objective of reducing the exchange rate, would cause inflation to exceed the target band, and should therefore be ruled out. Once again, as in 1993, the correct policy response would be to tighten fiscal policy, and to allow the contractionary effect of this on the economy to be offset by a slide in the exchange rate.

4.6 Policy Conclusion

The policy conclusion is therefore as follows:

(i) If domestic demand slows down markedly, taking GDP growth to below its trend rate, monetary policy can safely be eased.

(ii) If, despite the tax increases already planned, domestic demand should speed up markedly, then the government would need to act again to tighten policy, preferably on the fiscal side, though this may need to be bolstered by tighter monetary conditions.

(iii) If domestic demand produces GDP growth somewhere near 3%, which is the most likely out-turn, then there will be no compelling need to adjust policy rapidly. However, a risk-averse government should start to worry about the build-up in external debt which this could involve, and adjust fiscal policy with the aim of holding domestic demand growth to 2% or so per year, while monetary policy is set to achieve an exchange rate consistent with some improvement in net exports. The aim would be to maintain overall GDP growth at $2^1/_2$-3% per year until inflation pressures begin to emerge.

It will be difficult for the government to follow the policy prescription suggested in (iii) if this scenario comes to pass. A further fiscal tightening when there is an improving PSBR, no marked rise in inflation and no sign of a chronic problem developing on the external front would be politically very difficult. We would certainly *not* predict that a fiscal tightening would actually occur in this scenario. Unfortunately, however, inaction in these circumstances could possibly lead to an eventual crisis, though this is not a certainty and it is most unlikely to happen soon.

What is more certain is that any *reversal* of the fiscal tightening already announced would be quite dangerous, since it would probably necessitate sufficient monetary tightening to raise the real exchange rate, and produce an unsustainable path for the current account. We are encouraged that the Chancellor - unlike some of his supporters - seems to recognise this fact.

5 Fiscal Strategy

5.1 Introduction

In last year's Budget speech, the Chancellor said: 'The task of my first Budget has been to set the government's finances on a sustainable path for the rest of the decade ... In my opinion, the Budget must sort out the problem of public borrowing once and for all'. The November 1993 package accordingly tightened fiscal policy by 1.25% of GDP per year by the end of the Parliament, and this came on top of a tightening equivalent to 1.7% of GDP announced by Chancellor Lamont in March 1993. Mr Clarke said that these two packages together represented 'the minimum necessary to ensure that the public finances are on a sustainable track for the rest of the decade'.

In the last two Green Budgets (January and October 1993), we have consistently argued that a fiscal tightening of at least 3% of GDP would be needed in order to achieve sustainability for the government accounts (defined below) by the end of the Parliament. In the event, the two Budgets taken together delivered precisely that amount of fiscal tightening (assuming that the government sticks to its public spending plans in real terms), so we naturally felt after the November Budget that fiscal policy had been set on a path which was sustainable. Indeed, it seemed, based on the evidence available at the time, close to optimal.

A year later, the question naturally arises of whether it still appears that fiscal policy is on an optimal path. In particular, the rapid decline in the PSBR observed so far this fiscal year may suggest to some observers that budgetary policy was tightened too much in 1993, and that there is now scope for an early dose of tax cuts. We would not agree with this view; and the Chancellor has said that those who are hoping that tax cuts can be announced this November are 'living in cloud cuckoo land'. However, it is worth examining the extent and causes of projected falls in the PSBR before justifying our view that there is no room for tax cuts this year.

5.2 PSBR Projections

The PSBR peaked in 1993-94 and is now firmly set on a downward path. We expect this trend to continue into the medium term as a result of strong government revenue growth and, initially at least, nominal public expenditure reductions. Rapid economic growth and considerable fiscal tightening announced in 1993 cause our tax revenue forecasts to be buoyant, while lower than expected inflation gives the government room to cut nominal spending plans without affecting the growth of real public expenditure. For greater detail of our forecasts, see Chapter 7 for spending analysis and Appendix 1 for our methods for forecasting the PSBR.

Table 5.1. The Public Finances 1994-95 and 1995-96

(£ billion)	FSBR	1994-95 Summer Forecast	IFS Forecast	1995-96
Income tax	64.4	65.0	65.0	72.7
Corporation tax	17.6	18.8	18.0	22.6
Petroleum revenue tax	1.0	0.5	0.7	0.8
Capital gains tax	1.3	0.9	0.7	0.8
Inheritance tax	1.4	1.4	1.3	1.4
Stamp duties	1.8	1.9	1.9	2.0
Total Inland Revenue	**87.5**	**88.5**	**87.6**	**100.3**
VAT	43.1	43.4	43.4	47.5
Petrol	14.5	14.3	14.9	16.7
Tobacco	7.2	6.9	7.0	7.6
Alcohol	5.4	5.6	5.5	5.8
Betting and gaming	1.2	1.2	1.2	1.2
Customs duties	2.0	2.1	2.1	2.1
Agricultural levies	0.1	0.2	0.2	0.2
Air passenger duty	0.1	0.1	0.1	0.3
Insurance premium tax	0.3	0.2	0.2	0.7
Total Customs and Excise	**73.9**	**73.8**	**74.5**	**82.2**
Vehicle excise duties	3.8	3.9	4.0	4.2
Oil royalties	0.6	0.5	0.5	0.5
Rates	13.0	12.7	12.7	13.2
Other taxes and royalties	5.9	5.9	5.9	6.1
Total taxes and royalties	**184.7**	**185.4**	**185.3**	**206.5**
National Insurance contributions	42.8	42.9	42.9	46.2
Council tax	8.6	8.6	8.6	8.9
Interest and dividends	5.4	5.4	5.4	5.6
Gross trading surplus and rent	4.3	4.5	4.7	4.9
Other receipts	6.4	7.5	7.5	7.7
General government receipts	**252.2**	**254.3**	**254.4**	**279.8**
New control total	**251.3**	**251.3**	**247.6**	**260.6**
Cyclical social security	14.8	14.6	13.9	13.3
Central government debt interest	22.5	22.4	22.6	24.0
Accounting adjustments	8.8	8.9	8.9	10.0
General government expenditure	**297.4**	**297.1**	**293.0**	**307.9**
Privatisation	-5.5	-5.5	-5.5	-2.5
General government borrowing requirement	39.7	37.3	33.1	25.6
Public corporations borrowing requirement	-1.5	-1.2	-1.2	-1.3
Public sector borrowing requirement	**38.2**	**36.1**	**31.9**	**24.3**

The PSBR in the Short Term

We expect the PSBR for **1994-95** to be significantly lower than previously forecast. Table 5.1 shows our forecast of the government finances for 1994-95 and 1995-96, alongside the Treasury's estimates for 1994-95. Our forecast indicates higher tax receipts than predicted by the Treasury in November 1993 as a result of stronger economic growth, but the same receipts as in the Summer Economic Forecast.

As our macroeconomic assumptions in Table 5.2 indicate, this does not reflect a similar view on the path of the economy but is merely a coincidence arising from a similar money GDP growth forecast. Underlying our money GDP forecast, however, is faster real GDP growth and lower inflation. In fact, our inflation estimate, as measured by the GDP deflator, will be $1^1/_2$ percentage points lower than forecast by the Treasury last November in the FSBR.

Table 5.2. Macroeconomic Assumptions 1994-95 and 1995-96

(% growth)	1994-95 (%)	1995-96 (%)
GDP	3.7	3.5
Wages	3.3	4.7
Prices	2.6	3.1
Consumers' expenditure	2.2	2.6
Employment	0.8	2.2
Corporate profits (previous year)	14.9	16.0

With lower inflation than forecast in the FSBR last November, the government will find sticking to its nominal spending plans for 1994-95 relatively easy. Indeed, if it merely keeps to its announced plans, real new control total (NCT) spending will increase by 0.2% rather than falling by 1.3% as outlined in last year's Budget. Therefore our central assumption is that the government will stick to the announced real path of the NCT (i.e. a 1.3% real reduction in the NCT), which implies that nominal spending plans will be reduced by £3.7 billion. If the Chancellor announces NCT spending higher or lower than £247.6 billion, it will be clear that the government has altered its spending policy.[1] Apart from changes to announced levels of the NCT, lower unemployment should reduce spending on cyclical social security and hence we forecast general government expenditure (GGE) to be £4.4 billion lower than the level in last year's FSBR.

Similar tax receipt levels and lower nominal GGE combine to form our PSBR prediction of £31.9 billion, a significant reduction from the levels forecast by the Treasury last November and in the Summer Economic Forecast.

[1] Spending plans are discussed in detail in Chapter 7, and the effects of our spending assumptions on our PSBR forecasts are described more fully in Appendix 1.

For **1995-96**, we forecast the PSBR will fall further as a consequence of rapid nominal revenue growth at 10% and slower nominal expenditure growth. Revenues benefit from real GDP growth of $3^1/_2$%, increasing inflation and the full effects of all of the tax increases announced in the two 1993 Budgets. For spending, we present two scenarios, firstly that the government keeps to the real NCT expenditure path outlined last November, i.e. the no policy change scenario. Under this scenario, the NCT would be £258 billion, some £5 billion less than forecast last November. Again, this does not represent real cuts but highlights the effect of our lower inflation assumptions on the government's ability to make cuts in announced nominal spending plans. On this scenario, the PSBR will be £21 billion in 1995-96. Our second scenario is that pre-election pressures will force the government to exceed its real NCT spending estimates, with spending growth in 1995-96 of 2% in real terms (rather than 1% outlined in the 1993 FSBR). On the second scenario, the PSBR will be slightly higher at £24 billion in 1995-96.

The PSBR in the Medium Term

To forecast the PSBR into the medium term, a full set of macroeconomic forecasts is needed. A summary of the estimates used is shown in Table 5.3. Forecasting macroeconomic variables accurately over even the very short term is a difficult enough pursuit and medium-term forecasts are clearly subject to formidable errors. We therefore present three plausible alternative scenarios to indicate the range of PSBR outcomes possible.

Table 5.3. Alternative Macroeconomic Working Assumptions

(% growth)		1994-95	1995-96	1996-97	1997-98	1998-99
GDP	Optimistic	3.8	4.0	4.0	4.0	4.0
	Baseline	3.7	3.5	2.8	2.8	3.0
	Pessimistic	3.3	2.0	2.0	2.0	2.0
GDP Deflator	Optimistic	2.6	3.6	4.9	6.4	7.7
	Baseline	2.5	3.2	3.5	3.7	4.0
	Pessimistic	2.5	2.7	2.0	0.7	0.0
Employment	Optimistic	1.0	2.5	2.0	2.0	2.0
	Baseline	0.8	2.2	1.5	1.0	1.0
	Pessimistic	0.6	1.2	0.5	0.5	0.5

On our central forecast, we expect the recovery that started in mid-1992 to continue strongly into the medium term. The growth rate is predicted to peak this year at 3.7% and slowly fall to settle at or just below 3% per year. This represents economic growth well above the UK historic trend and implies that inflationary pressures will emerge towards the end of the forecast period as output levels reach and exceed normal capacity working levels. These inflationary pressures are reflected in the GDP deflator which rises throughout the forecast period to the top of the government 0-4% range. Employment growth lags the cycle slightly, peaking in 1995-96 before settling at 1% per year into the medium term.

In our optimistic scenario, economic growth remains significantly above trend into the medium term. This creates significant inflationary pressures, forcing the GDP deflator out of its target range to end the period well above the ceiling. The pessimistic scenario shows a world in which the economy does not catch up to previous trend levels of GDP and grows modestly at 2% into the medium term. Consequently, employment growth is slow at 0.5% and inflationary pressures subside.

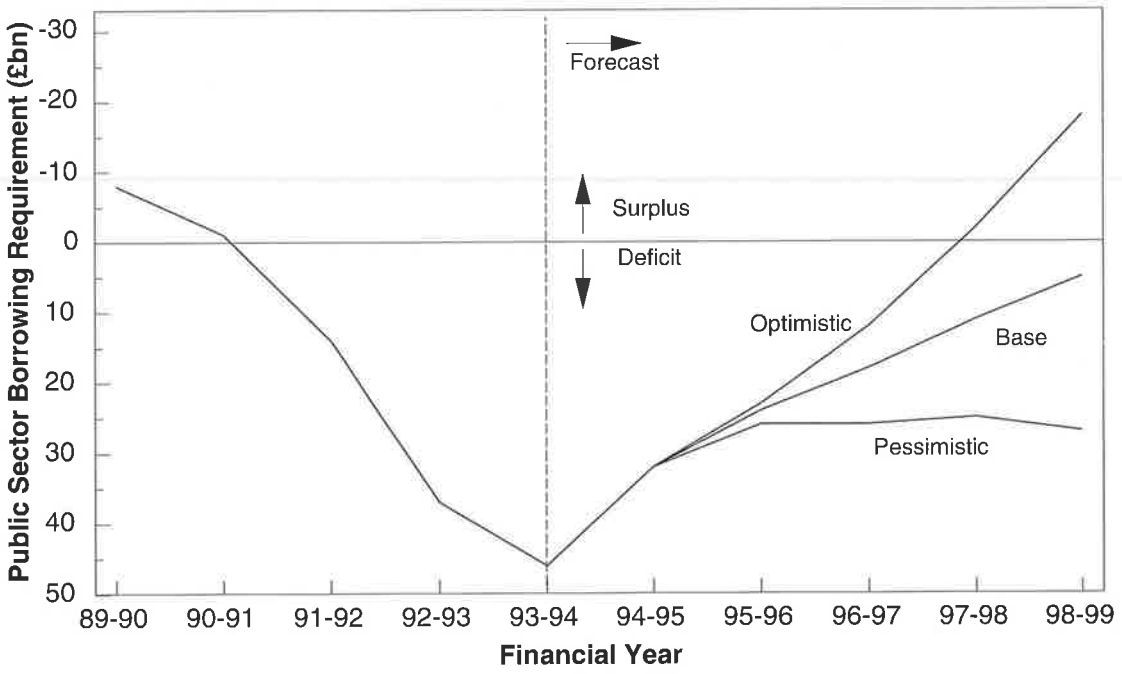
Table 5.4. The PSBR in the Medium Term: Sensitivity Analysis for both Spending Scenarios

		1994-95	1995-96	1996-97	1997-98	1998-99
Scenario A: Government sticks to its plans for real NCT growth						
PSBR	Optimistic	32	20	6	-11	-31
(£ billion)	Baseline	32	21	12	2	-7
	Pessimistic	32	24	20	17	16
PSBR	Optimistic	4.7	2.7	0.8	-1.3	-3.1
(% of GDP)	Baseline	4.7	3.0	1.6	0.3	-0.9
	Pessimistic	4.7	3.3	2.8	2.2	2.1
Scenario B: Real NCT growth of 2% per year from 1995-96						
PSBR	Optimistic	32	23	12	-2	-18
(£ billion)	Baseline	32	24	18	11	5
	Pessimistic	32	26	26	25	27
PSBR	Optimistic	4.7	3.1	1.5	-0.2	-1.8
(% of GDP)	Baseline	4.7	3.4	2.3	1.3	0.5
	Pessimistic	4.7	3.7	3.5	3.3	3.6

These economic forecasts translate into the different paths for the PSBR shown in Table 5.4 and Figure 5.1. Our receipts forecasts include all known future tax changes (e.g. petrol duties to rise by 5% in real terms every year) but otherwise assume annual revalorisation of excise duties and the indexing of all allowances and thresholds in Inland Revenue taxes. In Table 5.4, we show the PSBR outcomes on both our spending assumptions, while

Figure 5.1 relates to our second scenario only, that the government will increase NCT spending by 2% in real terms into the medium term. We show Figure 5.1 on one scenario only as we believe it is the most probable outcome for the PSBR over the medium term.

Figure 5.1
The PSBR in the Medium Term:
Sensitivity Analysis for 2% Real NCT Growth



In our central forecast, tax receipts rise rapidly throughout the period, benefiting initially from very strong real GDP growth and later in the period from faster inflation. On the spending side, our projections for nominal GGE lie below those in the November 1993 FSBR until 1996-97 under our expected (second) scenario. However, for both our scenarios, our forecast of accelerating GGE arises from the inflationary pressures we expect to develop as the economy hits full capacity. GGE is positively related to inflation primarily through increased wage pressures in the public sector and automatic increases in social security payments. These tax and expenditure patterns give a rapidly falling PSBR: 4.7% of GDP this year; 2.3% in 1996-97, the most likely election year; and only 0.5% of GDP by the end of the forecast period.

The optimistic and pessimistic scenarios show considerably different paths for the PSBR: falling extremely quickly in the optimistic scenario to leave a public sector debt repayment (PSDR) of £18 billion by 1998-99; and falling slowly in the pessimistic scenario to a

fairly constant £25 billion. This indicates that forecasts diverge by £43 billion by the end of the period, which highlights the obvious point, that macroeconomic performance is crucial to the state of the public finances.

Given that our central PSBR forecast shows a significant fall in borrowing, and a much faster fall than seemed possible this time last year, many will conclude that there is a good case for fiscal easing this year in the form of tax cuts. In the next section, we discuss the appropriate level of borrowing and debt and then address the question of whether taxes rose by too much last year, and whether there are valid arguments for reducing taxes in November.

5.3 Debt Sustainability and the 'Golden Rule'

In the Green Budget of October 1993, we outlined a method for assessing whether the government's finances were 'sustainable' and/or 'optimal'. Readers who are interested in the details of these concepts should refer to last year's publication, but we will summarise the main points again here.

Discussion on government finances often focuses solely on the question of what level of public borrowing is 'sustainable', in the sense that it would produce a stable public debt/GDP ratio in steady state. Clearly, a path for the PSBR which produces explosive growth in the ratio of public debt to GDP cannot be maintained indefinitely. Either this would result in accelerating growth in the money supply as the government covers its deficit by issuing money, or it would lead eventually to higher taxes or reduced public services. Furthermore, the longer the government waits to correct an unsustainably high PSBR, the greater the permanent increases in taxes that will be needed to stabilise the debt ratio. Therefore, the first prerequisite of long-term debt planning is to ensure that the debt path is, or is likely to become, sustainable.

Calculations of debt sustainability involve manipulations of the government's budget constraint, which requires that the budget deficit must be financed either by the issuance of bonds or by an increase in the monetary base. As shown last year, the long-run solvency constraint of any government is given by the following equation:

$$f = (r - y)b - (p + y)/V$$

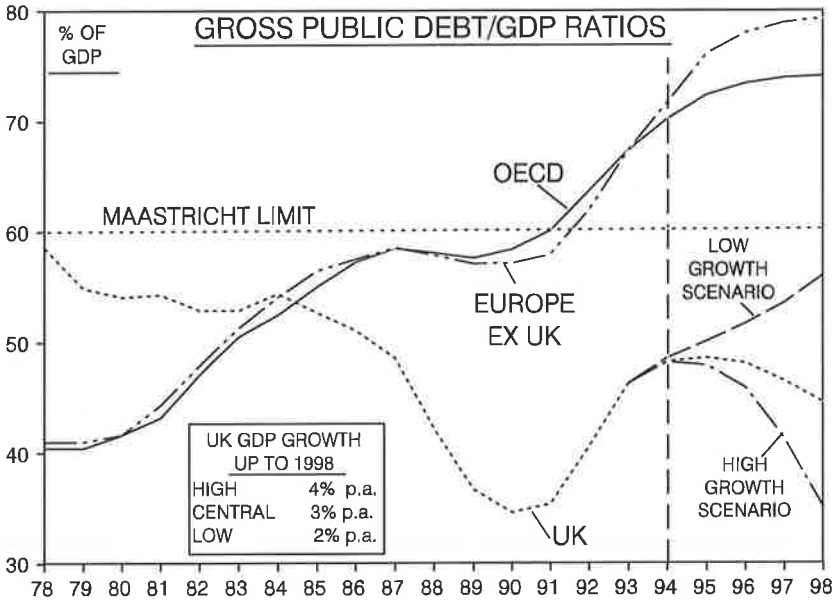
where f is the government's budget surplus excluding interest payments (or primary surplus), r is the real interest rate, y is the real rate of economic growth, b is the debt/GDP ratio, p is the inflation rate and V is the velocity of circulation of the monetary base. We can use this equation to calculate what, in the long run, the government's budget position needs to be in order to stabilise the debt/GDP ratio.

As explained last year, we assume that in the long run, inflation will remain at 4% per year (the top of the government's target band), real GDP growth will be 2% per year, the debt ratio will stabilise at 50% of GDP, the velocity of circulation of the monetary base is 30 and the real interest rate is 4%. Using these figures, we calculate that the non-interest budget surplus that the government needs to run in order to stabilise the debt/GDP ratio is around 0.8% of GDP. To this, we need to add debt interest in order to attain the overall

'sustainable' level for the PSBR at the end of the current Parliament. For example, if inflation is expected to settle at the top end of the government's target band, 4%, then nominal interest rates will be 8%, and debt interest will be about 4% of GDP. This implies that the UK can run an overall budget deficit equal to a little over 3% of GDP (3.2% to be precise - the primary surplus of 0.8% subtracted from debt interest of 4% of GDP) while stabilising the debt ratio if inflation runs at 4% per year.

By the same method, the steady-state PSBR target would decline if the inflation target were reduced. This is because debt interest would fall as nominal interest rates decline with inflation. For example, if the government wishes to hit the centre of its inflation target (i.e. 2.5% per year), and the market believes that this is sustainable, then the PSBR objective would be 2.4% of GDP. Each different inflation rate produces a different PSBR target.

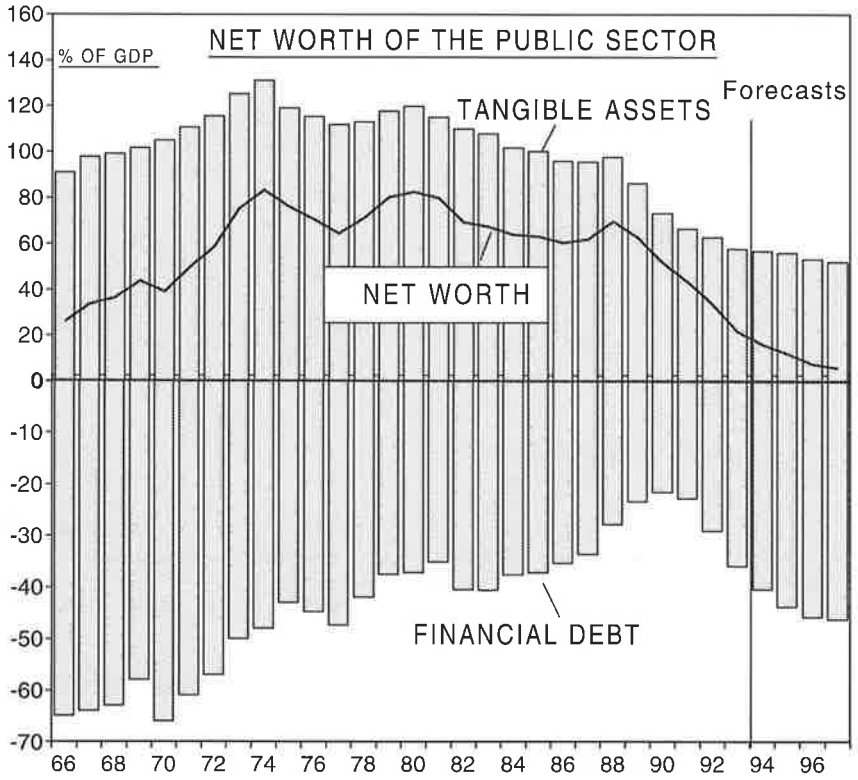
Figure 5.2



All this reasoning, however, hinges on our initial assumption that the debt/GDP ratio will be stabilised at about 50%. Although it appears innocuous to assume that the debt ratio should be stabilised around this level - which is roughly the level likely to be reached by the end of the Parliament - this is in fact almost entirely arbitrary. The present level of the debt/GDP ratio in the UK is quite close to a 200-year low point for this country, and is significantly lower than the debt ratios in most other OECD economies. If we were to choose a higher steady-state debt/GDP ratio, then the eventual PSBR target could also be significantly larger than we have assumed, and the actual PSBR could be even higher for an interim period as the debt ratio rises towards its long-term target.

It is therefore very important to have some method for deciding what the appropriate long-term objective for the debt/GDP ratio should in fact be. Unfortunately, this is none too easy, since a wide range of different debt ratios have been consistent with broadly satisfactory economic performance in different countries over the years. However, it would seem sensible for the government, like any private sector entity, to take decisions about the liability side of its balance sheet in conjunction with decisions on the assets side. The government could, for example, seek to keep its overall net worth (i.e. tangible assets less net financial liabilities) growing in line with GDP. Translating this into flow concepts, the government might choose to keep the PSBR equal to its investment in new assets (i.e. its gross domestic fixed capital formation less capital depreciation less asset sales). This is the so-called 'Golden Rule' of public finance, which is much in use in Germany and other continental European countries.

Figure 5.3



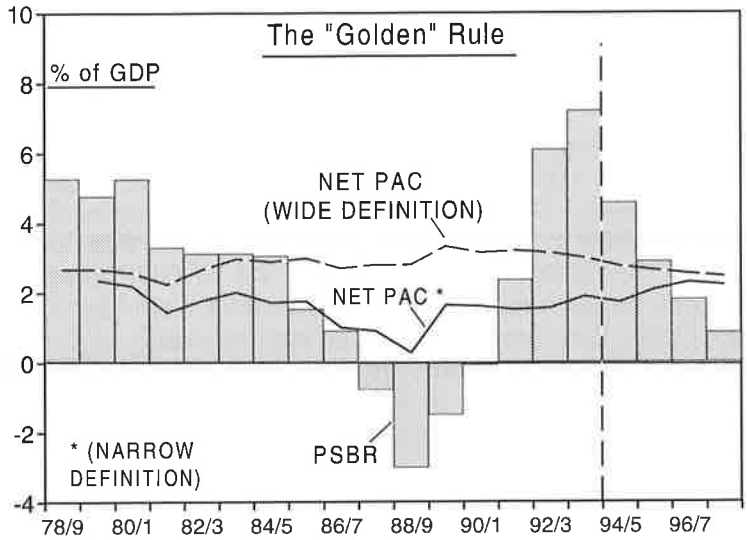
In last year's Green Budget, we recommended that the government should pay more attention to the relationship between its borrowing in the financial markets and the amount it is adding each year to its tangible capital stock. The problem is that, in the past few

years, there has been a very sharp drop in the government's net worth. This reflects the fact that financial debt has been rising rapidly, while fixed investment has been insufficient to maintain the real value of the government's tangible assets.

At the end of 1993, the public sector's tangible assets were valued at £376 billion, while its net financial liabilities were estimated at £241 billion. This left the government with total net worth of £136 billion, implying that in balance-sheet terms the government was comfortably still observing the Golden Rule (i.e. its stock of assets far exceeded its stock of liabilities). However, the government's net worth had shrunk from a peak of £320 billion at the end of 1989, which is a somewhat alarming rate of decline. Clearly, in flow terms, the government has not been observing the Golden Rule for several years (i.e. the PSBR has substantially exceeded net fixed investment, or the public sector's net creation of real assets).

The government's recent failure to observe the Golden Rule is illustrated in Figure 5.4, which compares net public sector asset creation (PSAC) with the PSBR. PSAC differs in several respects from more familiar concepts such as public sector gross domestic fixed capital formation. It excludes sales of land and buildings; it includes capital grants to the private sector; and it includes some items of defence spending which qualify as capital investment on the NATO definition but not on the UK National Accounts definition. After making these adjustments to fixed investment figures, and after subtracting capital depreciation, we are left with an estimate of net PSAC, which is the amount that the public sector adds to the nation's stock of tangible assets each year.

Figure 5.4



There is one more complication, relating to asset sales. In the graph, we have distinguished between narrow and wide definitions of PSAC. The 'wide definition' is the concept just defined. It relates to the whole economy, and not simply to the stock of assets created and held in the public sector. If we wish to narrow the definition to the increase in public sector net worth only, we need to subtract government asset sales from the wide definition. (Transfers of assets from the public to the private sector do not affect national net worth, but they reduce public sector net worth unless there is a corresponding cut in the PSBR.) This produces an estimate of PSAC ('narrow definition') that tells us how much the government can borrow each year without reducing the net worth of the public sector itself.

In 1994-95, the narrow and wide definitions of PSAC differ by around £7 billion, which is the sum total of privatisation receipts (£5.5 billion) and sales of land and public buildings (£1.5 billion). However, as land and asset sales diminish over the medium-term horizon, the narrow and wide definitions of PSAC are likely to become almost identical, and seem likely to run at around 2% of GDP. (Using a slightly different definition, the November 1993 Budget 'Red Book' estimated that the government's net capital spending would amount to 1.5% of GDP over the medium term.) This means that the PSBR needs to be reduced to 2% of GDP or less in order to observe the Golden Rule; alternatively, the government could run a higher PSBR while simultaneously boosting public investment to ensure that the Golden Rule is met.

Putting all this together, we conclude that the PSBR over the medium term needs to be reduced to around 3% of GDP in order to ensure that the government's debt ratio stabilises at 50% of GDP. Meanwhile, on the government's present investment plans, it would need to reduce the PSBR to under 2% of GDP in order to ensure that the Golden Rule is attained.

5.4 Developments since the November 1993 Budget

In the October 1993 Green Budget publication, we estimated that, on unchanged tax rates, and making plausible assumptions about the likely public spending out-turn, the PSBR would decline to about 3.6% of GDP in 1997/98, by which time the economy was thought likely to have returned to normal capacity working. We therefore concluded that fiscal policy needed to be tightened by a little over 1% of GDP in order to ensure, based on central economic projections, that public sector debt would be 'sustainable' by that date, and that the Golden Rule would by then be approximately met. In the event, Chancellor Clarke introduced an annual fiscal tightening equivalent to 1.25% of GDP by the end of the Parliament. Consequently, in the wake of the November Budget, our central expectations were that the PSBR might decline to around 2.5% of GDP by 1997/98.

Since a decline of this sort would have been almost exactly sufficient to hit the debt sustainability and Golden Rule targets for the PSBR in 1997-98, which was then estimated to be the year in which the economy would return to mid-cycle, it seemed to us that prospective fiscal policy was broadly appropriate. Since then, however, the PSBR for both 1993-94 and 1994-95 has come in much lower than expected, due in part to a combination of considerably firmer economic activity and lower inflation than was

expected a year ago. Furthermore, changes in central economic projections for the next few years have substantially reduced the most likely path for the PSBR over the remainder of this Parliament.

Table 5.5 compares our latest central economic assumptions with those contained in the November 1993 Red Book. Real GDP growth in both 1994-95 and 1995-96 is now expected to be around 1% faster than the government assumed a year ago. Furthermore, the inflation rate in the current financial year (measured by the GDP deflator) is expected to be $1^1/_2$% lower than expected last year, while inflation in 1995-96 is now expected to be 0.5% lower. Since these real GDP and inflation changes are roughly offsetting, there has been little change in the path for nominal GDP in 1994-95 and 1995-96. However, from 1996-97 onwards, our central projections show modestly rising inflation, reflecting the recent boost to activity, while the November Red Book projections show a continuous decline in inflation to reach 2% by the end of the planning horizon. As a result, our projections incorporate a much firmer path for nominal GDP by the end of the decade than was assumed in last year's Red Book.

Table 5.5. Changes to Economic Assumptions since November 1993

(1992-93 = 100 for all index numbers)

	Real GDP				GDP Deflator				Nominal GDP			
	% change		Level		% change		Level		% change		Level	
	1993 Budget	Latest estimate	1993 Budget	Latest estimate	1993 Budget	Latest estimate	1993 Budget	Latest estimate	1993 Budget	Latest estimate	1993 Budget	Latest estimate
1993-94	2.0	2.2	102.0	102.2	3.2	3.2	103.2	103.2	5.5	5.5	105.5	105.5
1994-95	2.5	3.7	104.5	106.0	4.0	2.5	107.4	105.8	6.5	6.3	112.4	112.1
1995-96	2.7	3.5	107.4	109.7	3.7	3.2	111.1	109.2	6.7	6.8	119.9	119.8
1996-97	3.0	2.8	110.6	112.8	2.5	3.5	113.8	113.0	5.7	6.4	126.8	127.4
1997-98	3.0	2.8	113.9	115.9	2.2	3.7	116.3	117.2	5.2	6.6	133.5	135.8
1998-99	3.0	3.0	117.3	119.4	2.0	4.0	118.7	121.9	5.0	7.1	140.2	145.5

Note: Latest estimates are the central forecasts contained in this publication.

As noted above, we now expect last year's Budget PSBR targets to be undershot by £6 billion this year, and by £6 billion, £3 billion and £1 billion in the three subsequent years. By 1997-98, the PSBR now looks likely to be around 1% of GDP, compared with the $2^1/_2$% of GDP which seemed likely following the November package.

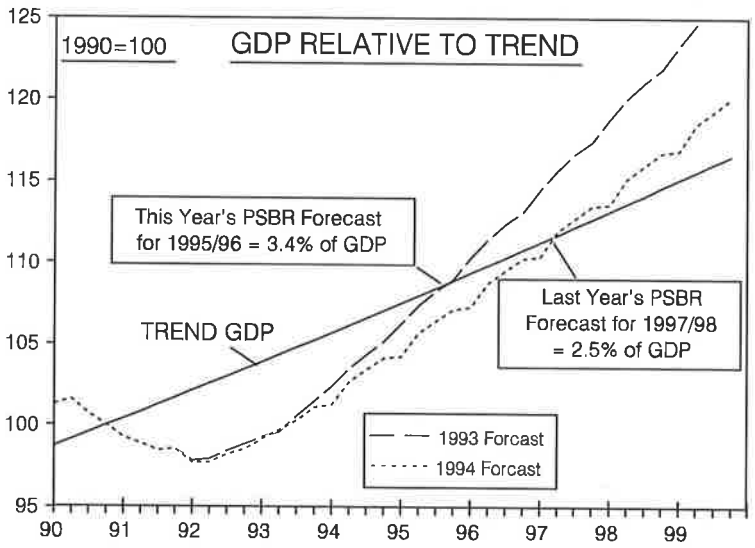
The question naturally arises whether this rapid reduction in the PSBR now justifies a reversal of the tax increases announced last year. Indeed, some observers may well say that our new PSBR projections indicate that last year's tax increases were unnecessary in the first place.

Table 5.6. Changes to Government Finances since November 1993

	Real Government Expenditure (1992/93 prices)		General Government Expenditure (Nominal prices)		General Government Revenue		PSBR	
(£ billion)	1993 Budget	Latest estimate	1993 Budget	Latest estimate	1993 Budget	Latest estimate	1993 Budget	Latest estimate
1993-94	277	273	286	282	230	230	50	46
1994-95	277	277	297	293	252	254	38	32
1995-96	282	282	313	308	280	280	30	24
1996-97	286	286	325	324	301	304	21	18
1997-98	289	291	336	341	322	327	12	11
1998-99	291	295	346	359	341	354	2	5

Note: Government expenditure excludes privatisation receipts. Latest estimates are the central forecasts contained in this publication.

Figure 5.5



However, we would not share this conclusion. This is essentially because the increase in GDP growth that has occurred since the November 1993 Budget has shifted forward the date at which the economy will return to normal capacity working, and has therefore altered the bench-mark against which we should be measuring the appropriate fiscal target. To be specific, the faster rate of growth in real GDP now assumed implies that economic activity is projected to return to mid-cycle levels as early as 1995-96, two years prior to the date anticipated last year. This means that the appropriate mid-cycle PSBR target should be brought forward by two years to 1995-96. From 1996-97 onwards, GDP will be above trend, so government borrowing should be below trend.

In the critical year of 1995-96, our latest forecast shows the PSBR running at £24 billion, or 3.4% of GDP, so the fiscal stance still seems broadly appropriate. Debt sustainability will have been almost attained by then, while the Golden Rule will be met the following year. It is not surprising that this conclusion has been reached, since all of the change in the PSBR assumed since November 1993 has come as a result of the automatic effects of different economic assumptions, while none has come from any change in real government expenditure or tax rates. Since the appropriate medium-term setting for fiscal policy should be independent of the economic cycle, and since we have made the assumption of no exogenous changes in fiscal policy instruments, it is natural that we have reached the same conclusion about the appropriateness of the fiscal stance as we did last year.

Despite this reasoning, it is nevertheless likely that there will be many who will conclude from the rapid improvement in the PSBR that tax cuts are justified. To our mind, they are inviting the Chancellor to repeat the fiscal policy mistakes of the late 1980s, when the government took advantage of a temporary improvement in the PSBR to announce much larger reductions in taxation (around 3% of GDP) than were sustainable over the medium term. This had three obvious disadvantages. Firstly, it saddled the private sector with an unstable tax background against which to draw up its own plans. Secondly, it boosted aggregate demand at a time when the economy was already overheating. Thirdly, it forced the authorities to tighten monetary policy by more than would otherwise have been the case, and thereby encouraged the real exchange rate to rise to unsustainable levels. Nevertheless, the political pressure to ease fiscal policy again in the run-up to the next general election may prove irresistible.

5.5 Government Finances in Britain and Elsewhere

Whatever the Chancellor decides to do, it now seems unlikely that he will ease fiscal policy enough to cause a problem with debt sustainability in the next few years. The considerable fiscal action taken in 1993 has, in fact, left Britain's government finances looking much better than those in most other economies, as Table 5.7 shows. This table has applied a common methodology to the government finances of all the major OECD countries. For the UK, the figures in the table differ slightly from those quoted above. This is because the table has assumed that current real bond yields are maintained in all countries, implying a 5.2% real yield in the UK, as compared with the 4% assumed above. Furthermore, the table is partly based on OECD forecasts for the PSBR (in order to make them comparable with forecasts for other countries), and these projections now appear somewhat too high. Nevertheless, the results are encouraging for the UK.

The 'budget gap' for 1995 shown in the table represents the amount by which each country would need to tighten fiscal policy in order to achieve debt sustainability next year. The gap for the UK is estimated at 3.2% of GDP, but over half of this is due to the fact that, on OECD estimates, the economy will still be working below capacity at that stage. Hence, the full employment budget gap - i.e. the amount by which the budget would need to be tightened in order to achieve debt sustainability when the economy next returns to normal capacity - is estimated at 1.5% of GDP for the UK, a figure which is considerably below that indicated for budget problem countries like Italy, Sweden and Australia. Furthermore,

Table 5.7. Sustainability of Budget Deficits - Can it be achieved?

				OECD Medium-Term Projections[b]			
(% of GDP)	1995 budget gap	Cyclical component of budget deficit	Full employment budget gap[a]	Predicted change in budget balance 1995-2000	Gross debt ratio 1995	Gross debt ratio 2000	Change in gross debt ratio 1995-2000
US	0.4	-0.5	0.9	0.4	64.1	62.6	-1.5
Japan	1.3	3.0	-1.7	1.8	82.6	87.6	5.0
Germany	-1.0	0.6	-1.6	1.3	64.3	66.8	2.5
France	3.7	3.2	0.5	3.3	60.6	65.3	4.7
Italy	7.2	3.0	4.2	5.2	120.7	114.9	-5.8
UK	3.2	1.7	1.5	4.5	52.3	46.9	-5.4
Canada	2.0	2.1	-0.1	2.2	95.4	91.0	-4.4
Australia	2.9	0.2	2.7	3.1	38.8	39.9	1.1
Belgium	2.0	0.5	1.5	2.4	144.8	131.6	-13.2
Denmark	2.0	0.8	1.2	4.2	69.6	64.5	-5.1
Netherlands	0.7	0.2	0.5	1.7	81.7	80.4	-1.3
Spain	3.2	2.3	0.9	3.0	67.4	71.0	3.6
Sweden	9.9	0.3	9.6	4.5	100.8	123.4	22.6

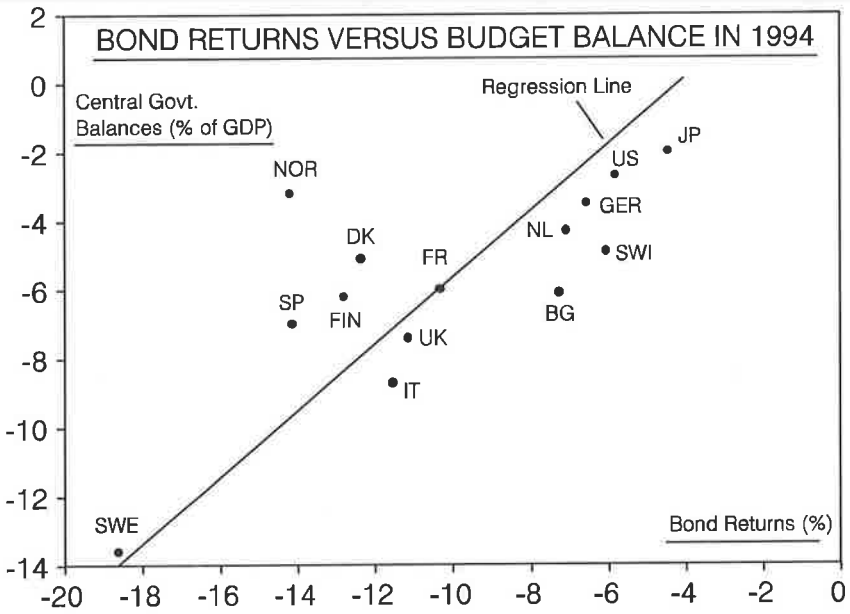
[a] Positive numbers imply that a fiscal tightening will still be needed to achieve debt sustainability at full employment. Negative numbers imply the opposite.
[b] OECD *Economic Outlook*, June 1994.

the improvement in the budget balance over the following five years predicted by the OECD is very large at 4.5% of GDP, and this is sufficient to reduce the UK's gross debt ratio from 52% in 1995 to 47% in 2000. This would leave the UK's debt ratio lower than that in any other OECD economy, with the exception of Australia. The rate of decline in the debt ratio from 1995 to 2000 is, on these forecasts, greater in the UK than in most other countries.

These figures suggest that the UK, unlike most other members of the European Union, should have little trouble meeting the budget criteria in the Maastricht Treaty by 1997. The Treaty states that the actual or planned general government deficit should not exceed 3% of GDP unless it has declined substantially and continuously, or is only temporarily above 3%; and the ratio of gross government debt to GDP should be less than 60%, unless it is approaching the 60% limit at a satisfactory pace. The UK will, on present forecasts, comfortably meet these budget criteria, and at present also meets the criteria for inflation and bond yields. (These are that the UK inflation rate should be within 1.5% of the average of the best three member states, and that the bond yield should be within 2% of the average bond yields in these three member states.) However, the UK looks unlikely to meet the currency criterion - i.e. that sterling should be within the 'normal' bands of the ERM for at least two years - unless the government changes its mind about re-entry to the ERM.

The relatively good budget outlook for the UK may soon begin to pay dividends in the form of lower long term interest rates relative to other countries. As Figure 5.6 shows, bond returns around the world appear to have been significantly affected in 1994 by the market's perceptions of budget performance. In fact, the relatively poor performance by the gilts market this year may be connected to the continuing high (though falling) level of the PSBR. However, provided that the government maintains its medium-term fiscal plans, the UK's budget performance should look increasingly favourable in an OECD context. This may result in a decline in UK real bond yields, compared with the global average - which would at least be some reward for the tough fiscal decisions taken last year. Any premature reduction in taxes might jeopardise this conclusion, and may result in higher real long-term interest rates than could otherwise be attained.

Figure 5.6



5.6 Budget Strategy for 1994-95

The PSBR peaked in 1993-94 and is now firmly on a downward path. Tax revenues will rise very rapidly in the next few years as economic growth and the fiscal tightening of the 1993 Budgets take effect. By 1995-96, when we expect the economy to be back close to trend, our best estimate is that the PSBR will be around £24 billion, or 3.4% of GDP. This is close enough to achieving both long-run debt sustainability and the Golden Rule to require no further tightening of fiscal stance, but certainly does not imply scope for tax cuts in the 1994 Budget.

6 Issues in Taxation

In this chapter of the Green Budget, we look in detail at the various parts of the UK tax system. We aim to identify both areas that may see changes in the November Budget and issues for longer-term reform.

We begin by examining the taxation of companies. Given that we do not expect any major increases or reductions in personal tax, it may be that the Chancellor will be keen to introduce some changes to the taxation of companies that can be portrayed as ways of stimulating enterprise and improving the working of the economy. We consider the debate over investment and dividend policy, the possible use of increased capital allowances and the extent to which the tax system could or should be used to stimulate R&D. We also discuss the fall in revenue from non-domestic rates.

Turning to the direct tax system for individuals, we describe the impact of the income tax changes announced in 1993 but yet to take effect, and some of the longer-run trends in the structure of income tax. We examine possible sources of additional revenue and discuss the current taxation of savings and its reform.

We then move on to the indirect tax system. We consider the arguments for further extension of the VAT base, and assess the extent to which the bringing down of fiscal frontiers within the EC has implications for domestic excise duty rates.

We next discuss the role of taxation in achieving environmental objectives. We begin with some principles, and then go through a number of possible options for the November Budget.

Finally in this chapter, we examine recent developments in National Insurance contribution revenue and possible changes in the structure of NICs.

6.1 Issues in the Taxation of Companies

Dissatisfaction with the taxation of companies is a perennial item on the agenda in the run-up to the Budget. Company taxation in Britain creates a significant tax bias against investment, and distorts the allocation of investment between different forms of capital spending; corporation tax favours debt finance over equity finance, and encourages firms to pay out dividends; these distortions become more significant at higher rates of inflation; and there are special problems facing companies that conduct a large amount of business abroad. Which of these problems attracts most attention varies from year to year, but one or more of these issues is invariably a source of concern.

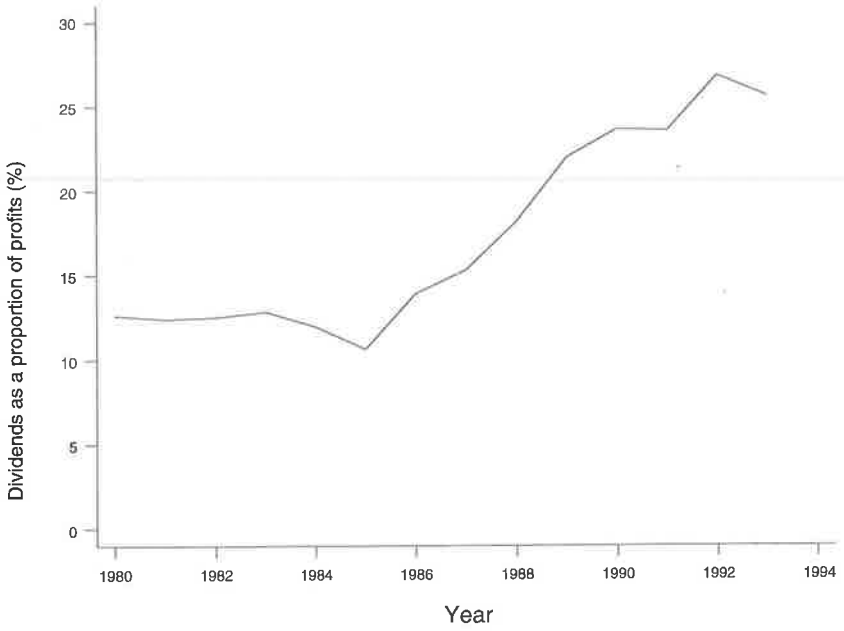
These complaints stem mainly from the failure to tax company profits in a way that is non-distortionary with respect to investment and financial decisions. Later in this section, we will ask whether the taxation of companies could be reformed in a way that would remove tax considerations from these key aspects of company behaviour. First, we will review some of the issues that have attracted most comment this year.

The Tax Treatment of Dividends

The fraction of company profits paid out as dividends to shareholders has risen sharply since the middle of the 1980s, and is exceptionally high by international standards. Figure 6.1 shows ordinary and preference dividends as a fraction of gross trading profits for UK industrial and commercial companies, over the period 1980-93. The striking feature is the rise since 1985. The payout ratio now stands at its highest level for over 20 years, although higher levels were observed in the mid-1960s. Table 6.1 compares

the dividend yield in the UK stock market with dividend yields for the other G7 countries. The share of the overall return to equity investment paid in the form of dividend income is clearly much higher in the UK than in the other major economies.

Figure 6.1
Dividend Payout Ratio
(UK industrial and commercial companies, 1980-93)



Note: The series shown is total payments of cash dividends on ordinary and preference shares by UK industrial and commercial companies, as a proportion of the total gross trading profits, net of stock appreciation, of these companies.
Source: *Economic Trends Annual Supplement 1994.*

Table 6.1. Dividend Yields in the G7 Countries

Country	1992	1993
US	2.7	2.9
Japan	0.8	n/a
Germany	1.7	1.9
France	2.9	3.2
Italy	1.6	2.0
UK	3.9	3.9
Canada	2.5	2.6

Source: Euro Equities.

Concern has been expressed, both inside and outside the Treasury, that this high level of dividend payouts may have an adverse effect on investment spending by companies. This concern would not arise in the context of a perfect textbook capital market, in which external sources of finance for investment (debt or new equity) are assumed to provide a perfect substitute for internally generated finance from retained profits. However, there is now considerable evidence to suggest that external finance does not serve as a perfect substitute for internal finance, and that the investment spending of a substantial fraction of companies may consequently be constrained by a shortage of internal funds.[1] Pressures on firms to pay out profits as dividends reduce the supply of internal finance available for investment, and may therefore result in lower investment spending than would otherwise have occurred.

The tax treatment of dividend income in the UK is not neutral with respect to the decision to pay dividends or retain profits.[2] Since the introduction of the imputation system in 1973, there has been a large incentive to pay out dividends, particularly in the case of tax-exempt shareholders such as pension funds. To illustrate the size of this tax bias, note that if a firm wholly owned by tax-exempt institutions raises £1 million from a new share issue and pays this amount out as a dividend, the value of this dividend payment to the shareholders may be as high as £1.25 million after taking into account the tax credits available. It may be no coincidence that the proportion of company shares owned by pension funds and insurance companies has increased sharply over the last 20 years, from about 20% in 1969 to about 50% in 1989.[3]

This generous treatment of dividend income arises as a result of the imputation system which relates corporate and personal taxes. When a firm pays a dividend, it also makes a payment of advance corporation tax (ACT). The sum of the cash dividend and the ACT payment is known as the grossed-up dividend, and the rate of ACT is currently 20% of this grossed-up value. Thus when a firm pays out £1 in dividends, the ACT payment is £0.25 and the grossed-up dividend is £1.25.

For shareholders receiving dividend income, the tax system treats this as a receipt of the *grossed-up* amount of dividends, on which income tax equal to the ACT payment has *already been paid.* Thus in our example the shareholder is deemed to have received income of £1.25, on which income tax of £0.25 has already been paid. For standard-rate shareholders, currently subject to a tax rate of 20% on dividend income, this tax credit fully discharges their income tax liability, and the system is administratively quite simple. For higher-rate shareholders, the income tax liability is 40% of the grossed-up dividend, so a further £0.25 would be due in income tax. For tax-exempt shareholders, the income tax liability is zero. The tax credit for the amount of £0.25 is fully refundable

[1] See S. Fazzari, G. Hubbard and B. Petersen, 'Financing constraints and corporate investment', *Brookings Papers on Economic Activity*, no. 1988:1, and S. Bond and C. Meghir, 'Financial constraints and company investment', *Fiscal Studies*, May 1994, for further discussion of the evidence relating to financial constraints on investment.

[2] Shareholders benefit from profits earned by companies either as dividend income, or as capital gains when profits are retained. Throughout this section, we are concerned with the tax treatment of dividends relative to retained profits, as it is this relative tax treatment that will influence the dividend payout decision.

[3] See *Stock Exchange Quarterly*, Summer 1992. Only the pensions business of insurance companies qualifies for this tax-exempt treatment.

- unlike most other credits in the income tax system - and so a rebate of £0.25 is paid out by the Inland Revenue. This fully refundable tax credit is the source of the tax preference towards dividends for exempt shareholders.

This may still not appear to be excessively generous. After all, this amount of ACT was paid by the firm. However, the final twist is that in most cases this payment of ACT can simply be set off against the firm's payment of corporation tax. Except for a small timing difference, therefore, this does not result in a higher total tax charge for the company. The repayment of income tax credits to tax-exempt shareholders then amounts to a subsidy for dividends paid to these shareholders, relative to the treatment of retained profits. (Firms that cannot fully offset their ACT payments against their corporation tax charge face a different set of issues, which we discuss further below.)

The rationale for an imputation system is generally to avoid the double taxation of dividends that occurs when dividends paid out of post-corporation-tax profits are taxed again under the personal income tax. The rationale for this particular system is much harder to fathom. Double taxation of dividends could be avoided by the much simpler expedient of exempting dividends from personal income tax. By being less generous to tax-exempt shareholders, we estimate that this approach would now save the government some £3-4 billion per year. It may not be entirely irrelevant that this approach would have been more expensive for the government back in 1973, when taxpayers owned a much larger fraction of company shares and exempt institutions owned a much smaller fraction than they do today.

A variety of different approaches to this question have been adopted in other countries. A number, including the US, simply have a classical treatment, with no relief against income tax on dividends given in respect of corporation tax paid. The Japanese system is close to this classical treatment, although the income tax rate applied to dividend income is slightly lower than the standard income tax rate. In Europe, some form of imputation system or split-rate corporation tax (with a lower rate charged on distributed than undistributed profits) is common. In Germany, for example, the tax treatment of dividends for tax-exempt institutions is more generous than that in the UK, although the fraction of company shares owned by such institutions is much lower.

It is clear from the figures in Table 6.1 that taxes cannot be the only determinant of the international variation in dividend payouts. Dividends are treated unfavourably in Japan (a low payout country), but also in the US (a high payout country); dividends are treated favourably in the UK (a high payout country), but also in Germany (a low payout country). Other differences between companies in these countries, in ownership structures, corporate governance arrangements and the market for corporate control, may well be more important than taxes in explaining this pattern.

Nevertheless, research indicates that tax considerations do exert some influence on company dividend decisions. Leading econometric research suggests that abolishing the imputation system in the UK would be associated with a reduction in dividends of between 20% and 40% in the long run.[4] Research in progress at IFS confirms a

[4] See J. Poterba and L. Summers, 'The economic effects of dividend taxation', in E. Altman and M. Subrahmanyan (eds), *Recent Advances in Corporate Finance*, Irwin, Homewood, Illinois, 1985.

significant relationship between taxes and dividends, but suggests a smaller effect. We estimate that abolishing imputation would be associated with a reduction in dividends of between 5% and 15% in the long run.[5]

The tax treatment of dividends is therefore an obvious target for a government concerned to place some downward pressure on company dividend payouts. Reforms to this tax treatment could also be justified as moving in the direction of fiscal neutrality with respect to the dividend payout decision.

There are various ways in which this might be approached. One would be to reduce the rate of advance corporation tax, the corresponding rate at which income tax credits are granted, and the rate of income tax on dividend income for standard-rate shareholders. A step in this direction was taken in the March 1993 Budget, when the rate of ACT was reduced from 25% to 20%. An alternative would be to restrict the extent to which income tax credits are refunded to exempt shareholders, whilst leaving the existing system for taxpayers intact. These two approaches would have identical effects on tax-exempt and standard-rate shareholders; the former would effectively increase dividend income taxation for higher-rate shareholders, unless the tax rate on dividend income for higher-rate taxpayers were correspondingly reduced.

Either approach would raise a substantial amount of revenue for the government, largely at the expense of tax-exempt shareholders.[6] If the rate of ACT were cut to zero, or if the income tax credit were made non-refundable, this would raise around £4 billion for the exchequer. If this revenue were not returned to companies, this tax change would have serious drawbacks. Cash dividend payments by firms would probably rise, to offset partly the effect of lower tax credits on the value of dividend income to shareholders. To the extent that this occurred, there would be an adverse effect on company cash flows, and this would tend to reduce company investment. Moreover, the stock market response to such an increase in the total amount of tax taken from companies and shareholders would be potentially very serious.

Both these problems would be mitigated, however, if this revenue were used to reduce taxes on companies, for example by cutting the rate of corporation tax. If all the revenue gained from abolishing advance corporation tax were used in this way, the rate of corporation tax could be cut to about 25%, which might appear very tempting to the Chancellor. In this case, the total amount of tax taken from companies and shareholders would not increase, and it is not clear that the stock market would be adversely affected. We expect that company cash flows would then be improved, even after allowing for the likely increase in cash dividends, so that this policy combination would tend to increase company investment. Although this increase might not be very dramatic, it could be achieved at no overall cost in terms of government revenue, and is consistent

[5] Note that this refers to the grossed-up value of dividends. Cash dividend payments may actually increase. For example, if grossed-up dividends were to fall by 10% in response to the abolition of advance corporation tax, this would require cash dividends to increase by 12.5%.

[6] Where these shareholders are institutions, it should be remembered that these institutions are investing on behalf of individuals, and that the cost of this increase in tax will ultimately be borne by those individuals, such as individuals saving for retirement. One view of the imputation system is that it provides some relief for these individuals from corporation tax as well as from income tax - although this relief is only partial and only applies for profits that are paid out as dividends rather than retained by firms. Whether we would ideally want these individuals to be subject to corporation tax depends on the form that corporation tax takes, and in particular whether it taxes all company income or only economic rents. We discuss this distinction further later in this section.

with the goal of fiscal neutrality in company payout decisions. Moreover, given the distortions associated with the present corporation tax, cutting the rate at which this is charged has some appeal in its own right, if more serious reforms to the structure of this tax are assumed to be ruled out by pragmatic considerations.

Is reform along these lines particularly likely in this year's Budget? There was a time earlier this year when it was looking distinctly likely. The Treasury was known to be conducting an internal review of the effects of taxation on saving and investment, and the then Financial Secretary, Stephen Dorrell, had expressed public concern about the high level of dividend payouts. With Mr Dorrell's departure from the Treasury, the probability of major changes to dividend taxation this year has fallen sharply. However, this is an area that could well attract the attention of a future government committed to supply-side reforms to stimulate investment spending.

Surplus ACT

Over the past few years, the problem of surplus advance corporation tax (ACT) has attracted much attention. In the last Budget, the Chancellor confirmed that he was introducing two measures to help alleviate this problem: the foreign income dividend (FID) scheme and the international headquarter companies (IHC) scheme. Before we look at these schemes in particular, we will briefly discuss the nature of surplus ACT, and why it causes so many problems.

Surplus ACT arises when a company's dividend payments are high relative to its UK taxable profit.[7] As described above, companies pay ACT at a rate of 20% on the grossed-up value of their cash dividend, where the grossed-up dividend is the sum of the cash dividend and the ACT payment. This payment of ACT by companies is offset against their total corporation tax charge, which will be 33% of UK taxable profits. Most companies then pay the difference between their total tax charge and the ACT they have already paid, known as mainstream corporation tax. Difficulties arise when a company's dividend payments are greater than its taxable profits, since a company may only offset against mainstream corporation tax that amount of ACT which *would have been paid* if all its UK taxable profits had been paid out in dividends. The amount that cannot be offset is known as surplus ACT.

Companies are allowed to carry surplus ACT backwards for up to six years, claiming a repayment based on tax paid or payable in earlier years; or to carry it forward to set against future tax liabilities.

As only the nominal value of the surplus ACT can be carried forward, the value of the future set-off to companies is reduced both by discounting and by inflation. Indeed, for companies that have no prospect of ever being able to take advantage of the set-off, this provision becomes worthless. There are therefore two distinct types of surplus ACT positions in which companies may find themselves - a *temporary* position which arises from a timing mismatch between dividends and profits, or a *permanent* position

[7] The actual workings of the tax system are far more complex than described here. For details, see last year's Green Budget.

which reflects a persistent difference between dividends and UK taxable profits. A permanent surplus ACT position arises when dividends are paid out of foreign income on which little UK tax is paid.

Companies find themselves with a temporary surplus ACT problem when they pay dividends out of reserves, for example during a recession, when companies may be reluctant to cut dividends in line with their fall in profits. In addition, a temporary problem can arise when accounting and taxable profits get seriously out of line. This can happen if depreciation allowances used for tax purposes are very different from those used in the accounts, or if provisions for gains made in the accounts are not yet reflected in taxable profits.

A more serious problem arises for companies that earn a large proportion of profits overseas. Where profits have borne corporate tax overseas, this can generally be offset against corporate tax due in the UK, subject to the relevant double tax treaties. However, these treaties do not extend to ACT. This is because dividends on which ACT has been paid bear an income tax credit, which tax-exempt shareholders can cash in and taxpaying shareholders can offset against their income tax liability. If the current restriction on the extent to which ACT can be set off against the UK corporation tax charge were removed, the UK government would be subsidising dividends paid out of foreign profits and repaying tax that was paid to other governments.

Surplus ACT of a permanent nature creates several problems, including introducing a bias against overseas investment for UK companies, encouraging companies to shift cost centres overseas, encouraging tax-driven take-overs and deterring the location of international holding companies in the UK.

In the November 1993 Budget, the Chancellor confirmed the introduction of the FID and IHC schemes, which had first been announced in the March Budget of that year. The FID scheme allows companies to pay dividends that are effectively not liable to ACT and do not bear an income tax credit, although for taxpaying shareholders the income is treated as having already borne income tax at the lower 20% rate. ACT is initially payable, but when it is established that the dividend was paid out of foreign source profits it becomes fully refundable. The IHC scheme allows the payment of FIDs, without any prepayment of ACT, for companies owned by non-UK residents.[8]

It is still too early to tell how useful the FID option will prove to be, since companies have only been allowed to declare FIDs since July 1994. Several companies with a large proportion of overseas earnings have announced that they will pay FIDs. However, restrictions on streaming (i.e. paying tax-exempt shareholders ordinary dividends and taxpaying shareholders FIDs) make the FID option far less appealing than it otherwise would be. If the same cash dividend is paid out as a FID, tax-exempt shareholders miss out on the refund of the tax credit which normally accompanies cash dividends. The trend so far has been for firms to pay out as a FID the grossed-up value of the cash dividend they might otherwise have paid. This leaves the post-tax value of the dividend income the same for tax-exempt shareholders. The value of this dividend income to taxpaying shareholders is then higher, as they receive the higher FID plus,

[8] A more detailed description of these schemes can be found in the previous Green Budget (*Options for 1994: The Green Budget*).

in effect, the same income tax credit. For firms with a permanent surplus ACT position, this option is no more expensive than paying the cash dividend plus ACT, but the whole of the tax saving is being passed on to shareholders.

The FID scheme will never be a complete solution to the problem of surplus ACT, since it is a unilateral reaction to an international tax problem. As companies become increasingly multinational in the future, it will become even more important to integrate national tax systems to reflect this.

Capital Allowances

Calls from business leaders to stimulate company investment by making capital allowances more generous are regularly heard. Capital allowances are a deduction against corporation tax, given to reflect the approximate cost of depreciation associated with owning and using most capital assets. The main capital allowance rates are currently 25% per year on a declining-balance basis for plant and machinery, and 4% per year on a straight-line basis for industrial buildings. Higher capital allowances would tend to increase investment, both by lowering corporation tax bills and by reducing the 'cost of capital', or the before-tax rate of return required by firms on investment projects in order to earn an acceptable after-tax rate of return for investors. More generous capital allowances would directly reduce government revenue from corporation tax, and most available evidence suggests that the increase in investment that might result from affordable changes to capital allowances would be quite modest.[9]

The government's attitude towards higher capital allowances has been inconsistent in recent years. Norman Lamont discussed the possibility in his March 1992 Budget speech, but dismissed it as unattractive, saying: 'I have concluded that, whatever its superficial attractions, an increase in capital allowances would not be a sensible use of the resources available' (*Hansard*, March 1992). The same Chancellor then raised capital allowances in his Autumn Statement later the same year, albeit for a one-year period only. The present Chancellor resisted the temptation to retain these higher capital allowances in last year's Budget.

Having apparently decided against the idea of higher capital allowances only last year, it would be strange for Mr Clarke to reverse this policy now. But in view of the government's recent record, another change of heart would not come as a complete surprise.

Mr Clarke did reveal a liking for eye-catching measures in his Budget last year, and there are numerous ways in which capital allowances could be made more generous at very little cost to the exchequer. An increase in capital allowances could be restricted to particular categories of investment or to particular types of firm, such as smaller companies. We would not be surprised at some tinkering in this area, but significant increases in the main allowances for plant and machinery and industrial buildings are unlikely.

[9] See S. Bond, K. Denny and M. Devereux, 'The impact of corporation tax on investment in the UK', *Fiscal Studies*, May 1993, for further discussion of the role of capital allowances, and some estimates of their possible effect on investment spending.

Tax Incentives for Research and Development

A long-standing concern surrounding the performance of the UK economy is its perceived failure to maintain the same pace of technological innovation as its competitors. The explicit strategy of the UK government is to move away from the direct funding of research and development (R&D). The recent White Paper on science and technology[10] emphasised diffusion and technology transfer as the key policy initiative. Reacting to this, the House of Commons Science and Technology Committee has called for a review of the case for fiscal incentives to promote business expenditure on R&D.[11] It refers to recent studies in the US which indicate that the incremental tax credit,[12] first introduced in the US in 1981, has encouraged new R&D expenditure at least equal to, if not greater than, the revenue cost of the credit.

However, empirical studies of the impact of the US tax credit overwhelmingly emphasise its distortionary nature. For many US firms, up to one-third in 1989, the credit provided a *disincentive* to invest in R&D. This surprising feature of the credit was due to the way in which it was designed and the fact that some firms were in a tax-exhausted position, which meant that they could not claim the credit. This is a general problem with tax credits and is particularly relevant for small and medium-sized firms. The experience of the US illustrates the difficulties of designing a tax credit that effectively targets marginal R&D expenditure.

It is unclear whether a tax credit would elicit the same response in UK firms as that seen in the US. The US is a larger, more closed economy and US firms conduct by far the greater part of their R&D domestically. One of the explicit aims of the US tax credit was to encourage US multinationals to keep their R&D at home. By contrast, the UK economy is smaller and more open, and UK multinationals conduct a larger proportion of their R&D overseas. A tax credit in the UK might encourage firms to relocate their R&D to the UK, which might have beneficial effects for the UK economy, but it is not clear that it would lead to more R&D being conducted by UK firms. In addition, it is likely that much of the initial increase would be due to the relabelling of other costs as R&D, in order to gain a tax advantage, without actually conducting any additional R&D. As Europe becomes more integrated, it is not clear that unilateral action by the UK government is the best course of action. A Europe-wide response might be an attractive alternative.

A Long-Term Solution?

Given the extent of dissatisfaction with the present tax treatment of companies and shareholders, and the regularity of calls for some or other aspect of this system to be modified, one might well ask whether there is not a more coherent way of taxing corporate-source income that would avoid the distortions inherent in the current

[10] *Realising Our Potential: A Strategy for Science, Engineering and Technology*, Cm 2250, HMSO, London, 1993.

[11] See *First Report from Science and Technology Committee*, Session 1993-94, HC74-I, HMSO, London, 1994.

[12] The aim of an incremental tax credit is to give a subsidy to R&D spending *above* the level that the firm would have undertaken in the absence of the credit but not to spending it would have done anyway. This is very difficult to achieve in practice.

treatment, and provide more prospect of stability in company taxation in the future. We believe that this is achievable. In this subsection, we outline briefly how this could be accomplished.

The key to taxing companies in a non-distortionary way is to tax only the component of company income that constitutes economic rent: that is, earnings over and above the minimum return required to attract investment in the company. The present corporation tax taxes the required return as well as the economic rent earned. Investment projects that only just earn this required return therefore become unattractive after paying corporation tax, which is why some investment is discouraged that would otherwise be considered viable. However, economic rent can be taxed without jeopardising these 'marginal' investment projects. Hence it is quite possible to tax companies without discouraging investment spending.

Not only is this possible in theory, it would be quite feasible in practice. The IFS Capital Taxes Group has put forward detailed proposals that would allow companies to be taxed with little or no effect on the incentive to invest.[13] In fact, surprisingly little change to the existing corporation tax rules would be required. The main change would be to introduce an easily-calculable allowance for equity finance, analogous to interest deductibility for debt finance, that identifies and exempts the required return on past equity investments. This change could in principle be introduced on a revenue-neutral basis, although this would require a higher rate of corporation tax than the present rate.

Once the principle of taxing economic rent is accepted, it becomes quite simple to design a corporate tax that distorts neither investment nor financial decisions, and that is not at all sensitive to the rate of inflation. Moreover, compared with the present treatment, which discourages investment, the introduction of such a neutral tax might provide a significant boost to investment spending, at least in the short run.[14]

A neutral corporate tax could operate alongside almost any personal tax treatment of dividend income, but the most coherent way of avoiding double taxation of dividends in this context would simply be to exempt both dividend income and capital gains on company shares from personal taxation. Personal taxation of shareholders' dividend income and capital gains would only serve to reintroduce distortions that the corporate tax was designed to avoid. This approach would abolish both the imputation system *and* dividend income taxation.[15] The simplest way of achieving this in practice would be to extend the current treatment of Personal Equity Plans (PEPs) to all holdings of company shares.[16] Abolishing advance corporation tax would also remove the problems currently associated with surplus ACT.

---

[13] IFS Capital Taxes Group, *Equity for Companies: A Corporation Tax for the 1990s*, IFS Commentary no. 26, Institute for Fiscal Studies, London, 1991; and IFS Capital Taxes Group, *Setting Savings Free: Proposals for the Taxation of Savings and Profits*, Institute for Fiscal Studies, London, 1994.

[14] See S. Bond, K. Denny and M. Devereux, 'The impact of corporation tax on investment in the UK', *Fiscal Studies,* May 1993, for further discussion of the likely impact on investment.

[15] Individuals investing in companies would therefore be subject to corporation tax, but this would tax only the economic rents earned by those companies.

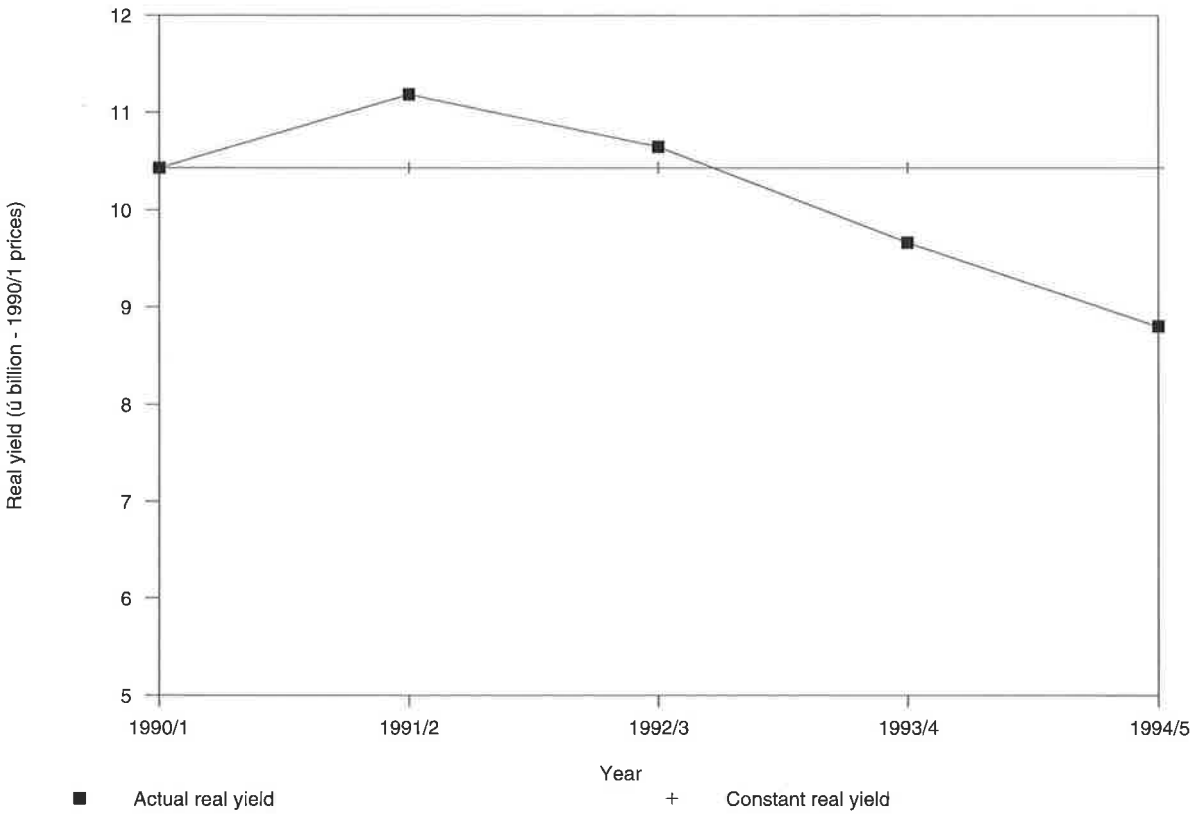
[16] See IFS Capital Taxes Group, *Setting Savings Free: Proposals for the Taxation of Savings and Profits*, Institute for Fiscal Studies, London, 1994, for further discussion of how the PEP treatment could be extended.

Reforms along these lines would bring a coherency to company taxation that has been sadly lacking in the past. Such reform does not appear on the agenda for the immediate future. Given the key role played by companies in the process of wealth creation, this complacency is costly. Any future government serious about supply-side reform would do well to consider the taxation of companies as an important priority.

The Fall in the Yield of Non-Domestic Rates

Although non-domestic rates raised £13.2 billion in 1993-94, compared with £14.6 billion from corporation tax, they tend to receive relatively little attention. This year, though, concern has been expressed about the falling-off of revenues, as illustrated in Figure 6.2.

Figure 6.2
Real Yield of Non-Domestic Rates
(1990-91 prices)



The fall in the real and nominal yield of non-domestic rates in England after a substantial initial rise has been viewed both as a trend resulting from the 1990 structural reforms to the system, such as poor incentives for collection and a diminution of the tax base,

and as a temporary phenomenon associated with the time profile of the tax yield rather than its equilibrium level. We shall consider the suggested trend explanations for the fall in tax yields first.

One suggestion is that there has been a systematic fall in collection rates because local authorities, which have to collect the tax, do not benefit directly from a higher yield. This incentive argument is largely false. Local authorities have to contribute a given amount to the national rates pool. This amount depends on their tax base and their provision for bad debts but not on actual collections. Hence, local authorities with poor collection records suffer direct financial losses. In 1993-94, 98% of the expected yield of the tax was collected. This represents 95% of the total tax liability.

A second suggestion is that there has been a fall in the value of the tax base. Evidence suggests that this has occurred but not to a sufficient extent to provide a full explanation of the apparent fall in yields. Why has the tax base fallen?

- The recession - Low levels of economic activity lead both to low buoyancy in the base and to mandatory 50% exemptions for vacant commercial and retail properties and 100% exemptions for vacant industrial property. These exemptions have only been mandatory since 1990, suggesting that the impact of this recession on yields would be greater than that of previous comparable recessions. Indeed, approximately £1 billion of empty property relief has been granted in each of the last three financial years.
- A higher-than-expected success rate of appeals - Over 650,000 appeals were made against the 1990 valuation list within the first six months. This represents approximately 40% of all hereditaments. Moreover, an additional 450,000 appeals have been made against subsequent revaluations. Approximately 250,000 of this total remain outstanding. Since successful appeals permanently lower the tax base, it now seems likely that the cumulative effect of this appeals process will be a substantial reduction in the aggregate tax base. The critical issue here seems to be the accuracy with which the extent of this diminution in the size of the tax base was forecast and hence taken into account at the time of the 1990 revaluation.
- An allegedly excessive number of successful appeals due to lack of local authority vigilance - Local authorities do not have any incentives to maintain their tax bases since they are not directly affected by changes in their tax base. Moreover, the 1990 reforms have restricted local authorities' legal right to contest valuation appeals on properties they do not own. It is very difficult to obtain evidence to test this hypothesis.

At least part of the falling yield is likely to be a temporary blip resulting from a temporal redistribution of tax yields for two reasons. Firstly, successful appeals against the 1990 valuation list have resulted in a significant revenue loss due to one-off refunds of the previous tax overpayment, with interest. This is because businesses are liable to pay the full amount of their original rates bill whilst their appeal is pending. Net repayments with interest have been in excess of £$^1/_2$ billion in each of the last three financial years. Since these refunds are likely to dwarf the impact of appeals on the tax base in the short run, we can expect a partial recovery in yields as the appeals backlog is cleared. Secondly, since the depth of the recession and the success rate of appeals were generally underestimated, anticipated collections (the basis for distributing the yield to local authorities) were over-optimistic in the early years of the tax. Poorer-than-expected collection rates do not affect the distributable amount in the year in question because

the Treasury makes up any deficit in order to reduce the budgetary uncertainty faced by local authorities. This amount is reclaimed the following year. As a result, the distributable amount falls in subsequent years even if the tax yield is constant. In 1994-95, almost £1 billion of revenue was refunded to the Treasury in return for 'bailing out' the non-domestic rate pool in previous years. The effect on the distributable amount is temporary and should not be used to make trend predictions.

Possible Policy Responses

The appropriate policy responses depend on whether the fall of the non-domestic rate yield is caused by temporary factors or whether it is a result of the structural features of the post-1990 system.

To the extent that the apparent fall in yields is due to tax refunds and the rectification of earlier forecast errors, yields should recover over time. But to the extent that the tax base has been diminished by an unexpectedly high rate of successful appeals, the 1995 revaluation provides an opportunity to set the 1995-96 uniform business rate at a level higher than that required by strict revenue neutrality. This could compensate for the diminution in the tax base likely to result from appeals against the 1995 valuation list. Tax yields would then be expected to rise sharply in 1995-96 and fall thereafter.

However, if the appeals process has been biased towards downward revisions to the tax base because of lack of involvement or incentives for local authorities to contest appeals, the anomaly of local responsibility for collection without direct local gain from collection effort could be tackled in two ways. Firstly, there could be a return to locally varying rate poundages as suggested by some local authority representatives. As argued above, this would not be a logical response to the problem, given the necessity of some degree of resource equalisation. It does not seem appropriate for the success of a policy reform to depend on misperceptions by local authorities of the incentives they face, however widespread these misperceptions may have been in the past. Secondly, the tax could be nationalised, with the Inland Revenue being responsible for the maintenance of the tax base and for collection. It is unlikely that such a step would have a significant impact on the success rate of appeals, given that the Inland Revenue is already responsible for the appeals process. However, it is difficult to conceive of any convincing rationale for continuing to have responsibility for the collection of a national tax (tax rates set by central government, tax base set by the Inland Revenue) divided between several hundred local authorities.

A large proportion of the recent fall in non-domestic rate yields has been caused by refunds of earlier tax overpayments and the correction of over-optimistic yield forecasts. To the extent that previous revenue assumptions were therefore artificially high, this pattern of revenues simply represents a temporal reallocation of tax yields and is a temporary phenomenon which will be reversed in the future.

However, a significant reduction in the size of the aggregate tax base has occurred as a result of successful appeals against the 1990 valuation list. This can be corrected in the 1995 valuation list. To the extent that the success rate of appeals against the 1990 valuation list has been higher than originally anticipated, the first rate poundage to apply to the 1995 valuations could be set at a level which will offset any revenue losses likely to result from a repetition of this phenomenon. This would be consistent with current legislation.

The more contentious issues of local authority incentives are unlikely to be dealt with in the short term. A return to fully equalised locally varying non-domestic rates would not provide a logical response to the issue; a transfer of responsibility for collection to the Inland Revenue might. Given the administrative rationality of fully nationalising the tax, there seem to be few risks in pursuing such a strategy, even whilst the longer-term trend in non-domestic rate yields remains uncertain.

6.2 Personal Income Tax

This section begins with a description of the changes to income tax that have already been announced for April 1995 and their effects on household incomes. We then describe some of the changes to the broad structure of income taxation that have occurred over the last 15 years, and options for changes in this year's Budget. Finally we discuss the tax treatment of savings.

Effects of Income Tax Changes to be Implemented in April 1995

Two main changes to the income tax system were announced in the November 1993 Budget and have yet to take effect: a further cut in the value of the married couple's allowance and a further cut in the value of mortgage interest relief. At present, relief is available on both of these allowances at the lower rate of 20%, but from April 1995 the rate of relief will be cut to 15%.

Virtually all taxpayers who currently benefit from the married couple's allowance (MCA) will lose £1.65 per week. This is simply the weekly equivalent of 5% of the £1,720 per year value of the allowance. A similar loss will apply to lone parents currently benefiting from the additional personal allowance.

The effect of the reduction in mortgage interest relief depends on the size of an individual's mortgage. The maximum loss is simply 5% of the interest on a mortgage of £30,000. With an interest rate of 8%, this amounts to around £2.30 per week. In total, therefore, a taxpaying married couple with a mortgage of £30,000 or more will lose around £3.95 per week next April from the two pre-announced changes.

A common misconception about mortgage interest relief is that it is a subsidy whose abolition would disproportionately hit high earners. As Table 6.2 shows, while it is true that the better-off benefit more on average in cash terms, mortgage interest tax relief (MITR) falls rapidly as a percentage of income.

One of the reasons for the pattern shown in Table 6.2 is that since 1990-91, higher-rate taxpayers have only been able to receive relief at the same rate as other taxpayers, rather than at their own marginal rate. Secondly, the ceiling of £30,000 means that for those with mortgages above this level, MITR is effectively a flat-rate subsidy. Finally, the spread of owner-occupation down the income distribution during the 1980s - mainly through a combination of sale of council houses and higher unemployment - has meant that many lower-income households also benefit from the relief.

Table 6.2. Mortgage Interest Tax Relief (MITR) by Range of Total Income, 1993-94

Range of total income (lower limit)[a] (£ p.a.)	Number of single people/couples benefiting (thous)	Cost of MITR (£ million)	Average MITR (£ p.a.)
0	930	320	340
5,000	1,030	350	350
10,000	2,380	940	400
15,000	2,160	950	440
20,000	1,360	650	480
25,000	780	400	510
30,000	710	370	520
40,000	550	300	550
Total	9,900	4,300	430

[a] Total income of husband for married couples.
Source: Provisional estimates from Inland Revenue.

Trends in the Income Tax Structure

The cuts in the standard and higher rates of income tax that have taken place since 1979 are well known. What has been less obvious is the more gradual structural shift that has taken place as successive Chancellors have changed the value of tax allowances and reliefs and as the distribution of pre-tax incomes has itself changed markedly. Since the start of the 1980s, three main changes can be observed:

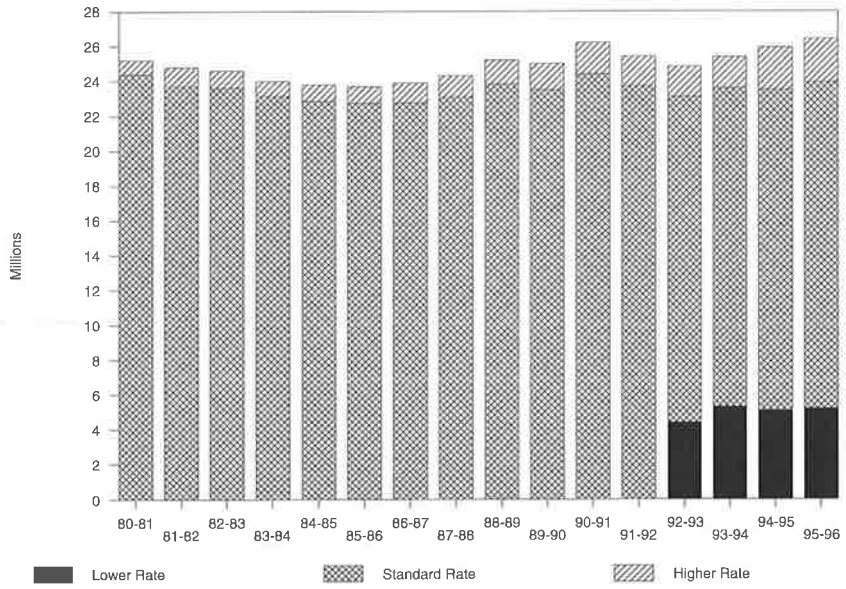
- a fall in the number of individuals paying tax at the standard rate;
- a rise in the number of higher-rate taxpayers;
- a fall in the number of standard-rate taxpayers with earnings above the upper earnings limit for National Insurance contributions.

Figure 6.3 shows the number of individuals paying income tax at the higher, standard and (since 1992-93) lower rate, for the period 1980-81 to 1993-94 and the projected numbers to 1995-96.[17]

Figure 6.3 reflects the fact that at the start of the 1980s, more than 95% of all taxpayers paid income tax at the standard rate, whereas now that proportion has fallen to below 75%. The most obvious reason for this has been the introduction and subsequent widening of the lower-rate band which now covers around 5 million people, or roughly one in five of all taxpayers. Whilst the existence of the lower-rate band increases the progressivity of the tax system, it is not the most effective way of doing so. This is because the full benefit from the lower-rate band is only received by those with £3,000 or more of taxable income in excess of the tax allowance. A more effective approach would have been to increase the tax allowance itself, since this would have taken the lowest earners out of tax altogether.

[17] A narrow band of income was charged at a 'reduced rate' of 25% until the abolition of this band in the 1980 Budget.

Figure 6.3
Number of Individuals Paying Tax at Higher, Standard and Lower Rates



Source: Inland Revenue.

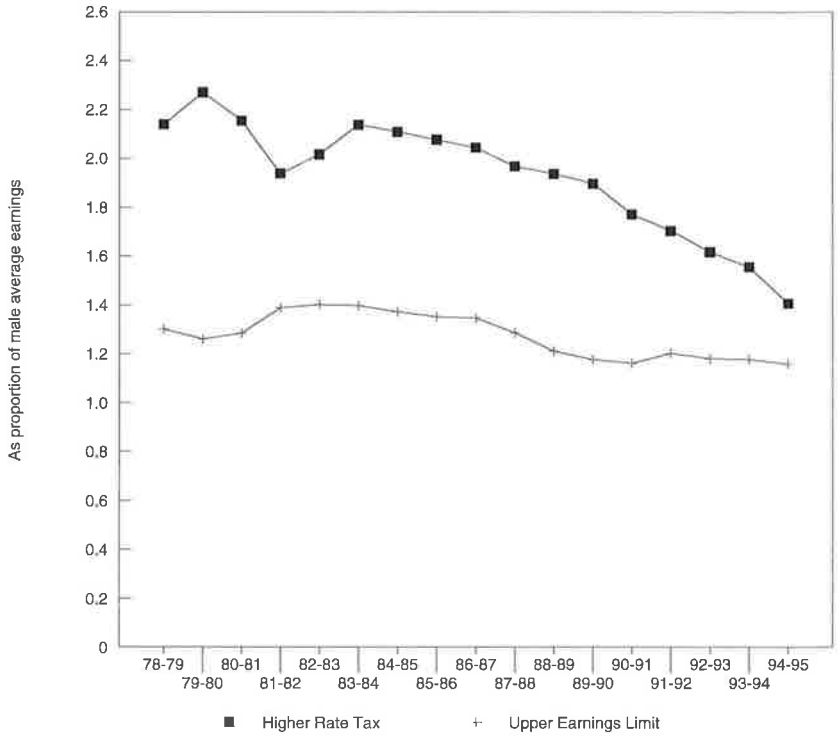
The other, less conspicuous, reason for the fall in the number of standard-rate taxpayers is that the number of higher-rate taxpayers has also risen, from around three-quarters of a million at the start of the 1980s to a projected 2.5 million in 1994-95. Part of the reason for the growth in the number of higher-rate taxpayers has been a growth in the numbers of relatively high pre-tax incomes, but the main reason has been a cut in the effective starting-point for higher-rate tax, as Figure 6.4 indicates.

Figure 6.4 shows the starting-point for higher-rate income tax of a married man with a mortgage, expressed as a proportion of male average earnings.[18] For simplicity, the outstanding mortgage is taken to be 1.5 times male average earnings (i.e. just under £30,000 in 1994-95) with an interest rate throughout of 10%. After fluctuating in the early 1980s, the real value of the threshold has fallen consistently since 1983. If higher-rate tax still started at around 2.3 times male average earnings as it did in 1979-80, it would only affect those earning more than £43,000 per year rather than those earning more than £27,100 per year. A combination of factors has produced this trend:

- in the 1990 Budget, the value of mortgage interest relief was restricted to the standard rate; until this point, the interest on the first £30,000 of a mortgage could be used to postpone the starting-point of higher-rate tax;
- since the introduction of independent taxation in 1990-91, the married couple's tax allowance has been frozen at £1,720;

[18] Male earnings are used as the bench-mark here since more than 85% of higher-rate taxpayers are men.

Figure 6.4
Starting-Point for Higher-Rate Tax and Upper Earnings Limit
(married man with mortgage)



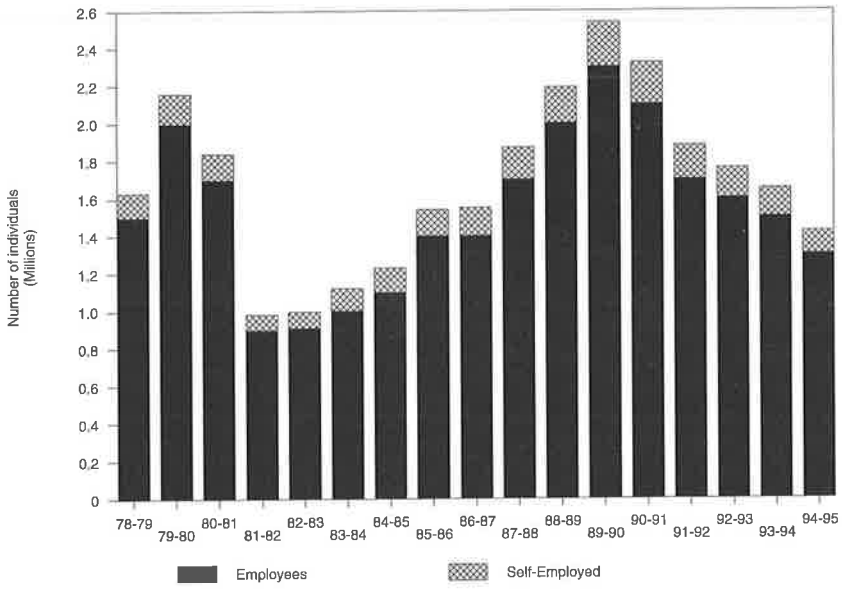
- in the March 1993 Budget and with effect from April 1994, the married couple's allowance was restricted to the standard rate; this effectively lowered the starting-point for higher-rate tax by £1,720;
- the basic rate limit of £23,700 has been frozen several times in recent years, as has the basic personal allowance.

One negative consequence of the increasing numbers of higher-rate taxpayers is an increase in the cost and complexity of collecting tax. Whilst most standard-rate taxpayers do not fill in an annual tax return, almost all higher-rate taxpayers do so. One reason for this is that investment income, such as that on building society and bank deposits or share dividends, is taxed at source at the standard rate of income tax or the advance corporation tax (ACT) rate for dividends. Higher-rate taxpayers are liable to pay additional tax to reflect the excess of the higher rate over the standard rate, even where the sums involved are relatively modest.

A similar additional administrative burden is also implied by the introduction of a lower-rate band covering 5 million people. Each of these individuals is *over*taxed on any investment income and can claim a refund, though many fail to do so. Such considerations indicate some of the drawbacks of moving away from a tax structure where the vast majority of taxpayers pay at a single marginal rate.

There is, however, one positive aspect to the decline in the starting-point for higher-rate income tax and this concerns the relationship between the income tax and National Insurance systems. Alongside the effective value of the higher-rate threshold, Figure 6.4 also shows the value of the upper earnings limit (UEL) for National Insurance contributions (NICs). This is the point above which no further NICs are payable. The gap between the two lines has narrowed markedly over the last 15 years. As Figure 6.5 shows, the number of individuals with earnings between the UEL and the higher-rate threshold has now started to fall back sharply, reinforced by the effects of the recent recession.

Figure 6.5
Number of Standard-Rate Taxpayers Earning More than the Upper Earnings Limit



The significance of the falling numbers of standard-rate taxpayers with earnings above the UEL concerns the scope for merging income tax and employee NICs into a single system. One of the principal objections to an otherwise desirable reform has been that integration by (for example) adding 10p to all rates of income tax would produce large losses for all those earning above the current UEL. This could be dealt with partially by not imposing the extra 10p on the higher rate of tax, but this still leaves the slice of earnings between the UEL and the start of higher-rate tax facing a large additional tax bill. However, as this gap shrinks, so this objection diminishes. Continued freezing of tax allowances and thresholds would hasten this process, whilst any move to restrict the main personal allowance to the standard rate would now effectively eliminate the gap.

It is difficult to imagine that the changes of the late 1980s and early 1990s have been part of a long-term vision of rationalising the direct tax structure. It may well be, however, that such reform has been greatly facilitated by the changes that have taken place.

Options for the Budget

Given the overall state of the public finances, it seems unlikely that the Chancellor will want to raise substantial additional sums from taxation, and particularly from the income tax system, beyond the measures that have already been announced. Having said this, any Chancellor is tempted by relatively inconspicuous ways of raising revenue which can be used to cut borrowing, to cut more conspicuous taxes or to increase popular areas of spending. The experience of the last 15 years, and in particular the last two or three, is that public awareness of changes to tax *rates* is quite high, but that understanding and awareness of changes to tax allowances is rather low. Recognising this, there are two principal candidates for raising a little extra revenue.

Tax Increase Option 1: Freezing Allowances and Thresholds

The statutory procedure for indexation of income tax allowances and thresholds is that they should rise at least by the rate of inflation in the year to the preceding September. Assuming a rate of 2.4% (i.e. unchanged on August's rate), the basic personal allowance would rise by £90 to £3,535, the married couple's allowance by £50 to £1,770 and the starting-point for higher-rate tax by £600 to £24,300. However, at such low inflation levels, the cash effects of indexation are very small. A rise of £90 per year in the personal allowance saves a standard-rate taxpayer less than 45p per week, and £50 per year on the further restricted married couple's allowance saves barely 15p per week. The complete absence of such indexation would barely be noticed and would save the Chancellor around £750 million. Freezing just the MCA and the higher-rate threshold would save around £250 million.

Tax Increase Option 2: Restricting the Value of Allowances and Reliefs

In the past two Budgets, the value of certain tax allowances has been cut not only by non-indexation but also by changes in the rate at which relief is allowed. As discussed above, the married couple's allowance and mortgage interest relief will now both be allowable only at a 15% rate. If the Chancellor wished to go further down this road, he could either make further cuts in the rates for these two allowances or apply the approach to other allowances and reliefs.

A further cut of 5 percentage points in the rate for either the MCA or mortgage interest relief (presumably with effect from 1996-97) would raise around £1 billion per year. A second option would be to restrict the value of the main personal allowance which goes to all taxpayers. A restriction to 25% would raise around £1$^{1}/_{2}$ billion. A more dramatic restriction to 20% would raise almost £6 billion but would produce losses for all standard-rate taxpayers as well as significant losses for higher-rate taxpayers.

A final main option would be to restrict the rate at which pension contributions are allowable against income tax. At present, pension contributions up to certain ceilings are allowable in full at an individual's marginal rate. Restriction of this relief to (say) 25% would seem to be in keeping with the general policy of widening the tax base, but there would be a number of possible objections.

The first problem is that restricting the tax rate at which relief is given without restricting the rate at which tax is charged on pensions in payment could make pension saving very unattractive for those expecting still to pay higher-rate tax in retirement. To see this at its starkest, imagine a top-rate taxpayer making a contribution of £75, receiving tax relief at 25%, implying a gross fund of £100, earning a return of 10% in a year, taking the fund to £110, then the following year receiving the £110 as a pension taxed at 40%, leaving a net pension of £66, significantly less than the original net contribution. Attempting to restrict the rate at which tax was charged on pensions would be administratively extremely cumbersome, and would reduce the potential revenue gain to the government.

The second problem with restricting tax relief on contributions is simply identifying them. This is easy in the case of employee contributions, but hard in the case of employer contributions, which are at present simply ignored for income tax purposes. Were contributions relief to be restricted, an income tax charge of the difference between the individual's marginal rate and the rate to which relief was restricted would be necessary. But employers with occupational pension schemes typically make a single contribution to their pension fund which is not allocated between individuals. Imposing some form of allocation would be costly, and inevitably unfair to some.

Options for Income Tax Cuts

It is quite conceivable that the Chancellor might opt for some inconspicuous revenue-raising measures such as freezing allowances in combination with more visible cuts to the income tax burden of certain groups either this year or in subsequent Budgets.

The favoured method of cutting income tax in recent years has been to increase the scope of the 20% tax band. At present, this applies to the first £3,000 per year of taxable income, having been widened by £500 in April 1993 and again in April 1994 from its original width of £2,000. A further widening of £500 would cost the Chancellor around £400 million.

This would, however, be a relatively modest change. A widening of the lower-rate band means that there is a band of income over which tax is now charged at 20% rather than 25%. The gain to an individual earning above that level is 5% of the width of the band, so an increase of £500 in the lower-rate band gives just under 50p per week to a standard- or higher-rate taxpayer. Given that the cuts to the MCA and to mortgage interest relief could cost up to £4 per week, many taxpayers would still end up with much higher tax bills in April 1995.

A more dramatic move would be to reduce the standard rate of income tax by 1p to 24p. This would cost around £1.9 billion in 1995-96, and could be presented as a move towards the government's stated aim of a standard rate of income tax of 20p in the pound. If implemented in 1995-96, this would, however, provide presentational problems since it would coincide with the imposition of the second increase in the rate of VAT on domestic fuel. The Chancellor might find it difficult to justify cuts in income tax (which would give the greatest cash benefit to higher-rate taxpayers) at the same time as VAT increases. However, a cut in the standard rate of income tax in a Budget nearer to a general election must remain a real possibility.

The Taxation of Savings

The level and allocation of savings continue to attract attention. There are those, including some politicians from all major parties, who argue that we need more saving because this would lead to more investment and therefore higher growth. The suggestion that more saving would lead to higher investment is at best questionable, since the UK now clearly sits in an internationally open capital market. But alongside this macroeconomic argument is a debate about whether individuals save enough to maximise their own welfare, and also about the extent to which the tax system distorts the allocation of savings between different vehicles.

There has been a general trend in the UK tax system towards an alignment of the tax treatment of different forms of saving, with effective tax rates on the real return to saving converging towards zero. Private pension saving and house purchase with a mortgage have effective tax rates of less than zero, because of the tax-free lump sum available in pensions and the continued existence of mortgage interest relief in the case of housing. But in both these cases, restrictions have been introduced in recent years. The two relatively recent large-scale new savings regimes, Personal Equity Plans (PEPs) and Tax-Exempt Special Savings Accounts (TESSAs), have effective tax rates of precisely zero. It is not a surprise that the great bulk of saving flows go into relatively tax-privileged assets.

This trend towards a zero tax rate is consistent with the view that it is desirable to have a tax system that is neutral in its effect on the decision about whether to consume now or in the future. The trend to lower effective tax rates is unlikely to reverse, not least because of the growing internationalisation of capital markets which is eroding the scope for any one government to tax savings more heavily than its neighbours do.

These are developments which we would argue should be welcomed, but there has been concern expressed about the success of both PEPs and TESSAs. By March 1994, over £20 billion had been invested in TESSAs, with over 4 million live accounts, while at the end of March 1993, £9 billion had been invested in PEPs, in a total of almost 3 million plans. The Inland Revenue estimates that the tax revenue forgone in 1993-94 was £300 million in the case of TESSAs and £150 million in the case of PEPs.

These amounts of money are relatively small when compared with total tax revenue of around £250 billion, and it anyway seems very unlikely that any steps to restrict PEPs would be made by this government, given its stated commitment to saving in the form of equities. The case of TESSAs is slightly more complex.

At the time of their introduction, there was some suggestion that TESSAs might lead to an increase in saving. This was never very likely; much of the money that has flowed into TESSAs has simply come from other forms of saving. But we would argue that the best defence for TESSAs is that the taxation of most interest-bearing wealth in the UK is both unfair and inefficient, and that it is therefore desirable that interest-bearing wealth should have a TESSA-like tax treatment.

Some action on TESSAs is now quite pressing, since at present their tax-free status can last for only five years. The first TESSAs were taken out at the beginning of January 1991, so in principle these TESSAs will lose tax-free status at the beginning of 1996. The most sensible short-run response would probably be to allow TESSAs to continue

into the future, with the same annual maximum contribution as now, so as to avoid large shifts of funds at the beginning of 1996. But it is also clear that it would be more sensible in the long run to integrate PEPs and TESSAs into a single scheme with a higher annual contribution limit.

As recent work at IFS has shown,[19] the median level of household financial wealth in the UK is very low. The least wealthy households hold most of their wealth in interest-bearing form, because they hold wealth for precautionary purposes - to insure against falls in income or rises in necessary expenditure - and need their wealth to be liquid. To penalise such saving in the tax system is at best an unfortunate anomaly; to restrict TESSAs would worsen an already unfair system.

6.3 Indirect Taxation

In the last Budget, the Chancellor spelt out the government's preference for indirect over direct taxation as a means of raising revenue: 'The Government's clear policy has always been to shift the burden of taxation, over time, from income to spending' (*Hansard*, 30 November 1993).

On numerous occasions this year, he has reaffirmed his belief that the current VAT base is too narrow, and refused to rule out possible extensions. If Mr Clarke's ultimate ambition is a flat-rate VAT on all goods, then such a system may have much to recommend it, at least in principle. An indirect tax system with a uniform rate can be justified on the ground of economic efficiency: since a uniform system of taxes has no effect on the relative prices of commodities, it minimises distortion of consumer choice.

However, in reality it is not possible to tax some goods - leisure, in particular, is hard to tax - and imposing the same rate of tax on all goods that can be taxed therefore distorts the consumer's choice between consumption and leisure. This dispels the oft-cited argument that a shift from direct to indirect taxes eliminates the disincentive to work of high marginal tax rates. An individual's labour supply decision depends on the real net wage, not the nominal net wage. By reducing the purchasing power of income, indirect taxes act as an obvious disincentive to work.

Given that it is not possible to impose indirect taxes on all goods, the case for uniform rates is less clear. One principle that might be used as a guide in the design of an efficient indirect tax system is the Ramsey Rule.[20] In essence, this proposes that expenditure taxes should reduce the demand for all commodities by the same proportion. Thus, tax rates should differ between commodities according to the responsiveness of demand to prices, with goods for which demand is less responsive - including necessities such as food and domestic fuel - being taxed more heavily.

---

[19] For further information, see J. Banks, A. Dilnot and H. Low, *The Distribution of Wealth in the UK*, IFS Commentary no. 45, Institute for Fiscal Studies, London, 1994.

[20] F. P. Ramsey, 'A contribution to the theory of indirect taxation', *Economic Journal*, 1927, vol. 37, pp. 47-61.

Here, efficiency clearly conflicts with equity considerations. Since expenditure on necessities accounts for a higher proportion of the incomes of poorer families, a system of Ramsey taxation would be regressive. Selective taxation - and zero-rating in particular - can be used to redistribute income in favour of poorer households. However, since indirect taxes are targeted at the symptoms of low income - commodity composition of expenditure - and not the cause, they are a blunt instrument for redistribution.

Value Added Tax

As ever, the Chancellor has two options available should he decide to tinker with VAT in the Budget: he can either change the tax rate or change the tax base. Table 6.3 shows how much a 1 percentage point increase in the VAT rate would raise in the next two years.

Table 6.3. The Revenue Effects of a 1 Percentage Point Increase in the Standard Rate of VAT

(£ million)	1995-96	1996-97
1 percentage point on the standard VAT rate	£2,590	£2,770

Note: Assumes implementation on Budget day and includes VAT on domestic fuel from April 1994.
Source: HM Treasury.

The effect on inflation would be a one-off addition to the RPI of about 0.6%, an increase which the economy can probably withstand given the current low level of inflation. However, an increase in the rate of VAT would amplify the relative price distortions already present in an indirect tax system that does not levy VAT across the board; it would be inconsistent with Mr Clarke's preference for greater uniformity in indirect taxation and hard to defend on the ground of economic efficiency.

The other principal option on VAT, and one which might be economically more attractive, is to alter the tax base. Currently, all goods that are not subject to VAT are either zero-rated or exempt. The total cost is around £20 billion in forgone revenues in 1994-95. We will consider the case for extension of VAT to zero-rated goods first.

Zero-Rated Goods

Goods that carry a zero rate for VAT are entirely untaxed since manufacturers are able to claim back the VAT they pay on inputs to the production process. Table 6.4 shows the tax expenditures for zero-rating in 1993-94 and 1994-95. The potential revenues which widening the VAT base would generate are clearly substantial, and, as outlined above, economic theory provides some justification for such a move.

Table 6.4. Estimated Cost of Tax Expenditures: Zero-Rating

Zero-rating of:	1993-94	1994-95
Food	6,800	7,150
Construction of new dwellings	1,850	1,950
Domestic fuel	2,800	1,450
Domestic passenger transport	1,100	1,150
International passenger transport	1,100	1,150
Books, etc.	1,050	1,150
Children's clothing	550	600
Water and sewage services	650	700
Medicines on prescription	450	500
All	**16,350**	**15,800**

Note: The figures for domestic fuel relates to the difference between the standard rate of VAT and the current rate of 8%.
Source: HM Treasury.

Table 6.5. Ending Zero-Rating: Impact on the RPI for Selected Goods

Zero-rating of:	Addition to RPI
Food	2.52%
Domestic fuel	0.44%
Passenger transport	0.37%
Books, etc.	0.26%
Children's clothing	0.21%
Water and sewage services	0.18%
Drugs and medicines on prescription	0.03%
All	**4.01%**

Note: The figure for domestic fuel relates to the difference between the standard rate of VAT and the current rate of 8%.

The Chancellor may be concerned about the effect on inflation of extending the VAT base. Table 6.5 shows the percentage-point addition to inflation that the imposition of VAT on various zero-rated goods would produce. The effect of imposing VAT on all goods simultaneously would be a one-off increase in the inflation rate of 4.01 percentage points, instantly taking the economy out of the government's self-imposed inflation band of 1-4%. Furthermore, such inflationary effects would persist for one year after imposition.

Since distributional considerations have helped to determine the list of zero-rated goods, equity arguments are often raised against a uniform VAT system. Even after the imposition of VAT on domestic fuel, the current VAT system is still broadly

progressive.[21] Table 6.6 shows the proportion of total household expenditure spent on goods and services subject to VAT for each income decile. If VAT were levied on all goods, the result would obviously be distributionally neutral, i.e. all expenditure would then be taxable and tax would form 17.5% of total expenditure across rich and poor households alike. A move to a uniform system of VAT is, therefore, a regressive step.

Table 6.6. Percentage of Total Household Expenditure Spent on VATed Goods and Services, by Income Decile

Income decile	Percentage of total spending on VATed goods
Poorest 10%	58.7%
2nd decile	58.3%
3rd decile	59.0%
4th decile	59.5%
5th decile	60.8%
6th decile	61.0%
7th decile	62.6%
8th decile	62.8%
9th decile	64.4%
Richest 10%	65.6%

Note: These figures assume VAT on fuels at the full 17.5% rate.
Source: Family Expenditure Survey 1993.

However, such arguments illustrate the problems encountered when politicians and economists become too concerned with individual elements of the tax system. The revenues raised from the extension of VAT - if redistributed via direct taxes and benefits - would be more than sufficient to maintain the overall progressivity of the tax system, while such direct taxes and benefits would provide a far more delicate tool for achieving redistribution. Once linked to compensating adjustments in other areas of the tax and benefit system, there is no reason why greater uniformity of VAT should be inconsistent with a fairer and more efficient tax system. The real problem is how to design a tax system which can perfectly compensate all households, given differences in expenditure patterns.

Exempt Goods

While the producers of zero-rated goods and services can claim back the VAT they pay on inputs, the producers of exempt goods cannot. The final price of exempt goods therefore contains an element of VAT usually estimated as equivalent to a VAT rate between 4% and 7% depending on the nature of suppliers and the firm's cost structure.

[21] The measure of the progressivity of the VAT system depends on the chosen proxy for living standards. The usual measures are either expenditure (as here) or income. Measuring VAT payments as a proportion of total income will show a different and regressive picture. This is because the rate of saving increases with income. Expenditure is a better proxy, since economic welfare derives directly from consumption rather than the ability to consume.

The consensus view among economists is that the intermediate taxation imposed by VAT exemption is undesirable. The tax may still be passed on to consumers through increased prices, and the overall burden of the tax is increased as manufacturers are provided with the incentive to make different, and economically less efficient, choices of inputs and suppliers than they would in the absence of tax. Table 6.7 shows the tax expenditures associated with exemption.

Table 6.7. Estimated Cost of Tax Expenditures: VAT Exemption

Exemption of:	1993-94	1994-95
Rents	2,200	2,300
Private education	550	600
Health services	300	300
Postal services	200	200
Burial and cremation	100	100
Betting and gaming	450	450
Small traders	100	100
Finance and insurance[a]	n/a	n/a
All	**3,900**	**4,050**

[a] The method of calculating tax expenditures for financial services is currently under review by the Treasury.
Source: HM Treasury.

Goods that are exempted tend to be so because of some meritorious quality (e.g. education and health services), or on distributional grounds (e.g. rents), or because of the practical difficulty of applying VAT. A good illustration of the last is the treatment of VAT on financial services.

Value added in banking and insurance is no less appropriate for inclusion in the VAT base than any other good or service. The problem lies in identifying and measuring the value added by financial intermediaries as part of a transaction since in many cases they do not explicitly charge for their services. The charge is implicit in the difference between the interest rates at which financial institutions borrow and lend, but this spread is an amalgamation of other elements relating to the real cost of capital, the rate of inflation and risk premiums as well as the cost of intermediation. The problem of disentangling these components is complex. Several countries that have recently introduced some form of VAT system (New Zealand, South Africa and Canada) have tried unsuccessfully to find alternatives to exemption of financial and insurance services. And the implications of VAT exemption for financial services are deeper than simply the associated loss of revenue.

Firstly, exemption makes borrowing more expensive for non-financial companies; if charges were explicit and subject to VAT, non-financial companies would be able to claim VAT relief on their bills. Secondly, the consumption of financial services by households is encouraged by exemption since households are able, in effect, to deduct their expenditure on financial services from their investment incomes and reduce their income tax bills. This is because, under exemption, the implicit charge reduces their taxable income. Thirdly, the supply of factors of production to intermediaries from non-financial companies is discouraged because the intermediaries cannot claim relief from VAT on inputs.

The European Union Commission is currently engaged in a search for a practical method of bringing financial and insurance services into the VAT system. Finding a system that is both administratively feasible and close to the tax we would wish to impose in a perfect world is not easy, and there seems to be little chance of any change here in the short term. But in the medium and longer term, the imposition on financial services of VAT or a VAT substitute seems likely.

Excise Duties

The Chancellor has committed himself to real increases in excise duties of at least 3% for tobacco and 5% for petrol and diesel in future Budgets. These changes are easily justifiable on health and environmental grounds and there is no reason to expect the Chancellor not to implement them. Petrol and vehicle taxation is discussed in detail in Section 6.4 on environmental taxes. Table 6.8 shows the real value of excise duties since 1979. There have been real increases in duties on beer, tobacco and road fuels, and falls for wine, spirits and vehicle excise duty (VED). Wine duties peaked, in real terms, in 1983 after which the government was forced to cut duties following a European Court ruling that the United Kingdom's wine duties constituted protectionism.

Table 6.8. The Real Value of Excise Duties, 1979 = 100

Year	Beer	Wine	Spirits	Tobacco	Petrol	Unleaded	Diesel	VED
1979	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1980	99.7	92.8	92.5	92.5	125.2	125.2	118.1	98.6
1981	123.2	97.7	94.7	108.2	118.9	118.9	96.1	102.6
1982	127.8	99.3	92.0	112.5	120.7	120.7	96.3	107.2
1983	129.7	101.4	93.0	114.0	122.4	122.4	97.3	109.5
1984	137.2	77.1	89.9	124.0	121.2	121.2	97.0	110.3
1985	138.3	78.5	85.8	125.3	113.3	113.3	90.7	114.6
1986	134.2	76.2	83.2	137.2	119.2	119.2	95.0	111.2
1987	128.7	73.1	79.8	133.8	114.3	114.3	91.1	106.7
1988	127.0	71.9	75.5	129.5	113.6	102.5	90.9	100.8
1989	117.6	66.5	69.9	121.4	105.2	91.3	84.1	93.3
1990	116.0	65.5	70.3	121.5	106.0	91.9	84.4	85.3
1991	119.2	66.8	72.2	131.5	114.7	99.2	91.4	80.2
1992	119.9	66.9	72.4	138.7	118.0	99.4	91.7	84.5
April 1993	123.9	69.6	71.4	147.0	128.3	108.2	99.2	94.8
Nov 1993[a]	123.1	70.5	70.9	154.1	137.9	117.8	108.7	97.9

[a] Changes in alcohol duties did not come into effect until after Christmas.

Failure to maintain the real value of excise duties is costly in terms of revenue forgone: an estimated £1,620 million in 1995-96. Further revenues could be generated by increasing duties by more than the current 2.4% inflation rate, but there is an inevitable conflict with the inflationary impact of excise duty increases. Table 6.9 shows the price effects of excise duty revalorisation.

The pattern of excise duties levied on alcohol remains anomalous. Table 6.10 shows the tax per litre of pure alcohol implied by the current excise duty structure.

Table 6.9. The Price Effects of Excise Duty Revalorisation

	Beer	Wine	Spirits	Tobacco	Petrol	Unleaded	Diesel
Current							
Duty (p)	24.50	100.88	555.00	104.70	33.10	28.30	27.70
VAT (p)	21.16	43.25	170.59	36.25	8.01	7.31	7.33
Ad valorem (p)				48.68			
Price (p)	142.09	290.39	1145.41	243.38	53.80	49.10	49.20
Uprating 0% real, in line with inflation							
Duty (p)	25.11	103.40	568.88	110.46	35.58	30.42	29.78
VAT (p)	21.27	43.69	173.02	37.56	8.45	7.68	7.69
Ad valorem (p)				50.44			
Price change (p)	0.72	2.96	16.31	8.84	2.92	2.49	2.44
Uprating 5% real							
Duty (p)	26.34	108.45	596.63	115.69	37.24	31.84	31.16
VAT (p)	21.48	44.57	177.88	38.76	8.74	7.93	7.93
Ad valorem (p)				52.05			
Price change (p)	2.16	8.89	48.92	16.88	4.87	4.15	4.07
Uprating 10% real							
Duty (p)	27.56	113.49	624.38	120.93	38.89	33.25	32.55
VAT (p)	21.70	45.46	182.73	39.96	9.03	8.18	8.18
Ad valorem (p)				53.66			
Price change (p)	3.59	14.81	81.52	24.92	6.81	5.82	5.70

Notes: The units are: 1 pint of beer, 75cl bottle of table wine, 75 cl bottle of whisky (40% alcohol), 20 cigarettes and 1 litre of each fuel. Assumes additional real increases of 3% on tobacco and 5% on petrol, unleaded and diesel.

Table 6.10. Implied Excise Duty per Unit of Pure Alcohol

	Pounds per litre of pure alcohol
Beer (3.9% alcohol)	10.45
Wine (11% alcohol)	12.24
Wine (12.5% alcohol)	10.77
Spirits (40% alcohol)	19.82

Alcohol taxes are often thought of as sin taxes designed to tax the social externality associated with alcohol consumption. If so, the relevant measure of sin should presumably be the alcoholic content of the drink. Yet, despite the real reductions in spirit duties contained in the last few Budgets, the tax per unit of alcohol for spirits is still almost twice that applied to wines and beer. The Chancellor may decide to be kind to the whisky distillers once again.

Cross-Border Shopping

Since the completion of the Single Market on 1 January 1993, there has been a good deal of debate over the appropriate level of alcohol and tobacco taxation. The UK has one of the highest sets of alcohol duties in the European Union. Table 6.11 shows excise duties on alcohol levied in the UK and France.

Table 6.11. Taxes on Alcohol

(ECUs per hectolitre of pure alcohol)	France	UK
Excise duties:		
Beer	188	1,340
Wine	30	1,572
Spirits	1,361	2,541

Source: European Commission.

Despite these differentials, alcohol excise revenues have held up well after a year of the Single Market. Duty receipts from spirits rose from £1,698 million in 1992 to £1,739 million in 1993. Receipts from beer rose from £2,394 million to £2,407 million. Both of these increases were ahead of trend for the last few years. Receipts from wine rose even more strongly, from £974 million to £1,078 million. Further, alcohol receipts in the first three months of 1994 were 7% up on the same period in 1993.

Nevertheless, there have been calls for alcohol duties to be cut. Lower duties would, it is argued, mean less cross-border shopping, more alcohol bought in the UK and an increase in excise revenues. For this to be true, however, the extra revenue from increased quantity must outweigh the fall in revenue from lower duties on each unit bought. This turns on the price responsiveness of the demand for excisable goods, and the tax-inclusive and tax-exclusive prices of those goods. It can be shown[22] that for revenues to increase when tax rates are cut requires that

$$E < -\left(\frac{\overline{P}}{\overline{P}-P}\right)$$

where E is the price elasticity of demand[23] for a taxed good, $\overline{P}$ is the tax-inclusive price and P is the tax-exclusive price of the good. Using this formula, we can calculate the critical value for the elasticity required for an excise cut to increase revenues. This is done in Table 6.12.

[22] See Appendix 3.

[23] The price elasticity of demand for a good is a measure of how responsive demand is to price changes. Formally, price elasticity is defined as the percentage change in quantity demanded for a unit percentage change in price. Typically, this will be a negative number since demand tends to fall as the price rises. The lower the elasticity, the more responsive demand is to price changes.

Table 6.12. Estimated Values for Critical and Estimated Elasticities

	$\overline{P}$ (pence)	P (pence)	Critical elasticity	Estimated elasticity[a]
Beer	143.0	98.5	-3.21	-1.04
Wine	290.0	146.0	-2.01	-1.10
Spirits	1112.0	391.0	-1.54	-1.09
Tobacco	252.0	59.4	-1.31	-0.24

[a] IFS estimates.
Source: HM Customs and Excise.

The fact that estimated elasticities tend to be lower than their critical values largely explains why excise revenues have been more robust to the Single Market than might have been expected. The estimated elasticity is closest to its critical value in the case of spirits; this is not surprising because spirits are the most heavily taxed form of alcohol.

The conclusion that must be drawn from this is that, given the elasticity evidence, no strong case can be made for cutting excise duties on the ground that the reduced volume of cross-border shopping will be sufficient to increase revenues. Indeed, increasing duties, particularly for beer, wine and tobacco, would raise more revenue than would be lost through any concomitant increase in cross-border shopping.

6.4 Environmental Taxation - Why and How?

There has been increasing interest in many European countries in the scope for tax reforms that would benefit the environment. Some European countries, especially the Nordic countries, have introduced new environmental taxes, designed to tackle a range of pollution and environmental problems - taxes on emissions of nitrogen oxides and sulphur dioxide (contributors to acid rain), taxes on non-recyclable bottles and cans, taxes on fertilisers and pesticides, on environmentally-damaging batteries, on plastic carrier bags, etc. Perhaps more significantly, environmental considerations are becoming increasingly prominent in formulating policy towards some of the major revenue-raising taxes - taxes on energy and road transport in particular.

This section looks at the issues involved in using taxes in this way, and at the potential contribution that tax reforms could make to environmental policy.

Environmental Objectives

Environmental taxes have been employed for two very different purposes in the countries that have introduced them. Firstly, many of the small environmental taxes have been seen simply as a means of raising extra revenues for environmental policy expenditures; the revenues have been earmarked to the budgets of government departments or government agencies, to provide additional resources for public spending on pollution control or clean-up. Secondly, an increasingly important objective of environmental tax measures has been to provide incentives for less environmentally damaging behaviour by producers or consumers. Much of the most

recent policy interest in environmental taxes has been in the potential for using fiscal incentives to support - or to substitute for - conventional environmental policies placing legal limits on polluting emissions or on the use of polluting technologies.

All environmental policies, whether based on regulatory limits on emissions and technologies or on incentive mechanisms such as environmental taxes, have to balance the costs and benefits of pollution control. A cleaner environment has benefits - for example, in terms of improved human health or better amenity. These benefits, however, need to be balanced against the costs of a cleaner environment - which may include expenditures on pollution-control equipment and restrictions preventing individuals or firms acting in ways that are privately desirable or profitable but socially undesirable. Full elimination of all pollution is rarely likely to be justified, except in rare cases of highly toxic pollutants with potentially catastrophic risks to human health or well-being. In the case of most pollutants, some level of pollution will be socially acceptable; a world with zero pollution would also be a world with very little in the way of production or consumption. The efficient strategy will be to cut pollution where the benefits of pollution reductions outweigh the economic costs of pollution abatement, and to accept residual levels of pollution for which abatement would be more costly than the resulting environmental benefits.

This perspective suggests a criterion for the optimal level of a pollution tax - it should be set so that it encourages reductions in pollution that have benefits in excess of the abatement costs, whilst not requiring pollution reductions that have greater economic costs than they have environmental benefits. Finding this level requires a careful assessment of the costs and benefits of pollution control.

The potential attraction of using taxes and other 'economic instruments' in environmental policy is that they have the potential to reduce the costs of pollution control, below the level that they would be with conventional 'command-and-control' regulatory policies which limit emissions or technologies. By reducing the costs of pollution control compared with conventional policies, taxes would allow either a given degree of pollution control to be achieved at less cost to the economy or a cleaner environment for the same economic cost.

The reasons for the cost savings from using economic instruments such as environmental taxes include both static and dynamic arguments.

The static efficiency gains from the use of market-based instruments arise in situations where polluters face different opportunities for pollution abatement or different abatement costs. The efficient, cost-minimising pattern of pollution abatement would require greater reductions in pollution by those polluters for which the cost of each unit of pollution abatement was low and would impose less stringent levels of abatement on polluters facing a high marginal cost of abatement.

In theory, a fully informed regulatory agency could tailor regulatory requirements to the circumstances of each polluter so as to achieve this outcome. However, regulatory agencies rarely have access to the kinds of information necessary to design the efficient allocation of abatement across polluters; much of the necessary information concerning relative abatement costs is in the hands of individual firms, which may not wish to reveal it to the regulator. Given these informational limitations on regulatory policy, regulatory rules tend to require greater uniformity in abatement across polluters than

would be efficient. Polluters with high abatement costs are required to undertake as much abatement as those with lower costs, and pollution abatement will be more costly than the efficient minimum.

Market mechanisms such as environmental taxes have the attraction that they may induce polluters to choose the efficient, cost-minimising pattern of abatement in response to the price signal they provide. A pollution tax that is imposed on each unit of emissions will mean that polluters with low abatement costs will be more likely to choose to abate, and to make larger reductions in emissions, than polluters for whom the costs of abatement are high. Polluters with low abatement costs will, in effect, volunteer to contribute higher levels of abatement, because the emissions tax makes additional abatement profitable for them. Conversely, the tax puts an upper limit on the cost of any abatement that takes place; polluters for which unit abatement costs exceed the potential tax saving will not find it worthwhile to undertake abatement measures.

In addition to the potential static efficiency advantages of market mechanisms, they may also confer dynamic efficiency gains, by providing an incentive for research and development in pollution abatement technologies. Even at the current cost-minimising level of emissions, polluters will continue to face an incentive to look for further cost-effective ways of achieving emissions reductions; with an emissions tax, this incentive arises because polluters pay the tax on any remaining units of pollution. There is thus a potential gain to be made from the development of new technologies which would allow the level of pollution to be reduced still further. Market mechanisms may thus hold out the possibility of a more rapid rate of development of pollution-control technologies than regulatory policies, which provide polluters with little incentive to reduce pollution by more than the minimum required to comply with regulatory requirements.

Environmental Taxes and Fiscal Policy Trends

'Fiscal neutrality' has been an important theme of the major tax reforms implemented during the past decade in many countries. It reflects concern about the costs of complexity in tax systems and a scepticism about the benefits of using the tax system to influence behaviour. In both respects, using environmental taxes to provide incentives for reduced pollution might appear to run counter to this established trend in tax policy. If, as IFS has often argued, we should aim for fiscal neutrality in taxation, does this imply that we cannot consistently advocate the use of environmental tax measures?

The discussion of neutrality in taxation is generally conducted in a context where individual decisions do not impose external costs or benefits on society as a whole. In these cases, where 'externalities' are absent, the advantages of a neutral tax system - in the sense of taxation which does not discriminate between different categories of goods or different assets - arise from two sources, simplicity and economic efficiency. A uniform system of taxation of commodities or assets will generally reduce administrative costs, and compliance costs to taxpayers; it may also, in some cases, reduce the scope for tax avoidance. Also, in the absence of externalities, economic efficiency is in general promoted by a non-distortionary tax system - by uniform commodity taxes, for example. In the absence of externalities, arguments of simplicity

and economic efficiency both point in the same direction, and it is not necessary to be precise as to whether the case for neutrality is based on its effects on administration and compliance costs or its effects on economic efficiency.

Where there are externalities, however, considerations of simplicity and economic efficiency point in different directions. Economic efficiency will generally be promoted by different taxes on activities that generate externalities, such as environmental damage, from the ones on those that do not, and the objective of economic efficiency may then conflict with the objective of simplicity. What matters then is to identify more precisely the objectives that a 'neutral' tax system is intended to promote. If, as we would argue, this is primarily the goal of economic efficiency, then there is nothing inconsistent in arguing for neutrality to be achieved through uniformity of taxation where there are no externalities, and arguing that externalities require a different approach, based on non-uniform taxation. From this point of view, environmental taxes seek to change behaviour but are not distortionary: indeed, they *correct* the distortion in the economy that arises from the failure of the economic system to place a proper price on individuals' use of the environment.

Adapting the Tax System for Environmental Purposes: Pollution Taxes as Approximations

In recent debates over tax policy and the environment, relatively little attention has been paid to the design of environmental taxes - precisely what form should they take? There are two broad possibilities.

One would be to introduce emissions taxes, based on measurements of the amount of pollution emitted by individual sources and levying a tax per unit of pollution emitted. Pollution taxes would thus be rather like gas or electricity bills - a meter reading would be taken and the charge computed on this basis.

In practice, most recent policy analysis has concentrated on a different type of pollution taxation, in which the existing tax system is restructured to introduce incentives for lower pollution. Thus existing tax bases (mainly on the sale of commodities) are used as the basis for environmental taxation, and the incentive for improved environmental performance is created by taxing activities associated with environmental damage (such as, perhaps, motoring or use of domestic fuel) more heavily than those that are not.

Which of these routes should be used? Broadly speaking, there is a trade-off: setting up a new system of taxes based on metered emissions may have higher administrative costs than using the existing tax system to provide environmental incentives - but, on the other hand, it is likely to be much more accurately targeted to the pollution problem. Where the balance of the argument lies will generally vary from case to case.

The costs of emissions measurement which would be required to levy taxes based directly on emissions will depend on the context, and will be higher where there are many pollution sources, where the cost per source is high and where measurement cannot be integrated with normal business activities.

Whilst the costs of measurement are normally a clearly identifiable cost involved in levying taxes on measured emissions, the possibility that there may be significant administrative costs in adapting the existing tax system to provide environmental incentives should not be ignored. Restructuring existing taxes may in some cases involve higher administrative and compliance costs; introducing complexity into the VAT structure, for example, would be likely to increase sharply the costs of VAT administration, compared with the current single-rate basic VAT structure.

The possible compensating advantage of using taxes based on measured emissions is much better *linkage* to underlying environmental objectives - the incentive can be directly targeted to the environmental problem that it seeks to influence, so that if taxpayers seek to reduce their tax payments, they will need to find ways of reducing their polluting emissions. Using the existing tax system to discourage pollution will, on the other hand, usually result in only an approximate incentive. Taxpayers will reduce their tax bill if they reduce the tax base, not if they reduce emissions - the tax will only discourage pollution if the two are closely linked. This is a potentially serious defect of the use of existing tax bases and is rarely given proper consideration. Poor linkage could lead to inefficient choices on pollution abatement strategies, or indeed to no effect at all on pollution.

Tax Burden and Revenues

Some environmental taxes, such as, for example, the carbon/energy tax proposed by the European Commission in 1991, would raise substantial revenues. These revenues present both problems and opportunities.

One potential, and widely discussed, problem concerns the impact of higher taxes on industrial inputs on the international competitiveness of industry. Would environmental policies that imposed taxes on industrial inputs put industry at a competitive disadvantage in international trade, compared with alternative forms of environmental policy that did not involve tax payments? It is widely believed that environmental taxes on industrial inputs would adversely affect competitiveness. In Sweden, industry has lobbied vigorously - and largely successfully - to have the burden of Swedish environmental taxes paid by industry reduced, in order to maintain industrial competitiveness.

Nevertheless, the argument that environmental taxes harm industrial competitiveness is more complex - and weaker - than at first sight it might appear. Certainly, industrial costs would rise, but would competitiveness, overall, fall? There are two, related, arguments which suggest that, overall, the long-run impact on competitiveness would be small, and could be positive rather than negative. One is that the initial change in industrial costs would provoke adjustment processes required to restore equilibrium in the balance of payments; these might, for example, take the form of an exchange rate adjustment, which would offset the average effect of the additional taxes on inputs. The second is that the environmental tax payments would provide scope for tax adjustments elsewhere; if these involved reductions in other taxes paid by industry, it is easy to see how they would offset any adverse impact on competitiveness, but even reductions in payroll or income taxes should have a broadly similar long-run effect. The core of the argument is that, ultimately, the environmental tax payments amount to a transfer within the economy, rather than higher resource costs of production, and thus should not adversely affect the ability of the economy overall to compete.

What would, of course, remain would be a tendency for industries that used large amounts of the taxed input (energy-intensive industries in the case of a carbon/energy tax) to be put at a relative disadvantage in international trade. On average, the environmental taxes on inputs might be offset by subsequent exchange rate adjustment - but industries that use a lot of the taxed input would still experience a loss of competitiveness. There is clearly scope for adjustment costs and problems, especially in the short run, before the compensating competitiveness benefits elsewhere in the economy were felt.

A further problem associated with the tax burden concerns the impact of environmental taxes on the distribution of household income. In cold damp countries like the UK, household energy for heating has the characteristics of a necessity, and higher energy taxes would be regressive. As IFS analyses have observed,[24] the regressive initial impact of higher energy taxes paid by households can be compensated on average with a lump-sum return of the tax revenues. The problems, as the experience of imposing VAT on domestic energy has shown, arise principally if the measure is imposed with inadequate compensation for the tax burden on poorer households; problems may also arise amongst certain households with high energy needs, for whom energy efficiency measures and other targeted assistance may be needed.

In addition to the problems that may arise from the environmental tax payments, the revenues collected from environmental taxes also present opportunities. To the extent that other taxes have a distortionary cost ('excess burden'), raising revenue from a distortion-correcting pollution tax would allow the overall distortionary cost of raising public revenues to be reduced. However, this requires the revenues to be returned in a different way from the distributional compensation - minimising the distributional impact requires a lump-sum return, whilst maximising the reduction in excess burden would require *rates* of tax to be reduced.

Some Options for Policy

Using tax policies to improve the environment requires the objectives to be clearly identified and careful selection of appropriate tax instruments, capable of delivering a well-targeted incentive without excessive dead-weight costs of administration and compliance. What are the main available options that meet these rather demanding criteria?

One would be to employ taxes based directly on measured emissions. Where measurement is cheap and administration and enforcement straightforward, emissions taxation will be the first-best approach, and preferable to restructuring of existing taxes. In the past, there have been relatively few emissions problems for which direct emissions charging would have been cost-effective, but recent technical change in measurement technologies has almost certainly increased the number of applications where measurement would be feasible at acceptable cost. There is a need for governments to keep these developments under continuous review, so that appropriate use can be made of this well-targeted form of environmental incentive.

---

[24] I. Crawford, S. Smith and S. Webb, *VAT on Domestic Energy*, IFS Commentary no. 39, Institute for Fiscal Studies, London, 1993.

Secondly, as has been extensively discussed, there is plenty of scope for energy taxes to be used as a part of environmental policies to control energy-related pollution problems, especially greenhouse gas emissions, where taxes on energy inputs would provide a well-linked incentive to reduce emissions. IFS has analysed the possible effects of a 'carbon tax' of the form proposed by the European Commission,[25] and has also assessed the environmental merits of the recent introduction of VAT on domestic energy.[26]

At the other extreme, it is clear that there are certain types of superficially attractive environmental tax measures that are not worth undertaking. Differentiating the VAT structure - to reduce VAT on recycled paper, for example, or to levy an increased rate of VAT on leaded batteries or disposable cameras or garden pesticides - is unlikely to be very cost-effective (although Chancellors might be tempted by the presentational aspect). There are three main reasons for this. The first, and probably most important, is that differentiating VAT would increase the administrative costs of the VAT system as a whole; it would be necessary to try to enforce distinctions between different goods, some of which (such as the difference between recycled and non-recycled paper) might not be easy to monitor throughout the production and distribution chain. A second limitation of tax incentives introduced into the VAT system is that they would be of no value to industrial consumers of the taxed commodities (since VAT on industrial inputs is generally, in effect, refunded) and hence would not influence the polluting behaviour of industry. A third limitation of VAT differentiation is that it would apply unevenly to different products with similar pollution characteristics: although pollution is usually a quantity-related attribute, VAT incentives would be related to the *value* of the transaction.

In between these clear-cut cases where environmental incentives have clear potential (such as emissions taxation and energy taxes), and cases (such as VAT differentiation) where the use of the fiscal system is clearly less cost-effective than other policy options, there are a range of possibilities for environmental tax policies, where the balance of costs and benefits is less immediately apparent. An assessment of some possible options which could currently be under consideration is set out in the next section.

Specific Policy Proposals

The publication of the 1990 government White Paper, *This Common Inheritance*, highlighted the present government's commitment to taxation as a means of achieving environmental goals. The document presented a review of all aspects of UK environmental policy and also detailed a series of targets that the government wished to achieve in the future. Although recent Budgets have been notable for their increasing adoption of 'green' measures (specifically VAT on domestic energy and the announced real increase in petrol duties), four years on from the White Paper's publication, there are a number of areas that still remain untouched by tax policy, as well as those where more tax measures are required if the government is to meet its targets.

---

[25] M. Pearson and S. Smith, *The European Carbon Tax: An Assessment of the European Commission's Proposals*, Institute for Fiscal Studies, London, 1991.

[26] I. Crawford, S. Smith and S. Webb, *VAT on Domestic Energy*, IFS Commentary no. 39, Institute for Fiscal Studies, London, 1993.

Motoring Taxation

Under the current system of road taxation, drivers pay two types of taxes - vehicle excise duty (VED), which is an annual lump-sum tax of £130 on vehicle *ownership*, and fuel taxes (comprising specific duties which are levied at the fixed amount per litre and VAT which is levied at the standard rate of 17.5% over and above all excise duties), which can be regarded as a tax on vehicle *use*. Given that VED raises approximately £4 billion per year whereas petrol taxes raise somewhere in the region of £15 billion,[27] the current system is far more geared towards taxation of use rather than ownership.

One way in which the Chancellor could change the tax system so that drivers' taxes more accurately reflected the amount of environmental damage that they caused would be through changes to VED, so that it varied according to certain vehicle characteristics such as engine size, axle weight or 'cleanness' in terms of vehicle emissions. Such a policy could be implemented so that it was revenue-neutral, but would also provide an incentive for individuals to purchase vehicles that were less damaging to the environment. Furthermore, the policy would not be difficult to administer or introduce; it is already used for commercial vehicles, and has been used widely elsewhere in the EC.

In terms of changes to motor fuel taxes, the Chancellor is already pre-committed to increasing petrol and derv duties. In the last Budget, he announced that duties would be increased by at least 5% in real terms every year for the indefinite future to help ensure that the UK meets its CO_2 target of stabilising emissions at 1990 levels by the year 2000.

In addition to changing the absolute level of duty on petrol, the Chancellor might also wish to alter the relative rates of tax for fuel. A policy that has had much success since its introduction in 1986 has been the levying of differential rates of duty on leaded and unleaded petrol, on the grounds that unleaded petrol is less environmentally damaging than leaded petrol. At the moment, the differential stands at 5p per litre, but it would be highly questionable whether a further widening would serve any purpose at all. Although sales of unleaded petrol have risen from near zero in 1986 to around 50% of total sales in 1993, it is unlikely that many more car-owners will choose to convert their vehicles. Most of the drivers who converted their cars to unleaded did so because it was cheap and technically feasible to do so; it is likely that the remaining drivers who still use leaded are either unable to convert their vehicles or else would only be induced to do so if a very large differential were to be established.

As well as there being a differential between leaded and unleaded petrol, there is also a substantial difference in duties on petrol and derv. The main reason for this was that, in the past, diesel was generally only used in commercial vehicles, and it was argued that high taxation of diesel would damage the competitiveness of UK industry. However, the differential also stimulated the development and production of a stock of diesel-powered cars, to the extent that now around 20% of all new cars sold use diesel, suggesting that competitiveness arguments are no longer so compelling. Similarly, on environmental grounds, there used to be some justification for taxing

[27] 1994-95 IFS predictions.

diesel at a lower rate than petrol since it was believed that diesel-powered cars were less damaging to the environment, emitting less carbon monoxide, nitrogen oxide and fewer hydrocarbons than conventional petrol cars (although not petrol cars fitted with three-way catalytic converters), and they also tend to be more fuel-efficient. Recent evidence[28] indicates, however, that diesel use may lead to emissions of black smoke and fine particulates, and this coupled with European Union legislation requiring all new cars to be fitted with catalytic converters from April 1993 implies that all new petrol cars are now unambiguously less polluting than diesel ones. This suggests that the policy of taxing diesel at a lower rate than petrol may warrant reconsideration.

The final area where the Chancellor might seek to introduce reform is the taxation of company cars. Under current legislation, holders of company cars pay income tax (but not employee National Insurance contributions) on 35% of the retail list price on the day of delivery, with reductions for cars that are over four years old and for individuals with high business mileage.[29] In addition, some companies give free fuel to their employees, and this is taxed at a flat rate depending upon the engine size of the car. The effect of these arrangements is that, despite large increases in the tax charge in recent years, they can still provide an incentive for companies to give income in the form of cars rather than wages (to the extent that now around half of all cars sold in the UK are company cars) and for drivers to increase their business mileage so that they can reduce their personal income tax liability. One possible reform that the Chancellor might consider is the changing of the mileage requirement either so that it is more graduated or, alternatively, to discourage cars for private use by awarding discounts to those with less than threshold private mileages.

Congestion Charging

Although increases in petrol duties and changes to VED are a reasonably effective way of ensuring that road users take account of the total costs of car travel including those imposed upon society, changes to the current system of taxation are unlikely to be able to address the significant problem of congestion. Between 1983 and 1993, total motor vehicle traffic grew by 42% (an average of $3^1/_4$% per year) and within that the largest growth was seen in cars and taxis (46%) and light vans (57%). Evidence from the Department of Transport suggests that the level of traffic will continue to increase; all motor vehicle traffic is forecast to increase by between 61% and 98% by the year 2025, compared with 1993. One way of curbing this growth in traffic would be to introduce congestion charges of some form to complement existing road taxes.

The most likely response from government is some type of charging: 'Charging on the motorway network will be introduced as soon as Parliament has approved the necessary legislation and as soon as the technology is right' (John MacGregor, 25 April 1994).

---

[28] QUARG, *Diesel Vehicle Emissions and Urban Air Quality: Second Report of the Quality of Urban Air Review Group*, Institute of Public and Environmental Health, Birmingham University, 1993.

[29] Individuals with an annual business mileage between 2,500 and 17,999 can reduce their personal liability by one-third and those with a business mileage of over 18,000 by two-thirds.

In May 1993, the government published the Green Paper, *Paying for Better Motorways*, in which a number of charging options were considered, ranging from the technologically advanced electronic road pricing to more simple schemes such as permits or tolls. Since releasing the document and as a result of the consultation process that followed the Green Paper, the Secretary of State for Transport has subsequently ruled out the possibility of permits or tolls for pricing the existing road network, leaving only the electronic road-pricing option.

Certainly the technology for electronic pricing is sufficiently developed; for example, the Dartford bridge and tunnel operate an 'automatic vehicle identification' (AVI) system which is based on an electronic tag. The driver pays a £50 deposit to open up an account and is given a credit-card-sized AVI tag which is placed on the windscreen and entitles them to use special lanes that can be entered without having to stop at the tollbooth. A radio then identifies the car and automatically deducts the toll from the driver's account. Similar schemes have been adopted elsewhere in Europe, for example in Italy, where motorway users are charged automatically for road use. The advantages of these electronic road-pricing schemes are extensive in that they avoid the queuing and congestion costs associated with traditional tolls, and the charges can also be adjusted relatively easily according to the degree of congestion. Objections can be raised in relation to this option, however, in that it could be thought of as infringing civil liberties, although this could be avoided if the scheme were changed so that the tags were prepaid (like telephone cards) and the units were used up at the time.

It is unlikely that the Chancellor will announce the introduction of electronic road pricing for the whole motorway network in November since any policy will require changes in primary legislation, and also extensive trials need to be set up. It is possible, however, that he will set the timetable for and location of preliminary trials which have been scheduled for next year.

A second strand of government policy that may lead to road pricing in a less substantial way is the Design, Build, Finance and Operation programme which relates to new roads. Under this scheme, the private sector might be invited to bid for contracts which would allow them to construct and run designated parts of the motorway network and in return for which the government would give the companies the right to charge for use of the road. Awarding of contracts would then partially depend upon the level of charges that each company planned to set.

Quite apart from any environmental benefits that may be derived from road-pricing schemes, an obvious attraction from the government's point of view is that it will provide a substantial source of new revenue. Estimates by the Department of Transport range from £250 million per year for a charge of 0.5p per mile for cars and light vehicles and 1.5p per mile for HGVs and other vehicles, to £700 million per year from charges levied at 1.5p per mile for cars and 4.5p per mile for HGVs.

The extent to which the policy of road pricing might meet opposition in terms of its distributional impact will depend upon the level of charges levied. However, like petrol duties, road charging is likely to be progressive across the population as a whole but regressive across the car-driving population. The burden might also be expected to fall upon rural rather than urban dwellers.

From an environmental perspective, one drawback with the pricing of inter-urban routes is that it may create further congestion problems elsewhere on the road network as some traffic will be diverted from motorways to smaller roads. The obvious solution to this problem would be the introduction of urban charging. The Department of Transport is currently conducting research into the feasibility of congestion charging in London which is due for completion at the end of the year. There have also been a series of regional trials conducted in conjunction with local authorities looking at the possibility of urban charging elsewhere. For example, in Cambridge a system of smart cards has been instigated where the card is activated on entering the city perimeter and calculates the time to reach a certain point. If the time taken exceeds the calculated time, then it is assumed that the vehicle is sitting in a traffic jam and a congestion charge is deducted.

Short of urban charging, the government may look towards other measures for combating inner-city congestion. One issue which has been attracting a great deal of attention has been the taxation of free car-parking spaces provided by employers. Some 85% of company cars used for commuting in London get free parking and this not only represents a considerable tax-free perk but also leads to further congestion. Subjecting the company responsible for provision of free parking to workers but not the general public to a tax might lead to some relief in inner-city congestion.

Household Waste and Recycling

During the period 1980-90, municipal waste per head increased at a rate of 1% per year in the UK. The disposal of household waste poses significant problems for local authorities: waste that is not treated properly can contaminate underground water supplies and lead to air pollution through emissions of carbon dioxide and methane. Attempts to deal with the adverse effects of waste have, in the past, taken the form of direct regulation with legislation at both a national and European level leading to more stringent standards, but although regulation will have an effect upon the supply of landfill sites and waste-processing plants, it will have few effects on the volume of rubbish that is produced by households. This is because, at the moment, households pay a fixed fee for rubbish collection in the form of their council tax and so they have no incentive to curb the amount of rubbish they produce. Unfortunately, experience suggests that volumetric charges for rubbish collection do not work either, since one drawback of high rubbish charges is that they can lead to illegal dumping. Despite this, household waste is a prime candidate for the introduction of more environmental taxation and there are a number of options that the Chancellor could look at.

Given that approximately 90% of household rubbish is landfilled,[30] one measure that might be introduced is a **landfill levy**, imposed either according to the volume and type of waste deposited or, alternatively and administratively more simply, as an *ad valorem* tax levied on top of the charge set by the landfill operator.

The imposition of a tax is one way of reflecting the true economic costs of rubbish disposal, thereby encouraging households to opt for waste minimisation or recycling, both of which are clearly more environmentally friendly. A further benefit of the policy

[30] The remainder is either incinerated or recycled.

is that it would be a substantial revenue-raiser. Broad estimates by the Department of the Environment suggest that a tax of £5 per tonne would raise in the region of £650 million per year.

Another way of encouraging households and firms to use products that can be recycled is through the imposition of a **virgin materials tax** which aims to correct for the fact that the market fails to include the collection and disposal costs of certain virgin materials in its prices. Taxing new materials (such as wood) would make their use relatively more expensive compared with that of recycled products (recycled paper) and thus should lead to some reduction in municipal waste. Furthermore, the tax could be adjusted according to how easily the virgin material can be disposed of.

Unfortunately, although virgin material taxes are theoretically an attractive idea, their introduction would require careful thought since there are a number of practical problems. Firstly, the tax would only be at its most effective if there were to be a wide definition of 'virgin'. Imposition of the tax on a narrow range of products would not necessarily encourage more recycling if, for example, manufacturers replaced plastic bottles with glass ones and if households were still reluctant to use bottle banks. It is also possible to envisage a situation imposition of a tax will discourage the use of a virgin material but will not necessarily encourage the use of non-virgin materials which still avoid disposal costs. For example, old newspapers may be made into animal bedding (replacing straw) but this would not be thought of as replacing a virgin material under most conventional definitions even though it avoided a disposal cost. Secondly, a virgin materials tax would raise considerable problems for imports since it would be difficult to assess the proportion of virgin material in individual products.

Finally, the government might consider extending the **recycling credit** scheme that was introduced in April 1992. Recycling credits are based on the idea that when waste is recycled rather than thrown away, the local authority saves some money. The recycling credit is simply a payment by a local authority to a recycler, where the size of the payment equals the amount of money that the local authority would have spent had it had to collect and dispose of the waste. Although, during its first two years, the scheme has had a relatively smooth introduction, it is unlikely to encourage a sufficient switch to recycling to enable the government to meet its recycling target of 25% of household waste by the year 2000. During 1992-93, waste disposal authorities paid over £2.5 million in recycling credits on nearly 0.5 million tonnes of recycled waste, or less than 1% of total waste generated. Furthermore, in contrast to other options, subsidies cost rather than raise money.

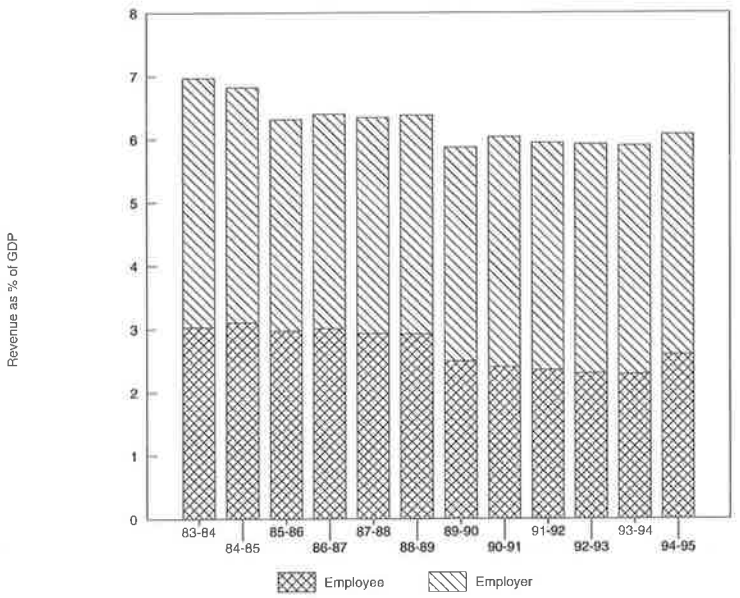
6.5 National Insurance Contributions

In 1994-95, National Insurance contributions will raise around £43 billion, or much the same as VAT. Employer contributions alone will raise around £23 billion compared with around £18 billion from corporation tax. In this section, we examine a number of issues relating to the structure and reform of NICs. We begin by examining revenues from NICs and consider how far labour market trends are causing an erosion in the NIC base. Next, we consider the case for changing both the level and structure of employer NICs to reduce any distortions in the labour market. Finally, we examine the state of the NI Fund and the scope for further changes to the base for NICs.

NIC Revenues and Labour Market Trends

Figure 6.6 shows total revenue from employee and employer NICs since 1983-84, expressed as a proportion of GDP. It shows that at the start of the period, NIC revenue accounted for around 7% of GDP, but that it had fallen back to just under 6% until the increase in the rate of employee contributions was implemented in April 1994. Part of the reason for the fall was the abolition of the NI surcharge on employers in 1985, whilst the burden on most employees was cut by the restructuring introduced in October 1989. Revenues will also have been depressed since 1988-89 by the cost of rebates and incentive payments to those taking out personal pensions.

Figure 6.6
Revenues from NICs as a Percentage of GDP 1983-84 to 1994-95



One possible explanation for the apparent lack of buoyancy in NIC revenues is the effects of trends in the labour market. A long-term feature of the UK labour market has been declining male full-time employment coupled with a growth in (mainly female) part-time employment and a growth in self-employment. Other things being equal, this trend would tend to depress revenues from NICs. For reference, Box 6.1 describes the current structure of NICs.

Table 6.13 shows the employee and employer NIC liability in respect of employees earning £200 per week, £100 per week and £50 per week.

Box 6.1 The Structure of NICs

For **employees**, no NICs are due from those with earnings below the 'lower earnings limit' (LEL), currently £57 per week. Those earning between the LEL and the 'upper earnings limit' (UEL), currently £430 per week, pay a rate of 2% on the slice of earnings up to the LEL and a rate of 10% on all other earnings. For those with earnings above the UEL, total NIC payments are capped at 2% of the LEL plus 10% of the difference between the LEL and the UEL. For those who are 'contracted out' of SERPS (the State Earnings-Related Pension Scheme), a lower rate of 8.2% is payable on earnings between the LEL and the UEL. Employee contributions are known as 'Primary Class 1 Contributions'. A small and dwindling number of married women and widows pay a reduced rate of NICs in return for reduced entitlement to NI benefits.

Employer contributions are structured somewhat differently. No NICs are due in respect of an employee with earnings below the LEL. For an employee with earnings above the LEL but below £100, the rate is 5% of all earnings; for those in the range £100-£144.99, the rate is 7% of all earnings; for those on £145-£199.99, the rate is 9%; and for those on £200 or more, the rate is 10.2% of all earnings, with no upper limit on total contributions. For employees 'contracted out', the employer NIC rate is reduced by 3.8% on earnings between the LEL and the UEL. Employer contributions are known as 'Secondary Class 1 Contributions'.

The NICs payable by the **self-employed** are of two kinds: first, a flat-rate payment ('Class 2' NICs), currently £5.65 per week, by those with profits in excess of a 'small earnings exception'; second, a proportionate profits tax ('Class 4') at 7.3% on that part of any profit in excess of a lower profits limit, currently £6,490 per year. As with employee NICs, profits subject to Class 4 NICs are capped by an upper profits limit, currently equal in value to the UEL. Additionally, half of any Class 4 NICs are allowable against an individual's income tax liability.

Table 6.13 NIC Liabilities in Respect of Employees at Different Earnings Levels

Weekly earnings	Employee contribution	Employer contribution	Total NICs
£200	£15.44	£20.40	£35.84
£100	£5.44	£7.00	£12.44
£50	0	0	0

Table 6.13 indicates that an employer who can split one full-time job paying £200 per week into two part-time jobs at £100 per week will reduce his (employer) NIC bill by almost a third, whilst the creation of four part-time jobs at £50 would extinguish his NIC liability altogether. From the point of view of the Exchequer, the loss would be compounded by the lower effective rates of employee NICs payable at lower earnings levels. In general, therefore, even with an unchanged total pay bill, a trend towards more part-time workers would be likely to depress total NIC revenues.

The growth of self-employment might also depress NIC revenues. Table 6.14 shows the annual NIC liability in respect of an employee and of a self-employed person with earnings/profits at £10,000 and £20,000.

Table 6.14. NIC Liabilities in Respect of Employees and Self-Employed

Annual earnings / profit	Employee (Total Class 1)	Self-employed (Class 2 + Class4)[a]
£10,000	£1,663	£518
£20,000	£3,803	£1,157

[a] Net of tax relief at standard rate on half Class 4 contributions.

Table 6.14 indicates that the net NIC due in respect of a self-employed person in this income range is around 30% of that due in respect of an employee at similar earnings levels. Whilst it is true that the self-employed are not entitled to certain National Insurance benefits (mainly SERPS and unemployment benefit), the difference in contribution rates more than compensates for this. The government estimates that the reduction in contributions for the self-employed not attributable to reduced benefit eligibility costs £1.7 billion per year.

What evidence is there that the move towards self-employment and part-time employment is in practice damaging the yield from NICs?

Table 6.15 shows, for selected years from 1982-83 to 1991-92, the total number of NI contributors, disaggregated by gender, marital status and class of contribution.[31] It shows a dramatic shift in the pattern of NI contributions over the 1980s. Between 1982-83 and 1991-92, the number of NI contributors rose by just over 1.4 million. Of this rise, 0.4 million was accounted for by married women and 1.1 million by single women. Almost all of the growth among single women has occurred in 'not contracted-out' employment. This refers to women who are not members of occupational pension schemes. In part, this will reflect the relatively low status of many of their jobs. The figure also includes mainly younger women who have taken out personal pensions.

Table 6.15 also shows that the number of married women paying a reduced rate of contributions has fallen sharply. Whilst this option is no longer available to those contributing for the first time, those married women who chose before 1978 to pay

[31] Regrettably, at the time of writing, the statistics for 1991-92 are the most recent available at this disaggregated level.

Table 6.15. Characteristics of NI Contributors 1982-83 to 1991-92

(Millions)	1982-83	1987-88	1990-91	1991-92
Total	**22.8**	**24.1**	**25.0**	**24.2**
of which:				
Men: total	**14.2**	**14.5**	**14.5**	**14.0**
Class 1: not contracted out	6.4	7.0	7.0	6.7
Class 1: contracted out	6.4	5.5	5.5	5.2
Class 2	1.4	2.0	1.9	1.9
Married women: total	**5.7**	**5.7**	**6.2**	**6.1**
Class 1: not contracted out	2.3	3.1	3.6	3.5
Class 1: contracted out	1.2	1.3	1.6	1.7
Class 1: reduced rate	2.1	1.1	0.7	0.6
Class 2	0.1	0.1	0.2	0.3
Single, widowed, divorced women	**3.0**	**3.9**	**4.3**	**4.1**
Class 1: not contracted out	1.8	2.6	3.0	2.8
Class 1: contracted out	1.0	1.1	1.1	1.1
Class 1: reduced rate	0.1	0.1	0.0	0.0
Class 2	0.0	0.1	0.1	0.1

Notes: 1. Total includes Class 3 (voluntary) contributions.
2. 'Class 2' figures include those paying both Class 1 and Class 2 contributions.
3. Class 4 contributions are not included
4. Column totals may not sum due to rounding.

Source: *Social Security Statistics, 1994.*

lower contributions have retained that right until they leave employment or reach state pension age. The declining proportion of women in this group will bolster NIC revenues, although it also gives rise to higher future entitlements to NI benefits.

Amongst men, the fall in the total number of contributors masks the growing numbers of self-employed paying flat-rate Class 2 contributions. The number of male employees paying contributions has fallen markedly over the period.

An idea of the significance of the changing composition of the contributing population may be seen from Figure 6.7, which shows a frequency distribution of earnings in 1983 and 1993 for each of these groups, normalised relative to the upper earnings limit which prevailed in April of each year.

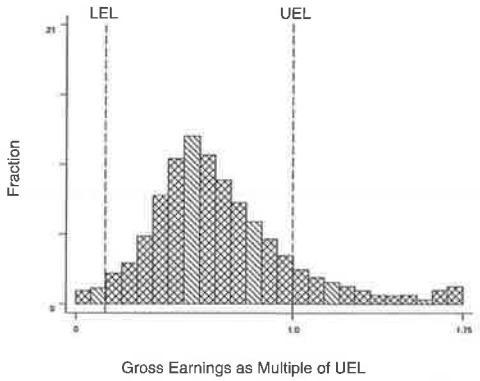
A number of trends are evident from Figure 6.7:

- The proportion of male employees with earnings above the UEL (and hence with a slice of earnings not liable to employee NICs) has risen from around 1 in 8 in 1983 to more than 1 in 5 in 1993; in part, this reflects the fact that the UEL has generally risen only in line with increases in the RPI over the period, whereas earnings have risen more rapidly.

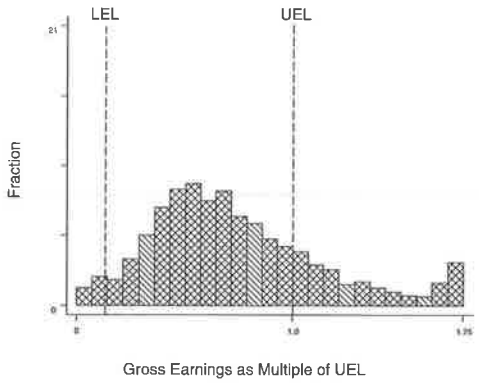
Figure 6.7
Earnings Distributions Normalised relative to Prevailing UEL: Men, Married Women and Single Women, 1983 and 1993

Men

1983

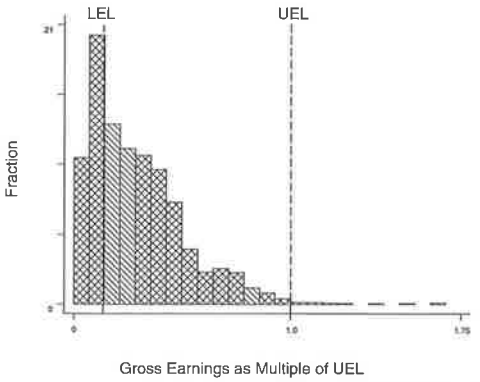


1993

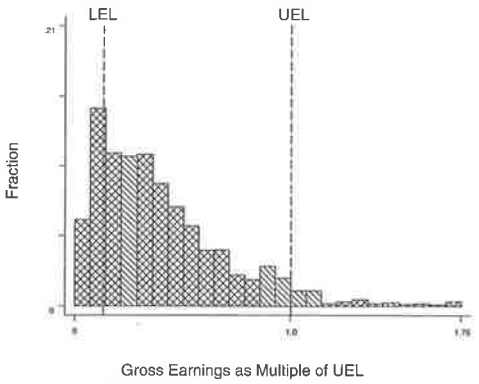


Married Women

1983

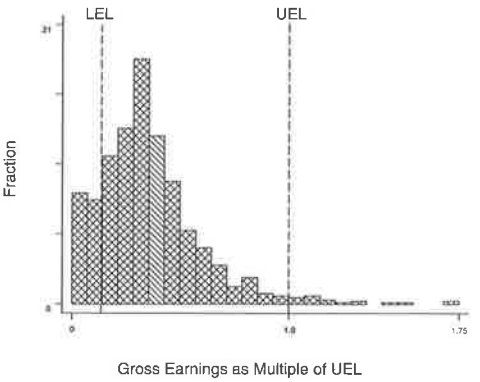


1993

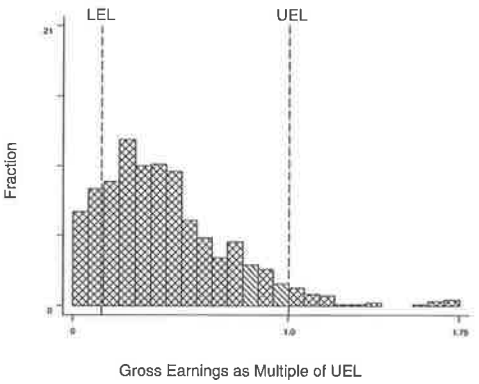


Single, Widowed and Divorced Women

1983



1993



- The earnings of women, and particularly married women, are markedly lower than those of men. A much larger proportion of women's earnings is either below the LEL or not far above it. This would seem to imply that a growth in the number of female contributors would tend to produce less revenue than a growth in the number of male contributors. However, the main growth has occurred among single women, and Figure 6.7 suggests that a rising proportion of this group are at higher earnings levels.
- Following reforms to the structure of employee and employer NICs, the number of married women being kept out of the system by pay just under the LEL has fallen, although there is still some evidence of bunching around this income level. In 1983, roughly 30% of the married women earners in the Family Expenditure Survey were earning below the LEL, whilst in 1993 the proportion had fallen to around 20%.

Conclusions

In general, a move from employment to self-employment, and within the employed population from full-time to part-time work, would tend to depress NIC revenues. Furthermore, the price indexation of the UEL means that for those employees on higher earnings, a declining proportion of their income is subject to NICs. However, there are a number of factors that will diminish the effects of these longer-term trends.

Firstly, over the last 10 years, there has been a decline in the proportion of the employed population earning below the LEL. In part, this is because the restructuring of contributions in 1985 and again in 1989 reduced the incentive to employers to pay just below the LEL. Also, the continued practice of linking the LEL to the RPI means that it too represents a steadily falling proportion of average earnings.

Secondly, the growth in female employment has come not just at low earnings levels but also further up the income scale. This is particularly important for revenue from employer contributions, since the top rate of 10.2% is chargeable on the whole of earnings where earnings are £200 per week or more.

Finally, the continued fall in the number of married women paying NICs at the reduced rate of 3.85% will bolster the effective average rate of NICs charged on the earnings of this group.

Reform of Employer NICs

Continuing high levels of unemployment and especially of long-term unemployment both in the UK and across Europe have led to calls both for reductions in the aggregate level of employer NICs and for restructuring to remove barriers to job creation.

The European Commission, in its 1994 White Paper *Growth, Competitiveness and Employment*, has urged member states to reduce 'the present disincentives to employing less skilled workers' (p. 158) by a range of reforms to employer social security contributions. These include reducing the costs to employers of taking on lower-paid workers and reducing the aggregate level of employer contributions relative to taxes on other inputs.

In similar vein, in its recent 'Jobs Study', the OECD set out a nine-point plan designed to foster job creation and to increase economies' abilities to cope with structural change. Under the goal of 'increased wage and labour cost flexibility', the report said that governments should in the short term take the following measures (amongst others), subject to overall budgetary constraints:

- reduce non-wage labour costs by reducing taxes on labour;
- reduce or remove provisions in the structure of tax and social security contributions that discourage part-time work or the employment of additional workers; a particular target should be the 'elimination of ceilings on [that part of] the wage base that is subject to contributions';
- reduce direct taxes on those with low earnings where this would shift the structure of labour demand towards low-wage workers.

The thinking behind the first of these measures is that the aggregate level of NICs is such as to reduce overall demand for labour. This will be true to the extent that employer contributions are not fully passed on to workers in the form of lower wages. The second and third points are based on the premiss that such new jobs as are created over the next decade are likely to be predominantly low-paid part-time jobs. Consequently, anything that encourages employers to provide such jobs and that encourages employees to accept them is expected to boost employment.

The appropriateness to the UK situation of the three groups of measures varies greatly. As far as aggregate levels of NICs are concerned, combined employee and employer contributions do represent a significant addition to total labour costs. The calculations in Table 6.14 indicate that total Class 1 contributions in respect of an employee earning £10,000 per year amount to around 17% of salary, rising to around 19% for someone earning £20,000 per year.

As regards removing disincentives to part-time employment, this element of the strategy has limited relevance for the UK which has been very effective at creating part-time jobs, certainly since the early 1980s. Indeed, as we have argued earlier, the NIC system actively encourages employers to split full-time jobs into part-time ones. Furthermore, there is no ceiling on employer contributions so there is little incentive there for employers to pay for an extra hour's work from a high-paid employee rather than a low-paid one.

The third argument, regarding the wedge between the pre-tax and post-tax return to an employee from a low-paid job, also has relatively little resonance in the UK. Whilst *marginal* tax rates for low-paid workers quickly reach the apparently high level of 30% (20% income tax plus 10% NICs), what matters is the relationship between pre-tax and post-tax income and this is determined by the *average* tax rate. As Table 6.16 indicates, tax and NICs represent a relatively small proportion of the pre-tax incomes of low earners.

More relevant to the incentives for a prospective employee to take a low-paid job is the operation of the benefit system. For some groups, particularly women with unemployed husbands and lone parents, the effects of benefit withdrawal are far more damaging to the return to a part-time job than the effects of the direct tax system.[32]

[32] Possible reforms to the social security system designed to improve labour market incentives are discussed in Chapter 8.

Table 6.16. Income Tax and Employee NICs for Lower-Paid Workers
(single person)

Weekly earnings	Income tax	Employee NICs	Total	Total (%)
£50	0	0	0	0
£100	£6.75	£5.44	£12.19	12.2
£150	£18.05	£10.44	£28.49	19.0

It would seem then that the UK NICs and income tax system is already quite heavily biased in favour of lower-paid part-time work. Some further restructuring in this direction or modest across-the-board reduction in employer NICs remains a possibility, however. As the next section indicates, the likelihood of this is enhanced by the improved finances of the NI Fund.

Other Issues

The NI Fund

Recession has a damaging effect on the finances of the National Insurance Fund in two respects: first, it reduces contribution income as employment falls, and second, it increases outgoings, particularly on unemployment benefit and related benefits. If the National Insurance Fund were ring-fenced so that all NI benefits had to be paid for out of NIC revenues, then during a recession NIC rates would have to rise, as indeed happened during the 1979-81 recession.

However, the revenue shortfall during 1993-94 was so severe that an increase in the NIC rate of more than four percentage points would have been required to bring the balance in the NI Fund up to the minimum level required by the Government Actuary. This would almost certainly have been politically unacceptable and so the then Chancellor, Norman Lamont, announced in his 1992 Autumn Statement that for 1993-94 a Treasury Grant would be reintroduced to top up NIC revenues. The value of the grant in that year was £7.6 billion.

It was expected that as the economy emerged from recession, the underlying position of the Fund would improve. However, outgoings were still expected to exceed revenues in 1994-95 and a continued subsidy of some sort would therefore be needed. Consequently, in his March 1993 Budget, Mr Lamont announced that from April 1994 the rate of NICs would be increased by one percentage point for employees and the self-employed. This left a projected shortfall in revenues, and a reduced but still substantial Treasury Grant of £6.4 billion has been announced for 1994-95.

The out-turn for 1994-95 is likely to be better than was forecast by the Government Actuary in February 1994, since unemployment has fallen and lower-than-expected inflation will reduce benefit expenditure from the Fund. In addition, continued recovery into 1995-96 is likely further to reduce pressures on the NI Fund. This gives the Chancellor the option either of cutting the Treasury Grant or of reducing NIC rates. Given that the employee NIC rate has only just been increased and that NICs continue

to be one of the less unpopular forms of taxation, it seems likely that the Chancellor will leave employee NIC rates unchanged, cut the Treasury Grant for 1995-96 and/or make a modest reduction in rates of employer NICs.

The NIC Base

The limitations in the base of NICs continue to provide scope for employers to reduce their NIC liability via artificial avoidance schemes. At present, employer NICs are due on 10.2% of the earnings of any employee earning more than £200 per week. However, if an employer can find a way of remunerating an employee in kind rather than in cash, then a significant saving can be made.

In the past, one of the favoured forms of benefits in kind was the company car. A company could provide an employee with a car in lieu of part of his or her salary, and thereby escape NICs on the amount paid in kind. This loophole was closed with effect from April 1991. From that date, employer NICs became chargeable on the imputed value of a company car, and Class 1A contributions, as they are known, now raise in excess of £500 million per year.

Moves to clamp down on other forms of NIC avoidance have continued periodically since then. In the November 1993 Budget, Kenneth Clarke announced that 'gold bars, coffee beans, cowrie shells and other exotic payments' would immediately become subject to employer NICs, whilst in August 1994, the NIC base was widened further to include diamonds and fine wine. It is possible that the November Budget will see further extensions to the NIC base, although the revenue gained from these marginal changes is typically small.

7 Public Spending

7.1 Introduction

The government this year will have the scope to revise its nominal expenditure plans downwards from those announced in the November 1993 Budget. With 1994-95 now expected to be a year of lower inflation than was predicted at the time of the last Budget, the government will be able to keep the path of real expenditure the same as planned whilst announcing a considerably lower nominal expenditure figure.

If such a revision comes about, this would make it the second year running in which the Chancellor has managed to announce planned spending levels below those set out in the previous year. The figure for the 'new control total' (NCT) for 1993-94 announced in the November 1993 Budget was £0.4 billion below the plan announced in the 1992 Autumn Statement, and the actual out-turn for NCT spending was £2 billion lower than this.

The Chancellor will be under strong pressure to announce spending cuts this year. In the last financial year, public spending was 'cut' in the sense that less was spent overall than initially planned, but this still represented a growth in real expenditure as compared with the previous year. The existing plan for the current financial year is for expenditure to fall in real terms. If the Chancellor wishes to achieve this given lower-than-forecast inflation, he could withhold reserve expenditure, which has been set aside for unforeseen spending needs. It is likely that there will also be pressure for the Chancellor to announce cuts to social security spending, and to spending on housing benefits in particular.

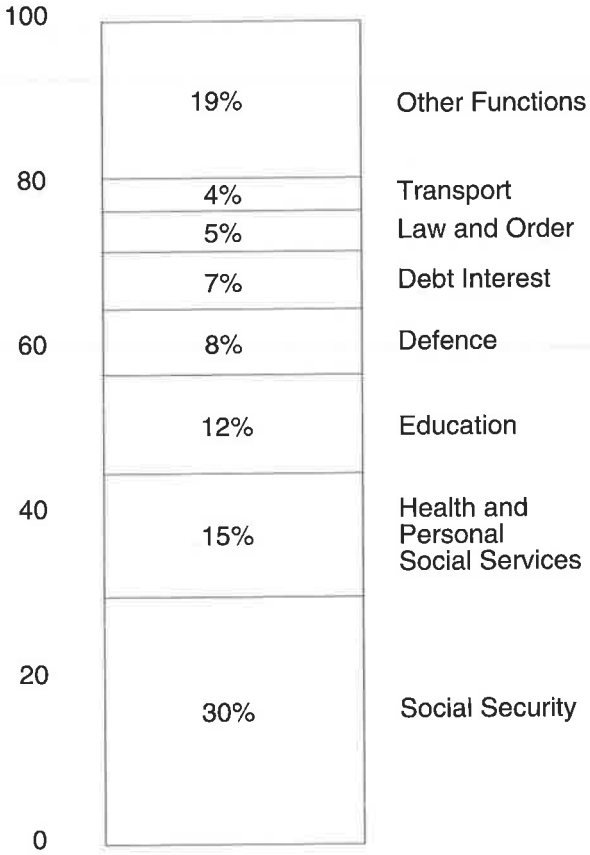
In the analysis that follows, we will consider the trends in aggregate expenditure since 1979. We then look at the expenditure plans that were framed in the November 1993 Budget, and assess the Chancellor's scope for cutting the nominal expenditure estimate for 1994-95 and the prospects for public expenditure in the medium term.

7.2 Trends in Public Spending

The government expresses its spending plans in terms of general government expenditure (GGE), which it breaks down into two main parts. The new control total (NCT) represents about 85% of GGE and attempts to capture that part of spending that is relatively invariant to economic activity, while the remaining fraction is taken up by elements that are most affected by the economic cycle, such as cyclical social security and central government debt interest, as well as accounting adjustments. General government expenditure is often expressed excluding privatisation proceeds, which represent negative expenditure in overall GGE.

By far the largest proportion of overall government expenditure goes on social security spending, at about 30% of GGE excluding privatisation proceeds, with health and education taking up the second and third largest proportions. Figure 7.1 shows the expected breakdown of GGE excluding privatisation proceeds for 1993-94 by government function. This is a more useful way of breaking down expenditure than by government department, as shown in Table 7.1, since certain government departments spend money on functions not indicated by their name. For example, most spending on education is channelled through the Department of the Environment, making this department the second largest spender at 14% of the total, while the Department for Education spends a meagre 3% of the overall figure.

Figure 7.1
General Government Expenditure Excluding Privatisation Proceeds, by Function



Source: Statistical Supplement to the Financial Statement and Budget Report 1994-5.

Figure 7.2 shows the path that public expenditure has taken since 1978-79, both in real terms and as a percentage of GDP. The bars show GGE excluding privatisation proceeds in real terms in 1993-94 prices, corresponding to the left axis, while the line shows this as a percentage of GDP and follows the scale shown on the right axis. The figures for 1994-95 and 1995-96 are based on current plans rather than actual out-turns.

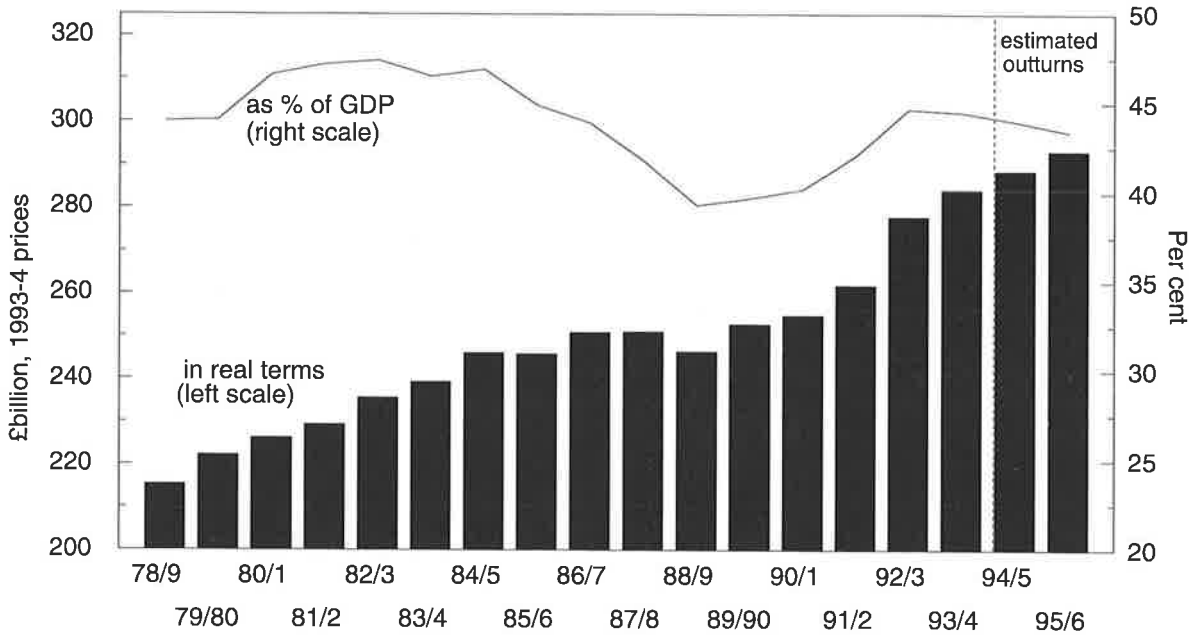
In the early 1980s, the government's stated objective was for public expenditure to fall in real terms. As can be seen on Figure 7.2, expenditure has grown in real terms almost every year since 1978-79. The average annual real growth rate for the years up until 1993-94 has been 1.8%. The only years in which spending actually fell in real terms were 1985-86, when it was down just 0.1% on the previous year, and 1988-89, a year when unemployment was falling rapidly, when spending fell by 1.8%.

Table 7.1. General Government Expenditure Excluding Privatisation Proceeds, by Department

Department	Spending as a percentage of GGE excluding privatisation proceeds
Department of Social Security	24
Department of the Environment	14
Department of Health	11
Ministry of Defence	8
Scotland	5
Department for Education	3
Wales	2
Northern Ireland	2
Home Office	2
Other departments	14
Debt interest	7
Cyclical social security	5
Accounting adjustments	3

Source: Statistical Supplement to the Financial Statement and Budget Report 1994-5.

Figure 7.2
General Government Expenditure Excluding Privatisation Proceeds, in Real Terms and as a Percentage of GDP, 1978-79 to 1995-96



Source: Statistical Supplement to the Financial Statement and Budget Report 1994-95, and Summer Economic Forecast 1994.

By contrast, expenditure as a proportion of GDP has both fallen and risen over the same period. In 1984, after five years of steady real public expenditure growth, the government modified its objective to reducing public expenditure as a proportion of GDP. This it achieved through the mid-1980s, during the years of consistent GDP growth, from a peak of 47% in 1984-85 down to $39^{1}/_{4}$% in 1988-89. It then rose each year, up to $44^{1}/_{2}$% in 1992-93. In last November's Budget, it was projected to continue to rise through 1993-94 and then fall thereafter. The lower-than-expected out-turn in spending has meant that, in fact, public spending fell very slightly as a proportion of GDP in the last financial year, and is projected to continue to do so into the medium term.

7.3 The Prospects for Public Expenditure

In the forthcoming Budget, the Chancellor will announce his estimate for the out-turn in spending for the current financial year, and may decide upon the allocation of the £3.5 billion contingency reserve which has been set aside to cover unforeseen spending needs by individual departments. This extra allocation is not guaranteed, since last year the Chancellor took the unusual step of withholding a large proportion of the reserve for 1994-95 which he had available to distribute.

He will also either confirm the spending plans he made in the November 1993 Budget for the years 1995-96 and 1996-97 or, more probably, announce revised spending plans for these years, also choosing whether to distribute the currently available contingency reserve for these years. Additionally, he will set new plans for an extra financial year, 1997-98.

Before going on to look at the decisions facing the Chancellor this November, we consider the decisions he made last year at Budget time, and the spending plans as they currently stand.

The November 1993 Budget

In the November 1993 Budget, the government revised downwards the spending plans it had made in the 1992 Autumn Statement. A small amount was cut from the planned NCT for 1993-94, and considerably more from the control totals for the years thereafter. In real terms, the Chancellor planned for expenditure within the NCT to grow slowly in 1993-94, to fall by 1.3% in 1994-95, and then to grow gradually again into the medium term. Plans for GGE were adjusted downwards further, since lower-than-originally-planned-for cyclical social security and debt interest payments were now forecast.

In the subsections that follow, we look at the plans for individual years in more detail.

The Plans for 1993-94

The Chancellor announced an estimated NCT of £244.7 billion for 1993-94, managing to cut £0.4 billion from the NCT plans announced in the 1992 Autumn Statement and more than £1 billion from the planned GGE. He allocated the contingency reserve of £4 billion available to him, mostly to social security and to the local authorities. The final outcome for the NCT in 1993-94, recently announced in the Treasury's Summer Economic Forecast, was in fact a full £2 billion below this plan. This has arisen partly as a result of a change in the timing of our net European Union contributions. Whilst this means that real expenditure grew by less than was expected this financial year, it does not represent permanently lower spending, since most of the reduction represents a one-off drop which will have to be made up for out of the current year's spending instead.

The Plans for 1994-95

A full £3.6 billion was shed from the 1994-95 control total, which was set at £251.3 billion. This was achieved in an unusual manner. In previous years, the contingency reserve for the year to start the following April has been reduced, and the reduction has been fully or near-fully allocated to individual departments, particularly to social security and to health. In formulating spending plans for 1994-95, however, the Chancellor chose not to distribute to departments £3.1 billion by which the contingency reserve was reduced. As a result of this, and because of a predicted underspend by local authorities of £0.5 billion as compared with the plans formulated the year before, the control total spending was in fact predicted to fall in real terms, a highly unusual outcome in the context of the real spending growth seen almost every year since 1979. Furthermore, with lower cyclical social security spending and lower debt interest payments being predicted, the planned GGE excluding privatisation proceeds was a full £5.7 billion below the 1992 Autumn Statement plans.

Again, this downwards revision in the planned NCT does not mean that the government has been able to achieve a *permanently* lower path for spending. Unless the Chancellor continues to withhold reserve spending at each Budget and for each financial year, the saving achieved from the 1994-95 total will be a one-off saving.

The Prospects for 1994-95

We are now predicting that the Chancellor will be able to reduce his plans for public spending in 1994-95 further in the forthcoming Budget. This prediction rests on the distinction between the government's nominal and real spending plans.

Nominal vs. Real Spending

Since the early 1980s, the government has framed its overall spending plans in *nominal* terms, i.e. in terms of the actual amount of cash that it will have to pay out in the financial year for which it is planning. At the same time, it clearly sets out what it expects this nominal amount to represent in *real* terms, based on its predictions for inflation. If it gets its predictions for inflation wrong, the same nominal amount of spending will have a different value in real terms from what was expected.

If the ultimate aim of the government is to control the real value of spending (and the real path that spending takes over time), then as inflation forecasts are revised, nominal spending will have to be adjusted correspondingly to achieve the real value of spending that it is aiming for.

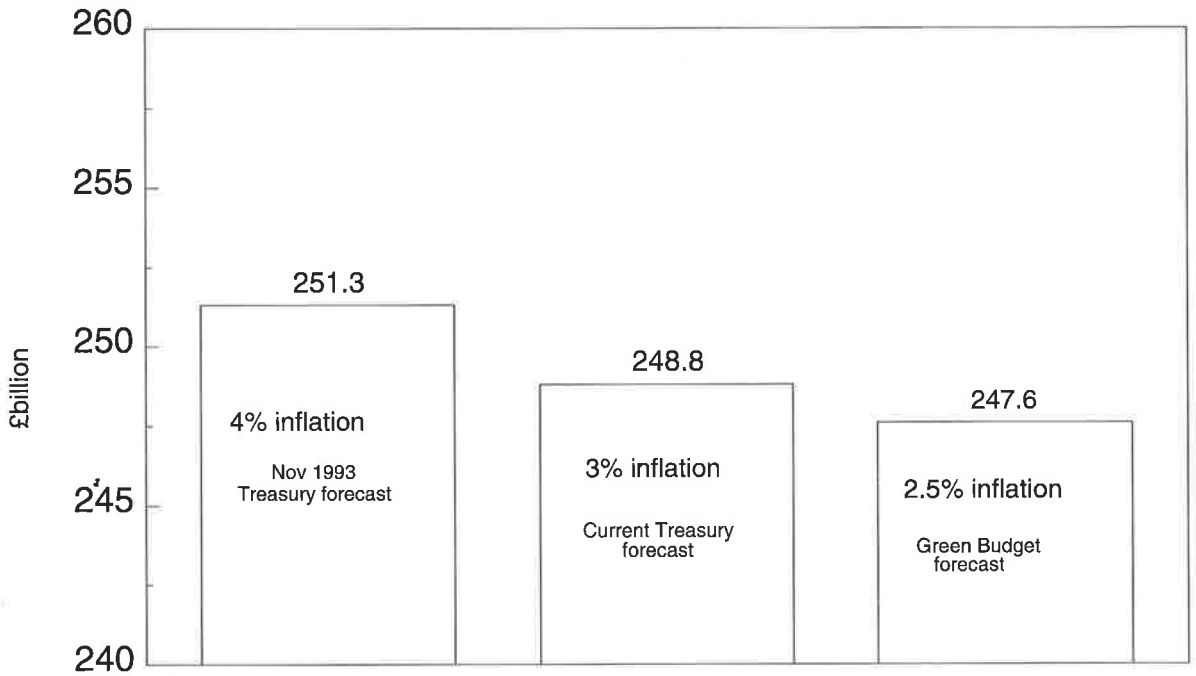
The 'cash-limited' regime was initially designed for an era of high inflation. If inflation exceeded expectations, the government intended that cash limits would be held, thus helping to exert some restraint on price inflation. But when inflation undershoots government expectations, it is much more likely that the government will want to adjust its nominal cash limits.

Using the government's inflation predictions made at the time of the November 1993 Budget, the NCT total of £251.3 billion represented a cut in real terms on the previous year's spending plan of 1.3%. However, the current financial year is turning out to be a year of considerably lower inflation than was initially thought. The government now expects the GDP deflator - the measure used to strip out the effect of price changes over the whole economy - to rise by 3% in 1993-94, rather than 4% as it forecast last November. Using this current Treasury forecast for inflation, the same NCT will actually represent a very slight real rise in spending of $^{1}/_{3}$% as compared with last November's plan.

If the government wishes to keep to the same real spending path it foresaw when formulating its expenditure plans last year, which we have termed the 'no policy change' scenario, it will now require less nominal spending to do so. Figure 7.3 shows the nominal spending required to keep the same real spending plans under different forecasts for the GDP deflator. We predict that the GDP deflator will rise by only $2^{1}/_{2}$% this year, and so we estimate that the NCT could fall to as low as £247.6 billion this year. Most of this cut in nominal spending could be achieved if the Chancellor again chooses not to allocate the £3.5 billion he has available to him from the contingency reserve.

There will be the scope for overall GGE to fall by even more. This is principally because cyclical social security spending is expected to be lower than originally planned, since the forecasts for GDP growth and employment growth have been revised upwards. The government saves about £350 million in unemployment benefits for each 100,000 people moving into employment.

Figure 7.3
The New Control Total 1994-95, under Different Inflation Forecasts: No Policy Change Scenario



The Prospects for 1995-96 and the Medium Term

The prospects for government spending in 1995-96 and over the medium term are perhaps less clear cut. Rather than keep to its plans for real expenditure growth of 1% per year, we expect that the government will be tempted to try to sweeten the electorate and allow real expenditure to grow faster than this, as it faces the prospect of an election in 1996 or 1997.

Prices are expected to continue to rise more slowly than initially forecast over 1995-96, again leaving the control total for 1995-96 as it stands higher in real terms than was predicted in the last Budget. If the government were to keep to the same real spending plans, as we have conjectured for 1994-95, the nominal spending totals again would be able to be cut.

In the run-up to a general election, however, it is less obvious that the government will want to keep strictly to its plans to control the path of real expenditure. It is more likely to use the slack available, as inflation undershoots expectations, to allow real spending to rise.

Based on the prediction that the government will allow real NCT growth of 2% per year in 1995-96, we estimate that the NCT for 1995-96 will be set at around £260.6 billion. Details are given in Appendix 1 of our estimates for the level of spending in 1995-96 under the 'no policy change' scenario, that the government in fact sticks to its real spending plans as they currently stand.

Looking into the medium term, the prospects for public expenditure are even more dependent upon political circumstance, since the outcome of the election will crucially determine the direction of government policy. In Appendix 1, we examine the prospects for government expenditure into the medium term under the same two policy scenarios we considered for 1995-96, the first that the government sticks to its plans for real NCT growth and the second that real NCT growth of 2% per year is allowed.

We expect that prices will begin to rise more quickly again in the medium term as growth in the economy gathers pace. Higher inflation puts upward pressure on the nominal spending bill, but at the same time, faster growth in the economy eases pressure on social security spending associated with the economic cycle. Overall, if real NCT growth of 2% per year is allowed from 1995-96, we expect the NCT to reach about £275 billion in 1996-97.

8 Work Incentives

8.1 Introduction

The Chancellor has declared an interest in minimising disincentives to work and is therefore interested in the structure of the social security system as well as that of the tax system. One of the most frequent criticisms of the UK social security system - indeed, of social security systems in general - is that it does reduce work incentives; in more emotive language, people are said to be trapped on welfare.

It is clear why this might be a problem. Social security systems are primarily (though not exclusively) designed to relieve poverty and to raise the incomes of those with the lowest resources. This means payments are made when other income - overwhelmingly earnings - is at its lowest. Income support and unemployment benefit, for example, are paid to people who are out of work; they are not paid to people who are in work. Therefore, earning money implies losing entitlement to these benefits and the net monetary gain from working becomes less than it would have been had there been no social security system. This sort of disincentive operates as an essential part of any social security system. There is no getting around it, though the possible structures of social security systems and the sorts of incentives they contain are many and varied.

One particularly extreme example of this problem is the so-called 'poverty trap'. A strict definition of this term describes a situation in which the marginal withdrawal rate is greater than 100%. In other words, an extra pound earned actually leads to a reduction in net income. Formally, this is no longer a problem in the UK social security system: the reforms of 1988 aimed to make marginal tax rates in excess of 100% impossible. In fact, expenses like child-care costs can reduce the return to working extra hours even more rapidly than the withdrawal rates in the social security system would imply.

The 'unemployment trap' describes a situation in which people are better off out of work than in work. This can be a problem within the UK social security system for two main reasons. Firstly, mortgage costs are covered only by income support for those out of work. Wages would need to cover mortgage interest to make work worthwhile for mortgagers. Secondly, costs associated with working, such as child-care and travel-to-work expenses, can raise the wage necessary to cover out-of-work income.

In the simplest of worlds, there exists a continuum of options on which the sorts of disincentives imposed by benefits can lie. At one end is a system like income support, where the benefit is withdrawn pound for pound when any other income is received. This imposes marginal withdrawal rates of 100% on those dependent on income support. At the other end is something like a basic income or citizen's income where everybody is paid a flat amount of benefit and then is taxed at a constant rate on any other income. This appears to get round the incentive problem, but does not. Rather, it spreads a less severe problem over a much larger number of people, since paying for a basic income that goes to everybody would require substantially increased tax rates on the bulk of the population.

The basic dilemma is clear. Either very high withdrawal rates can be imposed on a relatively small part of the population, or somewhat lower (though still high) withdrawal rates can be imposed on a much larger section of the population. Much debate about social security policy and disincentives centres on where on this trade-off we should be. To some extent, this even underlies part of the means-tested/universalist debate in social security. Means-tested benefits to certain groups - such as pensioners or tenants in social housing - impose disincentives to work (or save) while universal ones mitigate the disincentives for these groups but spread them across the population who face higher taxes to pay for them. For the unemployed, the difference is not as great. Whether the benefit is means-tested, like income support, or not, like unemployment benefit, moving into work will involve loss of benefit.

In general, the UK social security system, particularly as it affects those of working age, is much more like the first part of the spectrum described - benefits tend to be withdrawn very rapidly once any income is earned. This is especially true of income support, easily the biggest benefit for the unemployed, which is lost pound for pound once any income is earned. Housing benefit, the other major means-tested benefit, is also withdrawn very rapidly (see Section 8.3 for much more detail).

One benefit has, however, been introduced into the system specifically to provide an incentive to work a certain amount and move the serious disincentive effects further up the earnings distribution. That benefit is family credit. It is available to low-earning families with children where one parent is working at least 16 hours a week. Once those 16 hours are worked, family credit becomes available and can raise net income quite significantly, providing a definite incentive to work those 16 hours. Like all such benefits, it is then withdrawn - at a rate of 70 pence in every pound of after-tax income - so while it provides incentives to work 16 hours, it reduces incentives to work beyond that over a considerable range of earnings. Family credit, its operation and possible improvements are described in detail in Section 8.2.

There are other ways of achieving similar effects to that achieved by family credit. They all involve providing some incentive through the tax or benefit system to take some work, but beyond a certain level of income, the extra incentive has to be withdrawn, creating the high marginal tax rate further up the earnings distribution. This, for example, describes fairly well the earned income tax credit which is being extended in the US. This effectively works as a tax subsidy to low earners. Over a certain range of income, they receive an increasing level of tax credit (wage subsidy) as earnings rise; at some point, the credit is then frozen and eventually tapered away. Again, an incentive is introduced for earning right at the bottom of the earnings distribution but at the cost of high marginal withdrawal rates a bit further up. As with family credit, getting a low-paid job becomes much more worthwhile. Moving from a small amount of earnings to a larger amount becomes much less worthwhile.

In the UK, the complex nature of the benefit system and the interactions between different benefits, and between the benefit system and the tax system, can themselves cause problems. One example, which is described in detail in Section 8.3, relates to the relationship between family credit and housing benefit. For the housing benefit system can virtually negate the positive incentives involved in the family credit system since the receipt of family credit leads to loss of housing benefit.

Other interactions between the tax system and the benefit system can lead to combined marginal withdrawal rates that are much higher than those apparently implied by just one benefit or one tax. Although family credit is withdrawn at a rate of 70p in the pound, it is withdrawn on net income, i.e. income after tax and National Insurance. So £1 of gross earned income can lead to loss of tax and NI, leaving 65p, and then loss of 70% of this, leaving only $19^1/_2$p. Adding in housing benefit and council tax benefit tapers makes this situation even worse.

In fact, very few people actually face these very high withdrawal rates, but that is not surprising - there is every incentive not to be on these tapers. It cannot be stressed too strongly that the fact that we find very few people actually on family credit and housing benefit tapers is in no way an indication that they do not matter, or that the actual incentive problem is not large. In fact, the opposite is the case. Because the incentives introduced make being on the tapers unattractive, the fact that few people are found there is an indication that people are reacting to the incentives found in the benefit system.

So far, we have considered only the potential disincentive effects of the benefit system. In analysing actual effects, we need to know what sorts of combinations of taxes and benefits people are actually facing. These are illustrated in Tables 8.1-8.6 for different groups of people. The information in the tables is drawn from data on a representative sample of people in 1993.[1] This sample does not exactly replicate administrative data.

Table 8.1 shows that in our sample of married women with children, two outcomes dominate. Either they are in the labour market and paying income tax and National Insurance in their own right, or they are not participating and neither paying tax nor receiving any benefits. In the latter case, their partner's employment makes the family rich enough not to be entitled to any means-tested benefits. A further 10% are unwaged and receiving income support, thereby suggesting that their partner is also unwaged, and some 5% earn enough from part-time work to pay National Insurance but not enough to pay income tax.

Four per cent of married women with children do not pay tax or NI but are in families where there is receipt of family credit and/or housing benefit. These women are also likely to be unwaged, with the family credit being paid in respect of their partner's earnings. If they did work, they would face very high benefit withdrawal rates because the benefit system means test operates on family rather than individual incomes. So, while only 1% of our sample of married women themselves face very high withdrawal rates (i.e. they work, pay direct taxes and receive family credit or housing benefit), others may be caught by their spouse's earnings.

[1] We have excluded from these tables all individuals or partners of individuals who are retired, sick, self-employed, under 18 or in full-time education, because the tax and benefit system does not directly affect their labour market position. For simplicity, we have also excluded council tax benefit.

Table 8.1. Tax-Benefit Combinations: Married Women with Children

	IT	NI	FC	IS	HB	Total	(%)
1.	IT	NI	-	-	-	486	36
2.	IT	-	-	-	-	10	1
3.	-	NI	-	-	-	68	5
4.	IT	NI	FC	-	-	9	1
5.	-	-	FC	-	-	29	2
6.	-	-	FC	-	HB	12	1
7.	-	-	-	-	HB	11	1
8.	-	-	-	IS	HB	92	7
9.	-	-	-	IS	-	37	3
10.	-	-	-	-	-	574	42
Other						14	1

Note: Only those cells which comprise more than one-fifth of a per cent of the sample are presented. The codes to tax deductions and benefit receipt are as follows:
IT = income tax; IS = income support; FC = family credit;
NI = National Insurance; HB = housing benefit.

Table 8.2. Tax-Benefit Combinations: Married Men with Children

	IT	NI	FC	IS	HB	Total	(%)
1.	IT	NI	-	-	-	1022	75
2.	-	NI	-	-	-	13	1
3.	IT	NI	FC	-	-	25	2
4.	IT	NI	-	-	HB	8	1
5.	-	-	FC	-	-	12	1
6.	-	-	-	IS	HB	94	7
7.	-	-	-	IS	-	35	3
8.	-	-	-	-	-	98	7
Other						40	3

Note: As for Table 8.1.

Married men with children, illustrated in Table 8.2, show a similar picture to married women except that a much higher proportion of them are employed and paying direct taxes (75%). Again, 10% are unwaged and receiving income support with or without housing benefit depending on whether their accommodation is rented. Only 3% face very high withdrawal rates because they are working and receiving housing benefit and/or family credit.

Tables 8.3 and 8.4 give tax and benefit combinations for men and women in childless couples. For these families, there is no significant receipt of housing benefit for individuals in work. This reflects lower benefit entitlements because no child additions are payable and their housing costs are lower because less space is generally required for childless couples. For men and women in these families, there are much higher

employment rates and many fewer unwaged couples receiving income support and housing benefit. These families are, of course, not entitled to family credit because they do not have children.

Table 8.3. Tax-Benefit Combinations: Married Women without Children

	IT	NI	FC	IS	HB	Total	(%)
1.	IT	NI	-	-	-	614	66
2.	-	NI	-	-	-	22	3
3.	IT	-	-	-	-	5	1
4.	-	-	-	IS	HB	18	2
5.	-	-	-	IS	-	12	1
6.	-	-	-	-	-	244	26
Other						11	1

Note: As for Table 8.1.

Table 8.4. Tax-Benefit Combinations: Married Men without Children

	IT	NI	FC	IS	HB	Total	(%)
1.	IT	NI	-	-	-	754	82
2.	-	NI	-	-	-	13	1
3.	-	-	-	IS	HB	18	2
4.	-	-	-	IS	-	15	2
5.	-	-	-	-	-	115	12
Other						11	1

Note: As for Table 8.1.

Single people without children are predominantly employed (68%) or out of work receiving income support (14%), as illustrated in Table 8.5. Two-thirds of the latter group do not receive housing benefit when out of work because they are often young unemployed still living in their parental home. Fifteen per cent do not directly pay taxes or receive benefits, primarily because they are young adults living with their parents and not claiming benefits, to which they are often entitled. There is, again, only a residual group of 2% receiving housing benefit alone, indicating that they have high withdrawal rates and low enough wages not to pay direct tax.

Table 8.5. Tax-Benefit Combinations: Single People without Children

	IT	NI	FC	IS	HB	Total	(%)
1.	IT	NI	-	-	-	1,155	66
2.	-	NI	-	-	-	40	2
3.	-	-	-	IS	HB	76	4
4.	-	-	-	-	HB	32	2
5.	-	-	-	IS	-	172	10
6.	-	-	-	-	-	257	15
Other						25	1

Note: As for Table 8.1.

Table 8.6. Tax-Benefit Combinations: Lone Parents

	IT	NI	FC	IS	HB	Total	(%)
1.	IT	NI	-	-	-	75	16
2.	-	NI	-	-	-	4	1
3.	IT	NI	FC	-	-	21	4
4.	IT	NI	FC	-	HB	9	2
5.	-	NI	FC	-	HB	6	1
6.	-	NI	FC	-	-	7	2
7.	-	-	FC	-	HB	9	2
8.	-	-	FC	-	-	4	1
9.	-	-	-	IS	HB	232	48
10.	-	-	-	-	HB	6	1
11.	-	-	-	IS	-	72	15
12.	-	-	-	-	-	26	5
Other						9	2

Note: As for Table 8.1.

Lone parents are a very diverse group. This is shown in Table 8.6 by the number of tax and benefit combinations faced by more than 1% of lone parents. Half of lone parents are unwaged and receiving income support and housing benefit, while another 15% are receiving income support alone. Sixteen per cent earn enough money to be ineligible for any means-tested benefits and to pay income tax and National Insurance. Many of the rest (12%) are reliant for part of their income on family credit. The majority of these lone parents are not also receiving housing benefit, often because their family credit has made them ineligible for it, but those who do receive family credit and housing benefit (5%) would usually face marginal withdrawal rates in excess of 89% and up to 97%. The structure of family credit is such that one would expect to see people taking advantage of the incentive it provides to move into work and as a result facing these very high withdrawal rates.

Overall, we have shown that few people are working at points in the tax and benefit system where high withdrawal rates are prevalent. As we argued earlier, this indicates *not* how small the unemployment/poverty traps are, but how significant they are, precluding most individuals from working in regions that they affect. Many groups, especially childless individuals, will find labour income from employment high enough to float them out of means-tested benefits altogether, but lone parents and many couples with children can be trapped on benefit, partly because of scarcity of job opportunities and partly because of the structure of the social security system. The only group with a significant proportion of people working with high withdrawal rates is lone parents receiving family credit. That they have any incentive to work is explained in the following section.

One final point that is worth making, before we go on to our description of two particular aspects of incentives and the benefit system, is that it really is the benefit system and *not* the tax system which leads to very high withdrawal rates. With tax and NI at 35% between them, the marginal withdrawal rate for someone on family credit was $80^1/_2\%$. If the same person were in the 20% band of income tax, that withdrawal rate would only fall to 79%. It is disingenuous to claim that the lower-rate band of 20%, or rates even lower than this, have a significant effect on the very high marginal withdrawal rates that can occur at the bottom of the income distribution. They are primarily a feature of the benefit system and not of the tax system.

8.2 Family Credit

Introduction

Family credit was introduced in April 1988 replacing the considerably less generous family income supplement. It is payable to working (employed or self-employed) people who are responsible for at least one child under 16 (19 if still in full-time education). As such, it is an 'in-work' benefit available only where one of the parents is working at least 16 hours a week. Childless families are not entitled to family credit because it is argued that they do not face such strong disincentives to work as their in-work wage would almost always be sufficiently greater than their out-of-work benefit to make employment worthwhile. Family credit is progressively withdrawn as income after income tax and National Insurance contributions rises. The rate of the taper is 70p for every £1 net income earned above the 'applicable amount', which currently stands at £71.70 per week. Once family credit entitlement has been assessed, a family receives the same rate of benefit for six months regardless of most changes in family circumstances.

Since its introduction, the structure of family credit has remained broadly constant; the aim of Family Credit has always been to provide incentives for families with children to enter the labour market without losing all general social security entitlement (i.e. not related to a specific bill such as rent or local tax). There have been some changes: in 1992, the hours rule was lowered from 24 hours to 16 hours a week; and in October 1994, the benefit was extended to include a child-care disregard to help some recipients with child-care costs.

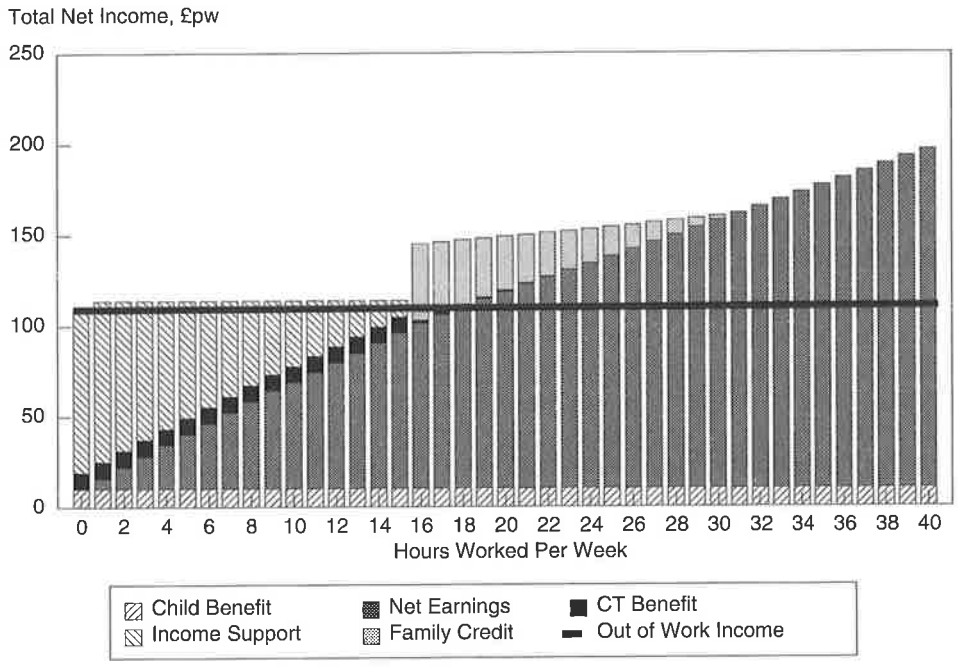
Claimants' Characteristics

The number of family credit recipients has risen steadily from just under 300,000 in 1988-89 to over half a million in 1994-95, and through increasing claimant numbers and inflation, the cost has risen from £394 million in 1988-89, to a planned £1,276 million in 1994-95, and up to £1,600 million by 1996-97. In January 1994, of the half a million claimants, 44% were lone parents, 39% were couples with a male main earner and 17% were couples with a female main earner. The average payment was £46.02 per week, and was greater for lone parents and couples with a female main earner than for couples with a male main earner.

Incentive Effects

The structure of family credit can create a significant jump in net income after tax and benefits for many eligible families at 16 hours of work a week. This arises because a family's earnings plus family credit are significantly higher than their income support amount. This effect is illustrated in Figure 8.1, which shows hours worked along the horizontal axis and net income along the vertical axis. For the purposes of illustration, no rent is assumed. In other words, the graph represents the situation faced by a non-householder or an owner-occupier without a mortgage. The incentive to work 16 hours is clear. Net income jumps once that number of hours is reached.

Figure 8.1
Net Income of Couple on Family Credit, by Hours Worked



Note: Couple, one child under 11, wage £6 per hour.

Figure 8.1 shows the intended operation of family credit, and it is clear from Tables 8.1-8.6 that for some individuals the incentive offered is enough to encourage labour-force participation. The tables also show that family credit is more important to lone parents than to couples with children. Couples often have one individual with earnings potential high enough to keep the family out of the means-tested benefit system altogether. But if they do not, the interaction of housing benefit and family credit can mean that the incentive to work will be much lower, as we discuss later. A couple generally has either one partner able to care for children or two waged partners and greater ability to pay for child-care. In contrast, many fewer lone parents can command salaries high enough to escape the benefit system, and all working lone parents have to provide child-care which is very expensive unless friends, family or highly subsidised care are available. Hence, family credit can provide an invaluable addition to income and make employment possible.

Family credit does not always achieve the goals set out above and sometimes can simply create other inflexibilities in the labour market. Some have even argued that family credit merely provides unscrupulous employers with an ability to reduce wages paid to family credit recipients. If employers did this, it could have little effect on a recipient's final net income because family credit and other means-tested benefit payments increase in response to a wage reduction, so employees might simply accept this exploitation of themselves and the benefit system. There is, however, little evidence of this sort of employer response to family credit. Other criticisms of family credit are more persuasive; these are outlined below alongside some policy options available to the Chancellor.

Child-Care Expenditures

Employment generates its own associated expenses, potentially the most significant of which is child-care expenditure. These fixed costs of work can reduce labour supply and radically alter the incentives faced by individuals. It is perfectly possible for a parent (especially a lone parent) to be worse off as a result of working an extra hour, once tax, benefit withdrawal and additional child-care costs are taken into account, i.e. the marginal tax rate exceeds 100%. The government recognised this fact in last November's Budget and created a £40 per week child-care disregard in family credit (and other related benefits) to address this problem.

This disregard will enable some family credit recipients to offset up to £40 per week child-care expenditure against their income for the family credit means test. This can mean that benefit payments can rise by an amount up to £38.20 per week, if the recipient receives family credit, housing benefit and council tax benefit. However, few women will receive such an increase in their family credit because the child-care disregard has strict eligibility limits and does not alter the maximum amount of family credit payable.

The eligibility criteria fall into two categories: firstly, eligible families must have a child under 11 and use approved care, i.e. a registered child-minder, day nursery or other formal arrangement; and secondly, some family credit recipients are excluded from the disregard because they are assumed to have access to informal child-care. Hence, the disregard will apply only to families who are:

- couples where both are working;

- couples where one is working and the other is incapacitated; or
- lone parents.

That the child-care disregard does not alter the maximum value of family credit payable means that the potential impact of the child-care disregard can be overstated. If a family already receives the maximum amount of family credit (i.e. their net income is lower than the 'applicable amount' of £71.70), offsetting additional child-care expenditure against income for the family credit means test does not alter the outcome - maximum family credit is still received. Hence the poorest recipients of family credit, and those only able to command very low wage rates, will not benefit from this reform because their net income will already be below the applicable amount.

The Department of Social Security estimates that 100,000 families will benefit initially and that an extra 50,000 will become eligible because they will start work as a result of the change. These figures must be treated with extreme caution because of the relatively small numbers involved, and recent work carried out at IFS[2] will suggest the effect could be much more limited than this because of the strict entitlement conditions and families already receiving maximum family credit. Since the reform has just been introduced, it is unlikely that the Chancellor will announce further reforms to family credit to offset child-care expenditure in this Budget, even though child-care expenses will still present very significant barriers to employment, especially for lone parents commanding fairly low wages.

Family Credit Taper and 16-Hour Rule

A persistent criticism of family credit has been the very steep taper of 70% on net earnings for every additional pound of income earned. This can, as shown in Figure 8.1, provide substantial incentives to work 16 hours a week but little incentive to increase hours further. For example, a lone parent working 16 hours (receiving maximum family credit) with a wage of £3.50 an hour would still be receiving family credit if she worked 40 hours a week and hence would face effective tax rates over 70%, for all the potential hours levels above 16 hours a week. This means that though Family Credit has provided a valuable incentive to work 16 hours a week it has also created a new inflexibility in the labour market at this hours level.

A partial response to this problem would be to introduce an earnings disregard to family credit so that more earnings could be disregarded before the family credit taper was applied. A similar policy response would be to increase the 'applicable amount', above which the family credit taper applies. Recent work at IFS for the Equal Opportunities Commission[3] has shown that introducing an earnings disregard of £25 per week would initially cost the exchequer £500 million. Eventual costs could actually be greater than this because incentives would be created for some people to reduce their hours worked.

---

[2] A. Duncan, C. Giles and S. Webb, forthcoming (early 1995).

[3] A. Duncan, C. Giles and S. Webb, *Social Security Reform and Women's Independent Incomes*, EOC, 1994.

Neither of these responses is, however, an actual solution. They simply push the potential problem further up the earnings distribution. The withdrawal of benefits, as we made clear at the start of this chapter, is an inevitable consequence of a social security system.

Incentives for the Childless

Childless couples and childless single people are not entitled to family credit, for reasons discussed earlier. As Tables 8.1-8.6 show, childless couples are more likely to work than couples with children and the same is true but even more pronounced for the single childless compared with lone parents. Nevertheless, many commentators have advocated extending family credit to childless couples to remove the difference in work incentives between childless people and people with children.

We simulated the initial exchequer cost of extending family credit to childless people using our tax and benefit model, TAXBEN2, based on a large and representative sample of people in 1993. We simulated two variants: extending entitlement to all childless people; and extending entitlement to all childless couples and to the single childless aged 25 and over. In both variants, we kept the family credit rates constant but reduced the applicable amount for single childless people to the single person's income support rate. Table 8.7 shows the immediate cost of these reforms, the average gains and the proportion gaining for the relevant groups. We have not simulated the behavioural effect of these reforms.

Table 8.7. Extending Family Credit to Childless Individuals: Initial Effects Only

	Exchequer cost (£ million)	Average gain (£ per week)	Proportion of group gaining
Family credit for all childless individuals	1,700		
Single		3.53	20%
Single-earner couple		1.28	5%
Two-earner couple		0.51	2%
Family credit for couples and singles aged 25 and over	490		
Single		0.86	5%
Single-earner couple		1.28	5%
Two-earner couple		0.51	2%

Young single childless individuals were the principal gainers of the first variant, nearly all of whom were living in their parental home and working relatively short hours to supplement often considerable household living standards. These are not individuals who face serious work disincentives. Hence, simply extending family credit to all childless people in this way would not be desirable, especially given the very high exchequer cost. If the Chancellor were to extend family credit to childless individuals, he would certainly want to restrict the benefits for single people in some way. One

natural solution would be to pay benefits only to those aged 25 and over, thereby massively reducing the cost and targeting single people with the more serious work disincentives. The restriction would be in line with the current distinction between young and older single people in the income support system.

Extending family credit to childless individuals need not, therefore, be prohibitively expensive, and would probably encourage greater labour-force participation. But the Chancellor would have to be convinced that childless people faced serious work disincentives, which from Tables 8.1-8.6 is by no means clear.

Family Credit Administration

An important but often neglected criticism of family credit is that its administration can leave people without adequate income for significant periods of time. When someone with a child receives a job for over 16 hours a week, they are immediately ineligible for unemployment benefit and income support, but any family credit entitlement is not calculated immediately. An individual must claim family credit which should not, but can, be a lengthy process. If they are not able to suffer this temporary loss of income, particularly if they have work expenses such as child-care costs that demand upfront payment, they may not be able to take advantage of their job offer. Moreover, as the family credit formula is complicated and applicants often do not understand their entitlements, the uncertainty of their family credit entitlement can discourage their job search. The Chancellor should therefore seriously consider integrating income support and family credit into one benefit with in-work and out-of-work credits that would not suffer from interim gaps in benefit receipt and so much uncertainty about entitlements once in work. This would also improve take-up of family credit, which has been low since 1988.

Very Low Wages

Family credit is designed to provide income support for working families with low earning power. However, if a claimant's wages are very low, even net earnings plus family credit will not necessarily provide much of an incentive effect to enter the labour market. Given that family credit tops up earnings and there is a maximum available amount of family credit, if wages are too low its effectiveness is diminished. As wage levels for many unskilled workers who left school at 16 have fallen in real terms over the last few years, there is a possibility that family credit will become less effective at helping some people with the lowest earnings potential. Given the aims of family credit, this is clearly a major potential problem. This is more a problem of the labour market than of the family credit system, and is likely to have to be addressed through labour market policies, rather than reform of the social security system.

Second Earners

Tables 8.1 and 8.2 showed that there were a significant number of unwaged individuals living in families receiving family credit in respect of their partner's employment. For these people, there is very little incentive to take a job if they would still receive family credit, because any income they received would lead to their family credit being reduced at a rate of 70%. There is therefore a case for introducing a second-earner disregard for earnings, to enable them to undertake some employment without benefit loss. We used TAXBEN2 to simulate the introduction of a second-earner earnings disregard of £25 per week which we estimate would initially cost £95 million, and would benefit 170,000 people of whom nearly 100,000 would gain more than £10 per week. More importantly, it would provide an incentive for an unwaged individual to take small amounts of employment without additional exchequer cost.

Conclusions

The introduction of the child-care disregard announced in last year's Budget is a very welcome reform which should mitigate some of the costs of child-care for some family credit recipients, although families with the lowest earnings will be disappointed. Other possible reforms, such as a reform of the administration and second-earner disregards, could be beneficial and relatively inexpensive. Extension to childless individuals would not have a major effect on work incentives as disincentives to work for these groups are not that great. However, in conjunction with combining family credit and income support, the extension of family credit to childless householders would not be excessively expensive and would make the benefit system much more transparent.

8.3 Housing Benefit

Background and Spending Levels

Housing benefit will be at the front of the Chancellor's mind this year for two reasons: firstly, because of its structure and the work disincentives that it can impose; and secondly, because of the large and fast-growing share of spending for which it is responsible.

Both the costs of housing benefit and its importance from the point of view of incentives have grown recently as a result of swift rises in rent levels in both the private and public sectors. These have themselves followed government decisions to deregulate the private rented sector and to allow social rents to rise well ahead of inflation towards market levels.

In real terms, spending on housing benefit has risen by four times since 1978-79. Spending on rent allowances, paid to private tenants, has doubled in just the last five years. Estimated spending on HB in 1993-94 was £8.8 billion. Planned expenditure for 1994-95 is £10 billion, representing 12% of the total social security budget.

In 1992-93, 3 million council tenants and 1.3 million private tenants were in receipt of housing benefit. Of these, 63% were also on income support.[4] More tellingly, of the 2.4 million recipients of working age (below 60), a full 76% were on income support. Only 7% of working-age recipients had any income from employment. This is despite the fact that HB is available to low earners as well as to those out of work, and is likely to be due in part to the structure of incentives imposed by HB. The small number of workers receiving HB is illustrated in Tables 8.1-8.6 at the start of this chapter, and, as stressed there, is likely to be an indication that the withdrawal rates imposed are a problem.

The Chancellor will have two separate objectives in mind when he comes to consider policies towards housing and housing benefit. Firstly, he will want to find some way to reduce costs. Secondly, he will want to do something to reduce some of the work disincentive problems associated with housing benefit. It is hard to see how he can make significant steps in either of these directions. To achieve both is likely to prove impossible. Here we concentrate on issues concerned with incentives.

We start by looking at the structure of housing benefit and explaining why it might have an adverse effect on work incentives.

Housing Benefit and Work Incentives

Housing benefit is a means-tested benefit related to income and to rent. If rent rises, entitlement to HB rises; if income rises, entitlement to HB falls. Anybody receiving income support is entitled to housing benefit covering the whole of their rent. Once incomes rise above this level, HB is withdrawn at a rate of 65p for every extra £1 of net income. But this does not imply that the marginal withdrawal rate facing those on the HB taper is 65%. It is rather greater than that because it is 65% after tax and NI have been deducted. Furthermore, virtually everybody receiving HB will also be receiving council tax benefit, which is withdrawn at 20p for every £1 of net income. An extra £1 (gross) earned by someone on HB would result in net income going up as follows:

Gross earnings increase by	£1.00
Income tax rises by	-20p
National Insurance rises by	-10p
Net income	70p
Housing benefit withdrawal (at 65%)	-45½p
Council tax benefit falls by 20% of 70p	-14p
Leaving	10½p

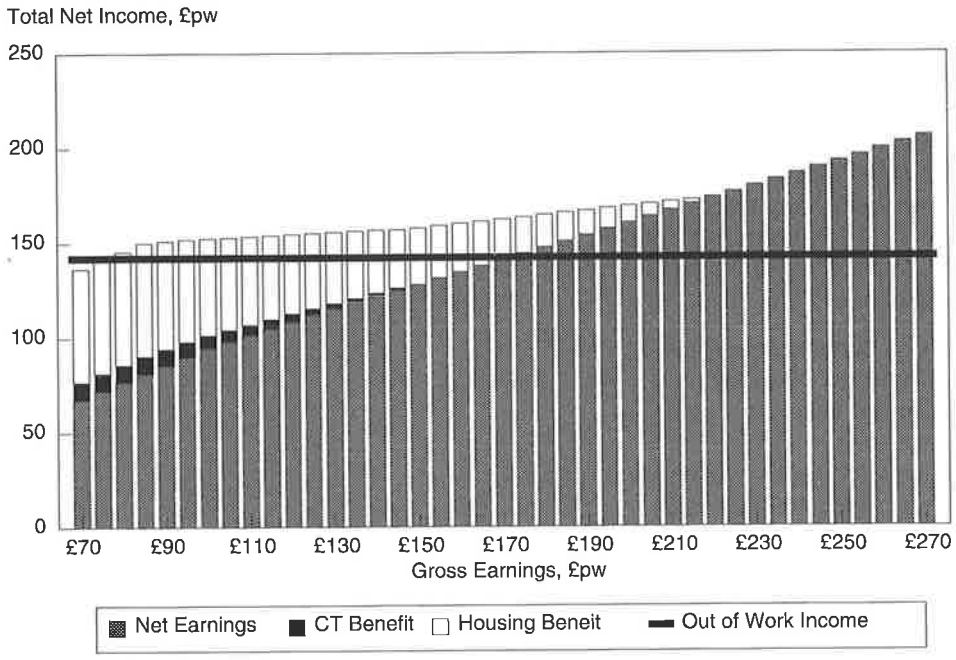
In other words, a marginal rate of 89½% is imposed. For every £1 earned, net income increases by only 10½%p. If family credit is also being received, marginal tax rates increase to over 97%.

[4] Source: *Social Security Statistics, 1993.*

The extent to which these marginal tax rates are a problem depends on the range of income over which they operate. A 90% rate of tax over £20 or £30 of earnings, for example, would not necessarily be a cause for great concern. The problem is that with high rents, relatively high levels of earnings have to be reached before HB entitlement is exhausted and the marginal withdrawal rate falls below 90%. With rent at £50 per week, a single person needs to be earning nearly £160 per week to escape HB, and a couple with two children would need to have earnings of over £240. With rent at £80 per week, the single person would need to be earning £230 and the couple £314, which is approaching national average earnings.

Having said this, it is difficult to estimate just how many people are actually affected. It should be stressed that what we present here are simply example cases. People in precisely the positions described will be facing the high marginal rates described, but it is important to bear in mind that how much of a problem this is depends to a large extent on the number of people who are actually in such situations or, as we argued earlier, are trapped out of work to avoid being in these circumstances. The levels of rent and earnings involved are suggestive of this as a serious problem but do not give a definite indication of its scope.

Figure 8.2
Net Income of Couple on HB



Note: Couple, no children, rent £60 per week.

Of course, not many people are actually in the HB taper. We have already seen that only 7% of working-age recipients have income from employment. But this does not necessarily mean that there is no problem. Given that the rewards to earning within the taper are so low, it is not surprising that very few people do so. An unemployed person will receive income support plus HB covering their full rent. Once employed

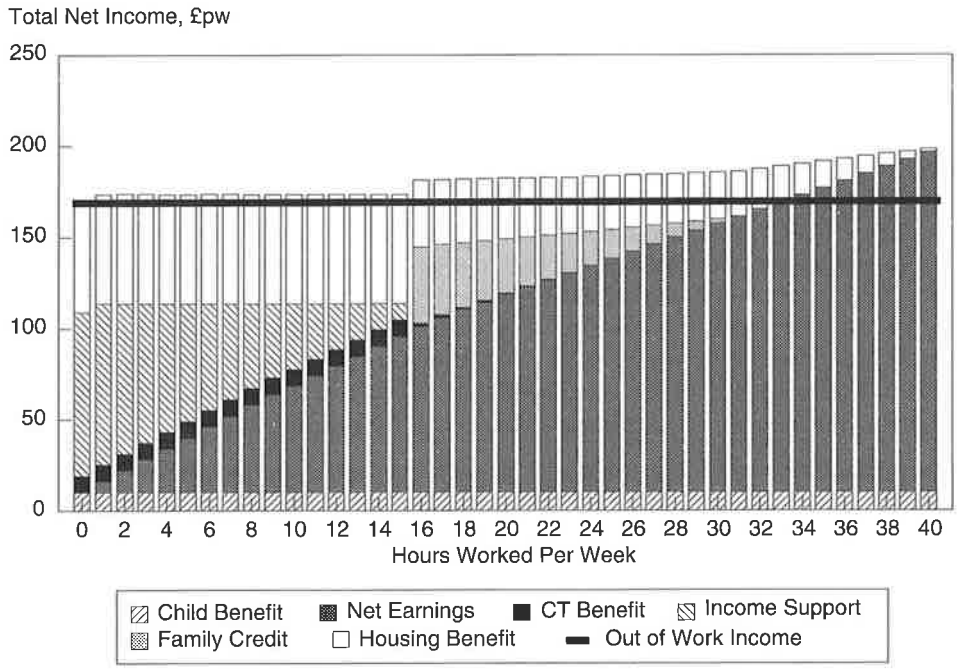
and off income support, individuals can keep £5 (or £10 for a couple), the HB earnings disregard, plus $10^1/_2$p for every £1 of gross earnings above the income support level. So with the income support rate at £71.70 for a couple, the gains to working over a significant range of income are very low when rent is high. This is illustrated in Figure 8.2.

Gross earnings are shown along the horizontal axis and net income on the vertical axis. It is clear that as gross earnings rise by £120, from £90 per week to about £210, net income rises by only about £20. The reward in terms of actual disposable income from significant increases in gross earnings is rather small.

The Interaction of Family Credit and Housing Benefit

The housing benefit means test includes family credit as income for that test, so if a woman becomes eligible for family credit by working 16 hours a week, much of the benefit of additional family credit can be lost by reduced housing benefit and council tax benefit. With a combined taper for these two benefits of 85%, any increase in net income through family credit can be almost entirely offset by reductions in these other benefits.

Figure 8.3
Net Income of Couple on Family Credit and Housing Benefit, by Hours Worked



Note: Couple, one child under 11, wage £6 per hour, rent £60 per week.

This is why there is such a low jump in income at 16 hours in Figure 8.3, which shows the situation for a family with rent of £60 per week. Originally, the aim of family credit was to float families off housing benefit and any local tax benefit, but increasingly, increased rents (in the social and private sectors) and increased local taxes have diminished the incentive effect of family credit for some families.

This is a problem with significant potential to grow as rents, especially in the social sector, continue to rise. With high rents, the housing benefit system will begin to render the family credit system ineffective.

The obvious response to this problem would appear to be to disregard family credit in the calculation of housing benefit. That way, the jump in income at 16 hours would be maintained. However, this is not a plausible option in practice. The problem is that if family credit did not count as income for housing benefit purposes, both family credit and housing benefit would be withdrawn as other income increased. They would be withdrawn independently not taking account of each other's loss. In other words, an extra £1 of net income would result in family credit falling by 70p and housing benefit by 65p, resulting in a loss of 35p. Marginal withdrawal rates well in excess of 100% would be introduced and this would make the reform unacceptable.

A somewhat more plausible reform would be to include a rent credit along with the adult and child credits in family credit. If the rent credit were set equal to actual rent, this would ensure that the income jump at 16 hours was the same for everybody irrespective of their housing costs. Instead of a dual taper for family credit and housing benefit, the latter would cease to exist for families with children working in excess of 16 hours a week. Instead, family credit would perform the tasks that both benefits currently perform and could be withdrawn at a single rate, perhaps higher than its current rate.

Theoretically, this is an attractive option. It does not cause withdrawal rates in excess of 100% and would ensure the maintenance of the family credit work incentive. Its problems lie in its administrative complexity. Currently, housing benefit and family credit payments are handled by two entirely separate bodies (the local authority and the DSS respectively) and there is no need to know housing costs for payment of family credit. Merging the two in the way described above would further complicate the administrative mechanisms and is unlikely to be a candidate for reform in the near future. In the longer term, such a change as part of a more far-reaching reform of the benefit system and its administration could be desirable.

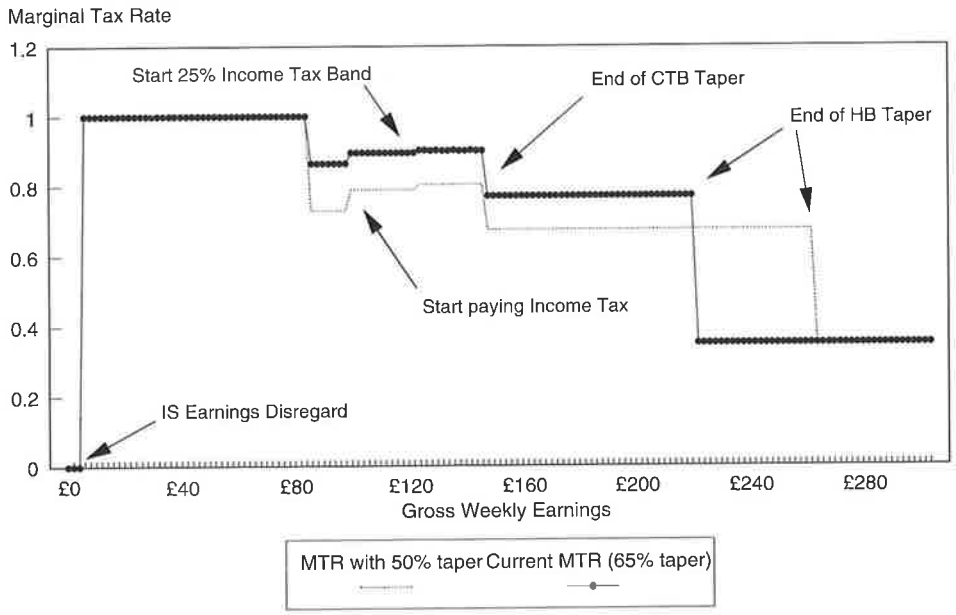
The simplest reform which would largely overcome the problems described would be simply to increase housing benefit earnings disregards for families with children. That way, the income on which housing benefit is assessed would be lowered at the point at which family credit is payable, so people would remain entitled to more of it. This is, of course, rather an indirect route to tackling the problem. It would leave the actual size of the work incentive at 16 hours variable according to the level of housing cost. Nevertheless, it seems to us to be probably the best short-term policy available and it could at least ensure a significant incentive for all.

The first-round costs of increasing the HB earnings disregards for those with children to £40 per week would be about £240 million, according to the IFS tax and benefit model. The numbers initially affected would be 420,000.

Lowering the Taper

An obvious policy response to the high withdrawal rates HB imposes would be to reduce the rate at which HB is withdrawn from 65% to, say, 50% or even less. If the taper were reduced to 50%, the total marginal withdrawal rate for those without children would fall from 89.5% to 79%. Even then, net income would go up by only 21p for every extra £1 of gross earnings. The problem is that this slightly lower, but still very high, withdrawal rate would apply over a greater band of earnings because higher earnings would have to be reached before entitlement to HB is exhausted altogether. This is illustrated in Figure 8.4, which shows the marginal tax rates faced under the two regimes over a range of incomes where a £60 rent is being charged, again for a couple.

Figure 8.4
Marginal Tax Rates of Couple on HB with 50% Taper and 65% Taper



Note: Couple, no children, rent £60 per week.

The initial cost (i.e. not taking account of any behavioural changes which might occur) would be £400 million. The majority of immediate gainers would, in fact, be pensioners, as shown in Table 8.8, which is derived from the IFS tax and benefit model. Pensioners are the most likely actually to be in the HB taper. Obviously, anyone on 100% HB would not be able to gain. Most of those recorded as unemployed who we see gaining would be in the taper as a result of other unearned income such as invalidity benefit or some private pension income. Many of the employed gainers would actually be brought into HB for the first time by a reduction in the taper - an illustration of the effect shown in Figure 8.4 where the HB taper starts to move further up the earnings distribution.

Table 8.8. Number of Tax Units Gaining from Reducing HB Taper

Type of benefit unit	Number gaining more than £1 ('000s)
Unemployed	260
Employed	420
Pensioners	740
Single parents	110

Source: IFS tax and benefit model.

Raising the taper to an even steeper level would, of course, have the opposite effect. Marginal withdrawal rates would be higher initially but the range of income over which they operated would be less.

Increasing Earnings Disregards

Currently it is possible for a single person to earn £5 and a couple £10 per week before affecting their HB entitlement - these are the housing benefit earnings disregards. The simplest way of making work more worthwhile would be to increase these disregards such that income in work clearly rose by comparison with income out of work. Raising the disregards to £10 and £20 would have a first-round cost of about £100 million; raising them to £20 and £40 would cost £370 million. Like the lowering of the taper, such a policy would extend further up the earnings distribution the point at which HB runs out. Much of the cost involved results from people not currently on HB being drawn into it.

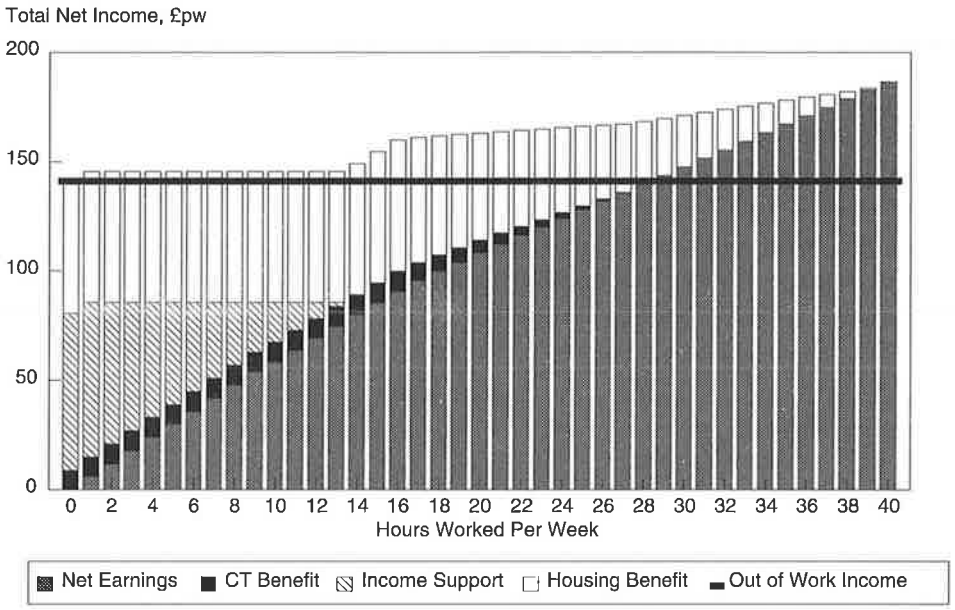
If the disregard applied to income support as well as to HB, the main incentive created would be to work just enough to earn equal to the disregard. Further earnings would be withdrawn pound for pound against income support. If, however, the disregard applied to HB only, then there would be some incentive to work such that earnings equalled the IS line plus the disregard. This is likely to be a realistic level of earnings for low-paid or part-time work of the sort that many individuals on HB would be likely to get. The sort of budget constraint that would be involved is illustrated in Figure 8.5. The incentive to earn up to the income support level plus HB disregard is clear, but still relatively small. Again, beyond that point the returns to earning more are very low. By making work itself more worthwhile than at present, such a policy could have a small positive impact. On the other hand, like lowering the taper, this policy would move the point at which HB runs out further up the income distribution.

Other Housing Benefit Issues

So far we have been looking at the work disincentive effects of the current HB system. There is another aspect of its structure which has attracted a considerable degree of criticism, that is the fact that, for those on HB, the actual level of their rent is immaterial - they gain nothing from moving to properties with lower rent levels. This is a product of the formula for calculating HB:

HB = rent - 65% (income - applicable amount)

Figure 8.5
Net Income of Couple on HB with £20 Earnings Disregard



Note: Couple, no children, wage £6 per hour, rent £60 per week.

where the applicable amount varies according to family size and is generally equivalent to the income support level. (This differs from the family credit applicable amount.) From the formula, it is clear that if rent goes up by £1, so does HB. And, of course, the majority of HB recipients are on income support, so all of their rent is paid anyway.

This is a problem, or potential problem, because it gives no incentive for tenants either to bargain for lower rents with their landlord or to move to cheaper accommodation. Indeed, landlords can raise rents (at least up to agreed market levels) in the knowledge that no ill effects will be felt by their tenants (other than a deepening of the poverty trap). There is no incentive for anyone to minimise costs to the public sector.

Rent officers are employed to ensure that rents charged are not above 'market rents'. If they are, HB is often not paid on the excess above the market level. Additionally, HB should not be paid in respect of property which is excessive to the needs of the tenant. These regulations should offer some protection for the public purse, but it remains the case that the incentives for the individual or landlord to lower rent payments are minimal (except indirectly because of the impact on work incentives).

One possible way (of many) of ensuring that tenants do care about the level of their rent is to change the formula for calculating HB such that an increase in rent will not be fully covered by a pound-for-pound increase in benefit. This could be achieved by reducing the maximum benefit which it is possible to receive from 100% of eligible rent to, say, 80%. The formula could then look like this:

HB = 80% of rent - 65% (income - applicable amount).

The change could be made revenue-neutral by raising income support, HB and council tax benefit allowances and premiums by 10% for those who rent. But of course those with higher-than-average rents would be left worse off. Indeed, the real problem with this sort of policy is that it would systematically redistribute from those in high-rent areas such as London and the South-East to benefit recipients in low-rent areas like the North. The distributional effects of such a policy are shown in Table 8.9, drawn from the IFS tax and benefit model. This shows average income changes for renters in a number of broadly defined regions. Not surprisingly, there are average losses in London and the South and gains elsewhere. Concealed within the averages is a considerable variation, with a significant minority of renters losing quite heavily.

Table 8.9. Average Gain/Loss from Restricting Housing Benefit, and Compensating through Income Support, by Region

Region	Average gain/loss for those who rent (£ p.w.)
Northern England	0.40
Midlands and East Anglia	0.70
Greater London	-1.80
Southern England	-0.60
Scotland	0.80
Wales	0.40
N. Ireland[a]	2.90

[a] Small sample size.

Apart from these distributional problems, an insistence that households pay a proportion of their rent could cause significant problems for rent collection in some sectors and, for that reason, cause serious problems for the government's own proposals to make greater use of the private rented sector in general. If landlords are not guaranteed the full rent through the HB system, then they could be unwilling to let properties to people reliant on HB.

Mortgages and Benefits

There is one other aspect of the benefit system as it relates to housing costs that the Chancellor is likely to have his eye on. This is the payment of the interest on the mortgages of income support recipients. Unlike the system for housing benefit, it is payable *only* to income support recipients and not to anyone else.

For the first 16 weeks on income support, half of mortgage interest payments are payable. After that, the interest is payable in full. Recently, however, limits have been placed on the size of the loan the interest payments on which will be covered by income support. Until August 1993, there were no limits. The limit was then set at £150,000. It was reduced to £125,000 in April of this year. Further reductions are likely.

Around £1.25 billion is spent annually on paying the mortgage interest of income support recipients. In 1993, around 550,000 people with mortgages were benefiting from these payments. The limits to the maximum loan on which interest is paid will have made very little difference to the overall costs or numbers of recipients. In 1993, only around 5,000 people were receiving payments in respect of interest of over £200

per week, which would have been roughly equivalent to a loan in the region of £130,000. To really bite in terms of saving money, it would be necessary to limit the maximum eligible mortgage to nearer half its current level.

In the longer term, it is possible that the Chancellor would like to see help for mortgage interest payments through the benefit system abolished altogether. This would have to involve a much expanded role for the private sector in insuring mortgagers, for the consequences of leaving individuals without any means of paying their mortgage if they should lose their income from employment - widespread repossession - would presumably be socially unacceptable.

It would probably be necessary for those purchasing a property with a mortgage to take out compulsory insurance against defaulting as a result of becoming unemployed. It would probably have to be compulsory because if it were not, only those concerned about becoming unemployed - high risks from the point of view of insurance companies - would take it up. This would raise the cost of premiums which would hit those in need of the insurance - generally those on low incomes - hard. This is the adverse selection problem central to any voluntary insurance scheme designed to replace income during periods of unemployment.

Conclusions

Helping those on low incomes with their housing costs is a complex problem. The increasing levels of expenditure on housing benefit over the past few years have reflected increased levels of receipt, themselves associated with increasing rent levels. This has led to an increase in the range of earnings over which HB is applicable and therefore to a widening and deepening of the possible disincentive effects.

We have shown that the greatest problem with housing benefit for work incentives relates to its very high withdrawal rates that can stretch over wide bands of potential family incomes. This also diminishes the effectiveness of family credit. We suggested a short-term solution of increasing earnings disregards in housing benefit for families with children. We also analysed some of the other trade-offs associated with reducing the withdrawal rates or the proportion of rent covered by HB. However, the incentive problems of HB stem directly from the government's policy of market rents backed up by personal subsidies which have forced rents in the social sector to historically high levels.

Tackling some of the disadvantages of HB and its potential effects on incentives to work will therefore be difficult without reversing government policy on rent levels, causing severe hardship to some HB recipients or spending substantially more money. None of these major policy shifts is very likely to happen this November.

Appendix 1: Forecasting the PSBR

This appendix outlines our methods used to estimate government revenues for 1994-95 and 1995-96, to estimate reasonable public spending paths, and to forecast the PSBR into the medium term under a number of economic scenarios. Initially, we consider the accuracy of last year's forecasts and methodological changes from previous IFS Green Budgets.

November 1993 Forecast: Errors and Methodological Changes

The move to a November Budget implied that the current year PSBR forecast presented in the Green Budget last year was likely to be less accurate than previously, because forecasts were made earlier in the financial year when less information was available. Table A.1 shows a breakdown of the errors made by IFS and the Treasury in the FSBR for 1993-94, and differences between forecasts for the 1994-95 PSBR made last autumn and those in the new Summer Economic Forecast, published by the Treasury in June.

Table A.1. Breakdown of forecast errors for 1993-94 and forecast differences for 1994-95

	IFS Green Budget October 1993	FSBR November 1993	Summer Economic Forecast June 1994
1993-94			
General government receipts	229.7	229.7	232.3
General government expenditure	280.3	280.7	278.9
PSBR	49.6	49.8	46.0
1994-95			
General government receipts	252.1	252.4	254.3
General government expenditure	296.1	291.8	291.6
PSBR	43.0	37.9	36.1

Note: PSBR figure does not represent the difference between receipts and expenditures because the net public corporation borrowing requirement must be added to achieve this figure. General government expenditure figure is net of privatisation receipts.

Source: HM Treasury, *Financial Statement and Budget Report (1994-95)*; HM Treasury, *Summer Economic Forecast*; IFS, *Options for 1994: The Green Budget.*

The IFS Green Budget estimate of the PSBR in 1993-94 was very similar to that published by the Treasury despite being two months earlier. The difference between these two forecasts and the eventual outcome was largely explained by one-off factors such as lower net capital expenditure by local authorities, reflecting higher-than-expected capital receipts, and higher-than-expected receipts of council tax and community charge arrears. On the expenditure side, part of the undershoot in expenditure was accounted for simply by a change in the timing of European Union net contributions.

For 1994-95, however, our PSBR forecast was £5.1 billion higher than that of the FSBR and £6.9 billion higher than that of the Summer Economic Forecast. The additional difference between the two government forecasts has been caused by an uprating of receipts forecasts in the first half of 1994, while almost all of the difference between our forecast last year and the FSBR forecast was caused by an underestimate of the government's ability to control public expenditure. In this year's Green Budget PSBR forecast, therefore, we have overhauled our method of deriving public spending estimates so they no longer rely on published government spending plans. In addition, we have carried out further work on income tax elasticities because this tax still raises significantly more than any other UK tax.

A1.1 Fiscal Year 1994-95

There is no doubt that this year the PSBR will be lower than last. After five years of deteriorations in its budgetary position, the government will enjoy the benefits of an expanding economy giving increased tax revenues, the effect of significant increased tax revenues from the two Budgets of 1993, and low inflation that will enable the government to cut previous nominal expenditure plans.

Revenue Estimates

Table A.5 shows a selection of forecasts for the government revenues for the current year. Government forecasts from the **Summer Economic Forecast** of late June 1994 are shown in the first column. The second column uses the tax receipts information available in mid-September to predict the financial year out-turn for the whole year. We have data to August for the main taxes, accounting for two-thirds of revenues, and data to July for other receipts. This **current receipts** method allows for the expected seasonal fluctuation and stable growth in receipts but not for accelerating or decelerating receipt growth. Estimates from the Summer Economic Forecast are used for some expenditures and revenues where monthly breakdowns are unavailable or the seasonal pattern is highly erratic.

Modelled estimates are shown in the third column. These are derived from forecasts of the change in tax 'bases' (such as personal income for income tax and consumers' expenditure for VAT) coupled with information from the analysis of aggregate data and IFS microeconomic models as to the rate of change of revenues with respect to rates of change in the tax bases.

In the final column, we present our judgemental view, giving our **forecast** of what we expect the government to present on Budget day.

Current Receipts Forecasts

The current receipts method uses the following formula to estimate revenues for the whole year based on data available for receipts so far:

$$1994-95 \quad forecast \quad = \quad \frac{April-August \quad 1994 \quad outturn}{April-August \quad 1993 \quad outturn} \quad * \quad 1993-94 \quad outturn \qquad (1)$$

Although expected seasonal patterns are accounted for, the estimates are, of course, sensitive to one-off fluctuations and changes in GDP growth; for example, this forecast would underestimate revenues in a year with accelerating GDP growth compared with the previous year, as is currently the case. The timing of tax payments causes further problems, when taxes are collected in 'lumps' at certain times of the year. Table A.2 gives the proportion of the total annual tax take received by this time last year.

Table A.2. Proportion of Annual Revenues Received by August 1993

Revenue	Tax received
Income tax	40%
Corporation tax	29%
Capital gains tax	10%
Inheritance tax	23%
Stamp duties	24%
VAT	39%
Other Customs and Excise	25%
Vehicle excise duty	25%
National Insurance contributions	42%

Source: Monthly revenues from *Financial Statistics*.

For income tax, corporation tax, VAT and National Insurance contributions, we use data to August. Around 40% of annual tax is usually collected by this time of year, except for corporation tax, where receipts are concentrated in 'lumps', in January, April, July and October. We only have receipts data for two of these months, and these do not include the two largest receipts. For other receipts, we use data to July, meaning the proportions collected are smaller (around one-quarter), except in the case of capital gains tax, where receipts are concentrated at the end of the calendar year. These factors must be taken into account when considering the accuracy of the current receipts forecasts in Table A.5.

Modelled Forecasts

For all taxes except income tax, the modelled forecasts use the following formula to link changes in economic aggregates with changes in tax revenues:

$$\text{1994-95 revenues} = \text{1993-94 revenues} * \left\{ \frac{\text{1994-95 base}}{\text{1993-94 base}} * \text{Elasticity} \right\}. \qquad (2)$$

The relevant bases for each tax are given in Table A.3. Nominal values form the base for taxes on incomes and profits and for *ad valorem* taxes on spending, like VAT. Real expenditure is the base for other excise duties, which are specific taxes independent of the value of the good. Table A.3 also shows the elasticity assumptions used, linking changes in the base with changes in revenue. We have analysed both aggregate data

on receipts and changes in the tax base (adjusted for tax reforms) for the past 20 years, and detailed IFS micro models of different parts of the tax system, to estimate elasticities.

We found that income tax revenues on our elasticity assumptions of previous years could not distinguish between alternative reasons for changes in the income tax base, such as the differential effects on income tax revenues of employment growth versus wage growth. Therefore, we use a more sophisticated technique based on a cointegrating relationship between income tax receipts and nominal wage growth. Elasticities of income tax revenues to nominal wage growth, one-period-lagged employment growth and the proportion of part-time employees in the labour force are generated in an Engle-Granger-style error-correction model. Table A.3 also gives the parameter estimates for these income tax revenue elasticities.

Table A.3. Tax Bases and Elasticities for Model Forecasts

Tax	Base	Elasticity
Income tax	Nominal wage growth	1.56
	Lagged employment growth	1.18
	Proportion of part-time employees	-0.26
	Lagged error-correction term	-0.22
Corporation tax	Nominal gross profits	1.20
VAT	Nominal consumers' expenditure	1.10
National Insurance	Nominal wage bill	1.05
Petrol	Real consumers' expenditure	1.40
Tobacco	Real consumers' expenditure	0.35
Beer	Real consumers' expenditure	0.85
Wines	Real consumers' expenditure	1.50
Spirits	Real consumers' expenditure	0.95

Table A.4 gives our working assumptions about the out-turn for the macroeconomic aggregates that form the tax bases outlined above. Recent evidence suggests that the out-turn for the economy for both 1994-95 and 1995-96 will show considerably faster growth than that envisaged in the FSBR or the Summer Economic Forecast. We also forecast lower inflation, as measured by the GDP deflator, than that in government publications. Consequently, our underlying forecast for money GDP is very similar to the government's, but this is a mere coincidence driven by our more favourable price-volume mix in money GDP. The government assumed real GDP growth of 3% in 1994 and inflation measured by the GDP deflator was assumed to be 3%.

The final column in Table A.4 shows the sensitivity of our modelled estimates. It shows the effect on government revenues of a 1 percentage point change in the macroeconomic assumptions. For example, if wage growth is 4.3% rather than 3.3%, £1.4 billion extra government revenue would be generated. The extent of the sensitivity depends on the size of the tax elasticities and the proportion of total revenues raised by taxes related to the changed tax base. Revenue predictions based on the elasticities in Table A.3 and the macroeconomic assumptions in Table A.4 are given in the third column of Table A.5, adjusted for the effect on revenues of Budget measures announced in 1993.

Table A.4. Macroeconomic Assumptions and Sensitivity Analysis

	1994-95 (% growth)	1995-96 (% growth)	Sensitivity (£ billion)
GDP	3.7	3.5	n/a
Wages	3.3	4.7	1.4
Consumer prices	2.6	3.1	1.0
Consumers' expenditure	2.2	2.6	0.7
Employment	0.8	2.2	0.4
Corporate profits (previous year)	14.9	16.0	0.2

Note: The sensitivity of revenue predictions to a 1 percentage point change in GDP forecasts varies depending on which component part has led to the change in GDP.

Revenue Forecasts for Fiscal 1994-95

Nominal **income tax** receipts grew last year (1993-94) by 3.3%, significantly more than had been expected at Budget time last year. The rapid recovery in income tax receipts is explained by the stronger recovery of economic growth and cessation of falling employment levels. Though budgetary increases in income tax in the March and November 1993 Budgets did not affect the level of 1993-94 receipts, they will have strong and positive effect on income tax revenues in 1994-95. Freezing allowances throughout 1993, restricting the married couple's allowance and mortgage interest relief to 20%, reduced income tax credits for exempt and higher-rate taxpayers (to offset the fall in the advance corporation tax (ACT) rate from 25% to 20%), and other smaller measures will increase income tax revenues by over £3 billion in 1994-95. This gain in revenues is mitigated slightly by a revenue loss of £420 million stemming from increasing the lower-rate band to £3,000.

The current receipts method of forecasting income tax receipts would be expected to fall well below Treasury estimates at this point in the financial year because monthly revenues are accelerating and the revenue gains from the reduced ACT credits for exempt and higher-rate shareholders will concentrate towards the end of the financial year to coincide with the bulk of dividend payments at the accounting year end. Hence we expect the Treasury Summer Forecast estimate of £65 billion to be the best estimate of income tax revenues this year, despite it being slightly more optimistic than our modelled estimate. This implies a 7% nominal rise abstracting from Budget changes.

Corporation tax revenues were the biggest recession victim in the public sector accounts. Although they did not sink right down to the government's 1993-94 forecast of £14.6 billion, last year's out-turn of £15 billion was the lowest receipt of corporation tax since 1986-87. The government forecast a further fall to £14.6 billion for this year. This partly reflected budgetary reductions in revenues including a temporary cash-flow loss of £1 billion from the reduction in the rate of advance corporation tax, but principally highlights the volatility of profits with respect to the economic cycle.

Table A.5. Government Revenues 1994-95

	Summer Economic Forecast	Current receipts	Modelled	IFS forecast
Income tax	65.0	63.1	64.4	65.0
Corporation tax	18.8	15.6	17.7	18.0
Petroleum revenue tax	0.5	0.0	0.7	0.7
Capital gains tax	0.9	0.4	0.7	0.7
Inheritance tax	1.4	1.5	1.3	1.3
Stamp duties	1.9	2.0	1.7	1.9
Total Inland Revenue	**88.5**	**82.6**	**86.6**	**87.6**
VAT	43.4	43.8	42.1	43.4
Petrol	14.3	14.8	14.8	14.9
Tobacco	6.9	6.9	7.3	7.0
Alcohol	5.6	5.9	5.5	5.5
Betting and gaming	1.2	1.1	1.2	1.2
Customs duties	2.1	1.9	2.1 *	2.1
Agricultural levies	0.2	0.2	0.2 *	0.2
Air passenger duty	0.1	0.1 *	0.1 *	0.1
Insurance premium tax	0.2	0.2 *	0.2 *	0.2
Total Customs and Excise	**73.8**	**75.0**	**73.4**	**74.5**
Vehicle excise duties	3.9	3.6	4.0	4.0
Oil royalties	0.5	0.5 *	0.5 *	0.5
Rates	12.7	12.7 *	12.7 *	12.7
Other taxes and royalties	5.9	5.9 *	5.9 *	5.9
Total taxes and royalties	**185.4**	**180.3**	**183.1**	**185.3**
National Insurance contributions	42.9	40.4	41.5	42.9
Council tax	8.6	8.6 *	8.8	8.6
Interest and dividends	5.4	5.4 *	5.9	5.4
Gross trading surplus and rent	4.5	4.3	4.7	4.7
Other receipts	7.5	7.5 *	7.5 *	7.5
General government receipts	**254.3**	**246.5**	**251.5**	**254.4**

Note: * signifies a figure taken from the Treasury's Summer Economic Forecast.

Consequently, rapid profit growth in 1993-94 of 14.9% will see a marked improvement in corporation tax receipts this financial year. Our current receipts figure represents a poor guide to the likely outcome because only a small proportion of total revenues have so far been collected. Our modelled receipts figure represents an 18% increase in revenues but even this increase is lower than that predicted in the Summer Forecast. We felt that though our estimates may be too low, on the basis of known profit levels last year, we forecast a slightly lower receipt level for corporation tax.

With almost 40% of revenues already collected, **VAT** receipts appear very buoyant this year. However, consumers' expenditure growth, which was particularly strong in the first few months of this financial year, has slowed recently, implying the current receipts figure is most likely to overestimate final receipts. Therefore, our judgemental forecast reflects a slightly more cautious out-turn to reflect slower consumption growth in the late summer and autumn. Our judgemental forecast implies that, excluding the £1 billion received this year from the first phase of VAT on domestic fuel and power, nominal VAT receipts excluding Budget changes will be 8% higher this financial year. This seems reasonable, given the 6% increase in nominal VAT receipts last year and nearly 3% consumers' expenditure growth this year.

Overall, Customs and Excise duties are coming in much faster than government expectations in the Summer Economic Forecast. This is accounted for predominantly by petrol and alcohol revenues exceeding government forecasts. Our modelled forecasts take account of the very large increases in excise duties in the last and in the current financial years, and we generally accept those figures for our judgemental forecast because the change in timing of the Budget altered the seasonal pattern of excisable goods leaving bonded warehouses, which has made the current receipts forecast volatile this year.

National Insurance contribution receipts have so far come in under the government forecast, indicating on our current receipts measure a £2.5 billion shortfall. However, receipts are accelerating, so we believe the financial year's out-turn will be similar to the Treasury forecast, which forms our judgemental view.

Overall, we believe our two short-run forecasting methods underestimate the likely **general government receipts** out-turn. Therefore our judgemental forecast shows significantly higher receipts, slightly higher even than the Treasury's Summer Economic Forecast.

Expenditure Estimates

In previous years' Green Budgets, we have usually assumed that the best estimate for **public expenditure** was that the government stuck to the previously announced expenditure plans. However, in 1993-94, a year of low inflation, the government managed to reduce the level of nominal spending within the new control total (NCT) in the Budget by £0.4 billion. This was achieved in the main by not allocating all of the reserve for that year. The final outcome for the NCT was another £2 billion lower than expected in the FSBR, although some of this reduction related solely to timing of EU net contributions.

Table A.6. Government Expenditure 1994-95

	Summer Economic Forecast	IFS forecast
New control total	**251.3**	**247.6**
Cyclical social security	14.6	13.9
Central government debt interest	22.4	22.6
Accounting adjustments	8.9	8.9 *
Privatisation proceeds	-5.5	-5.5 *
General government expenditure (including privatisation proceeds)	**291.7**	**287.5**

Note: * signifies a figure taken from the Treasury's Summer Economic Forecast.

Additionally in the November 1993 Budget, the government decided not to allocate the reduction in the 1994-95 reserve to spending departments in the normal way, thereby reducing the NCT for 1994-95 by £3.6 billion. On past experience, our Green Budget estimates assumed that the government would not spend less than previous plans, which is now clearly at odds with what happened. Two reasons seem to explain the Chancellor's ability to reduce spending in the last Budget. Firstly, low inflation meant that the government could reduce previous nominal spending plans without necessarily cutting real government spending levels. It also reduced pressure on pay and social security benefits. Secondly, there was undoubtedly a very tough public spending round in 1993.

Our new methodology for forecasting public expenditure takes the implied real growth (reduction) in NCT expenditure from the FSBR, and attaches this implied real growth to our forecast of the GDP deflator. The formula for our forecast is shown below. In the FSBR, the real 1994-95 level of the NCT was planned to fall by 1.3% from the 1993-94 level set out last November. Given our more favourable forecast for inflationary pressures (GDP deflator forecast to grow 2.5% rather than 4%), on unchanged policy, the Chancellor will have to announce a cut in nominal spending plans for 1994-95 of £3.7 billion. A saving of this magnitude could be achieved, for example, by not allocating the rest of the 1994-95 reserve. In this estimate, we have assumed the £2 billion undershoot of expenditure in 1993-94 was not consolidated into government expenditure because much of the undershoot reflected timing changes and not genuine expenditure reductions.

$$\text{NCT 1994-95} = \text{NCT 1993-94} * \left(\frac{\text{Real NCT 1994-95}}{\text{Real NCT 1993-94}}\right) * \left(\frac{\text{GDP deflator 1994-95}}{\text{GDP deflator 1993-94}}\right). \quad (3)$$

We also developed a new practice for the forecasting of the cyclical social security spending component of general government expenditure. Our forecast uses the published FSBR figure and subtracts from this the difference between the government's unemployment claimant count and our forecast of claimant unemployment, multiplied

by a rough cost of unemployment benefits of £350 million for each 100,000 unemployed. Our assumptions for the government debt interest reflect the outstanding level of debt and are almost identical to the Summer Economic Forecast.

Overall, we expect **general government expenditure** to be £6.3 billion lower than that announced in the FSBR for this financial year, although we are fairly cautious about this figure because it is not yet clear whether last year's reduction in public expenditure was a one-off or whether, given lower-than-expected inflation, the government can continue to reduce nominal spending plans.

Public Sector Borrowing Requirement

Our overall forecast is that the **PSBR** will be significantly lower than the Summer Economic Forecast figure of £36.1 billion, due almost entirely to the ability of the Chancellor to cut nominal spending plans while keeping the level of real spending the same as announced in the November FSBR. The fact that we have very similar revenue estimates is merely a coincidence reflecting our similar estimates of money GDP, which conceals a very different price/volume mix.

We would suggest our estimate of a PSBR for 1994-95 of £31.9 billion is the most probable scenario given no policy change, although it remains to be seen whether the Chancellor can keep public spending on last year's forecast real path.

Table A.7. Public Finances 1994-95

	Summer Forecast	IFS Forecast
General government expenditure (including privatisation proceeds)	**291.7**	**287.5**
General government receipts	**254.3**	**254.4**
Public corporations borrowing requirement	-1.2	-1.2
Public sector borrowing requirement	**36.1**	**31.9**

A1.2 Fiscal Year 1995-96

The public finances in 1995-96 are again projected using a variety of IFS micro-modelled elasticities from Table A.3 and our macroeconomic working assumptions, given in Table A.4.

We expect the economy in 1995-96 to be very strong, with GDP rising by some 3.5% over the year. The strong growth creates some inflationary pressure which pushes consumer price inflation up from 2.6% to 3.1%. Profit growth rises to very high levels and employment growth also picks up to 2.2%. The impact of this scenario on the public finances is given in Table A.8, which is the equivalent of Table 6.5 in the Budget

FSBR. The two columns for 1995-96 relate to two different spending assumptions. Overall, we show the PSBR falling from around £32 billion to between £20 billion and £25 billion depending on which spending assumption is used.

The most significant element in reducing our estimate for the PSBR in 1995-96 over 1994-95 is a rapid recovery in revenues from Inland Revenue taxes. We expect **income tax** revenue to grow by over 10%. The combination of stronger wage and employment growth and changes announced in the 1993 Budgets will generate the additional revenue from these two sources. In particular, income tax revenues will benefit in 1995-96 from the restriction of the married couple's allowance and mortgage interest relief to 15%, frozen allowances in 1994 and the final gain to income tax revenues from reducing the advance corporation tax rate to 20%.

Corporation tax revenues are predicted to recover very strongly, with growth in revenues of 25% over 1994-95. This extra revenue arises from a leap in forecast corporate profits in 1994-95, and pushes the revenue from corporation tax back to levels not received since 1990.

Customs and Excise receipts also rise by over 10%. They benefit from a 2.9% increase in consumers' expenditure and rising inflation from 2.6% to a predicted 3.1%, but much of the rise in receipts arises from budgetary measures from the 1993 Budgets. The increase in the rate of **VAT** on domestic fuel from 8% to 17.5% adds a further £1.35 billion to VAT receipts. Excise duties also show substantial increases in revenue, resulting from duties on petrol and derv being increased by 5% more than inflation and those on tobacco products being increased by 3% in real terms. In addition, the new insurance premium tax and air passenger duty will raise £1 billion in their first full year, 1995-96.

We have presented two assumptions for the level of public expenditure. Scenario A assumes the **new control total** (NCT) will grow in real terms at the rate implied by the November 1993 Budget. This implies a real growth in NCT spending of 0.9%. Scenario B assumes that the government increases real NCT spending further by 2% per year from 1995-96 up to and beyond the general election that would occur in 1996 or 1997.

With tax revenues rising at 11% and spending rising much less quickly at 4.1% under scenario A and 5.1% under scenario B, the **PSBR** (on unchanged policies) is forecast to fall to £21.4 billion in 1995-96 under scenario A and £24.3 billion under scenario B. Both these scenarios show considerably lower PSBR in 1995-96 than the Summer Economic Forecast of £27.9 billion. The difference between our forecast and the Treasury's again arises from public spending and not tax receipts, where we have remarkable similarity. Again, this reflects similar money GDP forecasts while concealing considerable differences in our forecast of real and nominal variables.

Table A.8. The Public Finances 1994-95 and 1995-96

(£ billion)	1994-95	1995-96 A	1995-96 B
Income tax	65.0	72.7	72.7
Corporation tax	18.0	22.6	22.6
Petroleum revenue tax	0.7	0.8	0.8
Capital gains tax	0.7	0.8	0.8
Inheritance tax	1.3	1.4	1.4
Stamp duties	1.9	2.0	2.0
Total Inland Revenue	**87.6**	**100.3**	**100.3**
VAT	43.4	47.5	47.5
Petrol	14.9	16.7	16.7
Tobacco	7.0	7.6	7.6
Alcohol	5.5	5.8	5.8
Betting and gaming	1.2	1.2	1.2
Customs duties	2.1	2.1	2.1
Agricultural levies	0.2	0.2	0.2
Air passenger duty	0.1	0.3	0.3
Insurance premium tax	0.2	0.7	0.7
Total Customs and Excise	**74.5**	**82.2**	**82.2**
Vehicle excise duties	4.0	4.2	4.2
Oil royalties	0.5	0.5	0.5
Rates	12.7	13.2	13.2
Other taxes and royalties	5.9	6.1	6.1
Total taxes and royalties	**185.3**	**206.5**	**206.5**
National Insurance contributions	42.9	46.2	46.2
Council tax	8.6	8.9	8.9
Interest and dividends	5.4	5.6	5.6
Gross trading surplus and rent	4.7	4.9	4.9
Other receipts	7.5	7.7	7.7
General government receipts	**254.4**	**279.8**	**279.8**
New control total	**247.6**	**257.8**	**260.6**
Cyclical social security	13.9	13.3	13.3
Central government debt interest	22.6	24.0	24.0
Accounting adjustments	8.9	10.0	10.0
General government expenditure	**293.0**	**305.0**	**307.9**
Privatisation	-5.5	-2.5	-2.5
General government borrowing requirement	33.1	22.7	25.6
Public corporations borrowing requirement	-1.2	-1.3	-1.3
Public sector borrowing requirement	**31.9**	**21.4**	**24.3**

Notes: A - real new control total growth in line with 1994-95 FSBR.
B - 2% real new control total growth in 1995-96.

A1.3 The Public Finances in the Medium Term

The previous sections have shown that in the short term, the outlook for the PSBR is rapid recovery in the government's financial position, due to rapid growth and very extensive tax increases imposed in this and the next financial year. Were the tax rises too large? Is there scope for tax reductions before the next election? To attempt to answer these questions, we need to project the path of the PSBR into the medium term.

Table A.9 gives a summary of our macroeconomic working assumptions. We expect the recovery that started in mid-1992 to continue strongly into the medium term. The growth rate is predicted to peak in 1994-95 at 3.7%, well above the UK trend growth rate. After this, it settles at around 3%, which, though above the UK historic trend, is forecast to be sustainable into the medium term without exceptionally strong inflationary pressures. Growth in the GDP deflator rises year on year but does not hit the 4% ceiling until the final year of the forecast. Inflation is higher than government desires to be within the lower half of its 0-4% range at the end of this Parliament. Employment is forecast to start to grow this year, peak in 1995-96 and settle at 1% per year into the medium term.

Table A.9. Alternative Macroeconomic Working Assumptions

(% growth)		1994-95	1995-96	1996-97	1997-98	1998-99
GDP	Optimistic	3.8	4.0	4.0	4.0	4.0
	Baseline	3.7	3.5	2.8	2.8	3.0
	Pessimistic	3.3	2.0	2.0	2.0	2.0
GDP deflator	Optimistic	2.6	3.6	4.9	6.4	7.7
	Baseline	2.5	3.2	3.5	3.7	4.0
	Pessimistic	2.5	2.7	2.0	0.7	0.0
Employment	Optimistic	1.0	2.5	2.0	2.0	2.0
	Baseline	0.8	2.2	1.5	1.0	1.0
	Pessimistic	0.6	1.2	0.5	0.5	0.5

Even short-term macroeconomic forecasting is difficult, and medium-term macro forecasts are littered with perils. Therefore, we also present alternative economic scenarios to complement our baseline forecast. The pessimistic scenario is that the economy will not catch up to previous trend levels of GDP and the economy will grow at 2% into the medium term. Consequently, employment growth is slow at 0.5% and inflationary pressures subside and, by the end of the period, die. On the optimistic scenario, economic growth remains significantly above trend into the medium term. This creates an inflationary scenario, in which the GDP deflator rises out of its target range to end the period well above the ceiling at nearly 8% per year.

Using macroeconomic variables (a subset of which are shown in Table A.9) and the elasticities in Table A.3, we estimate **government revenues** into the medium term. We have assumed annual revalorisation of excise duties and indexation of income tax allowances and thresholds. The impact of the 1993 Budget, including uprating fuel excise duties by 5% and tobacco duties by 3% more than inflation in future Budgets, has also been taken into account. Otherwise, the structure of the tax system remains unchanged and no estimates have been included for possible further increases or decreases in tax revenues resulting from future Budgets.

We present two alternative scenarios for the **spending side** on the same basis as in the last section. Spending is difficult to predict because government spending is determined by government policy and historical spending patterns as well as macroeconomic variables. It is clear that higher inflation presents governments with public spending pressures through increased wage demands, social security payments and bills for goods and services. On the other hand, faster growth can alleviate some spending pressures, particularly in social security. We have attempted to capture both of these features in two spending scenarios, each with their own optimistic and pessimistic alternatives.

Table A.10. The Public Finances in the Medium Term: The Government Sticks to Present Plans for Real New Control Total Growth

(£ billion)	1994-95	1995-96	1996-97	1997-98	1998-99
Inland Revenue	88	100	112	123	134
Customs and Excise	75	82	89	96	104
General government receipts	254	280	304	327	352
Control total	248	258	270	282	297
General government spending	293	305	318	332	347
Privatisation	-6	-3	-1	-1	-1
PSBR	32	21	12	2	-7

The first scenario (scenario A from the previous section) can be viewed as a no policy change scenario. The Chancellor announced in the November Budget that he intended to cut real new control total (NCT) spending in 1994-95 by 1.3% and for future years expected it to grow in real terms by only 1% per year. However, spending plans are presented in nominal terms, so if the Treasury's inflation assumption is flawed, and the government sticks to its nominal spending plans, the desire to see real NCT growth of 1% per year cannot be met. To succeed in sticking to its declared policy, the government must treat nominal spending plans flexibly, increase them when inflation is higher than forecast and reduce than when inflation undershoots. Our first scenario, therefore, pegs real growth in the NCT to that outlined in the 1994-95 FSBR, and adjusts nominal spending levels accordingly. The formula is shown in equation (3). Under this scenario, we also adjust cyclical social security to reflect lower unemployment levels than are used in government projections which keep the

underlying claimant number unchanged regardless of the performance of the economy. Finally, we adjust the level of debt interest to reflect total outstanding debt, given different PSBR paths.

Under the second scenario (scenario B in the previous section), we assume that political pressures and historical precedent will force the government to increase spending above real plans towards the end of the Parliament. Therefore we set real NCT spending growth at 2% from 1995-96, in time for an election in 1996 or 1997. This increase on 1% real growth outlined in the 1994-95 FSBR is a modest discretionary rise in expenditure that would be relatively easy for a Chancellor to introduce, particularly if inflation undershoots forecasts so nominal spending plans do not have to be changed. In this scenario, we adjust cyclical social security and debt interest in the same way as under the first scenario.

The two scenarios generate two **PSBR projections** into the medium term. The baseline forecast under the first scenario is shown in Table A.10, which suggests that if the government stuck to its real NCT plans, the PSBR would fall rapidly in the medium term to £21 billion (2.9% of GDP) in 1995-96, £2 billion in 1997-98 and a surplus of £7 billion (1.0% of GDP) by the end of the forecast period. Tax revenue is buoyant given fast GDP growth and at least £20 billion of tax increases by the end of the period from the two 1993 Budgets. General government expenditure (GGE) is initially lower than predicted in the FSBR but as our inflation forecast exceeds government projections at the end of the forecast period, the final year's GGE almost matches that in the FSBR. For comparison, our last medium-term PSBR projection in the Green Budget (October 1993) showed a baseline forecast using the same scenario for the 1997-98 PSBR of £11 billion, or 1.4% of GDP, compared with £2 billion now. This baseline PSBR projection has therefore fallen modestly due to a combination of additional tax increases from the November 1993 Budget, slightly more optimistic growth assumptions and a more optimistic assumption on the control of public expenditure.

Table A.11 shows the medium-term PSBR projections on the basis of our second scenario, that the government increases real NCT spending growth by 2% from 1995-96. This also shows a steadily falling PSBR throughout the forecast period, although at a slower rate, to reach £5 billion (0.4% of GDP) by the end of the forecast period. On this scenario, our GGE forecast lies below that of the FSBR until 1997-98, but exceeds it thereafter.

It is evident from these much more optimistic scenarios for the PSBR than we presented in last year's Green Budget that not all of the difference in the forecast can be explained by discretionary tax increases that could not have been included in the last edition. Clearly, changed economic circumstances can have an important effect on PSBR projections, and our forecasts are heavily dependent on distant macroeconomic estimates. Table A.12 shows the effect of our optimistic and pessimistic alternatives in Table A.9 on the path of the PSBR. Under both scenarios, real NCT spending is held constant, either (in A) at the level implied by the 1994-95 FSBR or (in B) at 2% from 1995-96 onward.

Under the first scenario, the optimistic case shows the PSBR declining very rapidly throughout the medium term and becoming a public sector debt repayment (PSDR) of 1.3% of money GDP by 1997-98. The pessimistic case shows government borrowing still falling to £17 billion (2.2% of GDP) by 1997-98, because in this world, low inflation would allow the government to reduce its nominal spending plans

Table A.11. The Public Finances in the Medium Term: Real New Control Total Growth of 2% per year from 1995-96

(£ billion)	1994-95	1995-96	1996-97	1997-98	1998-99
Inland Revenue	88	100	112	123	134
Customs and Excise	75	82	89	96	104
General government receipts	254	280	304	327	352
Control total	248	261	275	291	309
General government spending	293	308	324	341	359
Privatisation	-6	-3	-1	-1	-1
PSBR	32	24	18	11	5

considerably. Under the second scenario, PSBR levels still fall but are generally higher throughout the forecast period. The optimistic alternative still achieves a PSDR by 1997-98 but the public finances improve less quickly over the forecast period. Under the pessimistic alternative, the PSBR falls initially, but by 1998-99 is creeping up again due to low growth and increased spending pressures, and at 3.6% of GDP is unlikely to be sustainable further into the future.

Table A.12. The PSBR in the Medium Term: Sensitivity Analysis for Both Spending Scenarios

		1994-95	1995-96	1996-97	1997-98	1998-99
Scenario A: Government sticks to its plans for real New Control Total Growth						
PSBR	optimistic	32	20	6	-11	-31
(£bn)	baseline	32	21	12	2	-7
	pessimistic	32	24	20	17	16
PSBR	optimistic	4.7	2.7	0.8	-1.3	-3.1
(% of GDP)	baseline	4.7	3.0	1.6	0.3	-0.9
	pessimistic	4.8	3.3	2.8	2.2	2.1
Scenario B: Real New Control Total Growth of 2% per year from 1995-96.						
PSBR	optimistic	32	23	12	-2	-18
(£bn)	baseline	32	24	18	11	5
	pessimistic	32	26	26	25	27
PSBR	optimistic	4.7	3.1	1.5	-0.2	-1.8
(% of GDP)	baseline	4.7	3.4	2.3	1.3	0.5
	pessimistic	4.7	3.7	3.5	3.3	3.6

Appendix 2: Tax Ready Reckoner

Table A.13. Direct Effects of Illustrative Changes in Taxation 1995-96

(£ million)	Cost/Yield (non-indexed base)	
	1995-96	1996-97
Income tax		
Rates		
Change standard rate by 1p	1,700	2,100
Change lower rate by 1p[a]	770	660
Change higher rate by 1p	300	520
Allowances		
Change personal allowance by £100	490	630
Change married couple's allowance by £100	120	150
Lower rate band		
Increase lower-rate band width by 10%	250	320
Basic rate limit		
Change basic-rate limit by 1%	65	95
Change basic-rate limit by 10%		
increase (cost)	580	860
decrease (yield)	740	1,050
Allowances, bands and limits		
Change all main allowances, lower-rate band and basic-rate limit:		
increase/decrease by 1%	300	400
increase by 10% (cost)	2,900	3,900
decrease by 10% (yield)	3,900	4,250
National Insurance contributions		
Rates		
Change main employee rate by 1p	1,840	2,120
Change highest employer rate by 1p	2,300	2,670
Change Class 2 rate by £1	70	100
Change Class 4 rate by 1p	50	120

(continues)

[a] Revenue changes in the full year are lower because corporation tax changes are included in this value. Advance corporation tax changes in the first year would be offset by opposite changes to mainstream corporation tax in subsequent years.

Note: The revenue effect is computed for changes to the 1995-96 tax system and relates to the first-year (1995-96) and the full-year (1996-97) effects.

Table A.13 (contd). Direct Effects of Illustrative Changes in Taxation 1995-96

(£ million)	Cost/Yield (non-indexed base)	
	1995-96	1996-97
Corporation tax		
Change full rate by 1%	480	710
Change smaller companies' rate by 1%	80	120
Capital gains tax		
Increase annual exempt amount by £500 for individuals and £250 for trusts	-	6
Inheritance tax		
Change inheritance tax rate by 1%	16	33
Increase inheritance tax threshold by £5,000	16	33
VAT		
Change VAT rate by 1%	2,590	2,770
Extend VAT to (full-year effect):		
Food	6,800	7,150
Construction of new homes	1,850	1,950
Passenger transport	2,200	2,300
Books, newspapers, etc.	1,050	1,150
Children's clothing	550	600
Water and sewerage services	650	700
Prescriptions	450	500
Excise duties		
Beer up 1p a pint	105	110
Wine up 5p a bottle	35	35
Spirits up 25p a bottle	30	30
Cigarettes up 5p a packet	185	195
Petrol up 1p a litre	335	370
Derv up 1p a litre	125	145
VED up £5	130	130

Note: The revenue effect is computed for changes to the 1995-96 tax system and relates to the first-year (1995-96) and the full-year (1996-97) effects.

Source: *Tax Ready Reckoner and Tax Reliefs*, HM Treasury, July 1994.

Appendix 3: Deriving Critical Elasticities for Excisable Commodities

Consider a single taxed good. Denote:

R = tax revenues;
τ = taxes;
P = tax-exclusive prices;
Q = quantity demanded.

Then tax revenues are given by

$$R = \tau P Q \tag{1}$$

where $Q = Q(\overline{P})$, where $\overline{P} = P(1+\tau)$ is the tax-inclusive price of the good. Differentiating (1) with respect to τ gives

$$\frac{dR}{d\tau} = PQ + \tau P \frac{dQ}{d\tau}. \tag{2}$$

If $dR/d\tau > 0$, then a marginal increase in tax rates will increase revenues; if $dR/d\tau = 0$, then a marginal change in tax rates will not affect revenues; and if $dR/d\tau < 0$, then marginally cutting tax rates will raise revenues. We now require an expression for $dQ/d\tau$. The elasticity of demand for the good, E, is defined as

$$E = \frac{dQ}{Q} \cdot \frac{\overline{P}}{d\overline{P}}. \tag{3}$$

Rearranging (3) gives

$$dQ = EQ\left(\frac{d\overline{P}}{\overline{P}}\right) \tag{4}$$

where $d\overline{P}$ is the total derivative of $\overline{P} = P(1+\tau)$,

$$d\overline{P} = (1+\tau)dP + Pd\tau. \tag{5}$$

Substituting (5) and $\overline{P} = P(1+\tau)$ into (4) and dividing through by $d\tau$ gives

$$\frac{dQ}{d\tau} = \frac{EQ}{(1+\tau)} \tag{6}$$

because $dP/d\tau = 0$ and $d\tau/d\tau = 1$. Substituting (6) into (2) gives

$$\frac{dR}{d\tau} = PQ + PQ\left(\frac{\tau}{(1+\tau)}\right)\mathrm{E} = PQ + PQ\left(\frac{\overline{P}-P}{\overline{P}}\right)\mathrm{E} \tag{7}$$

It is then simple to show that

$$\frac{dR}{d\tau} = 0 \quad \Rightarrow \quad E = -\left(\frac{\overline{P}}{\overline{P}-P}\right)$$

$$\frac{dR}{d\tau} < 0 \quad \Rightarrow \quad E < -\left(\frac{\overline{P}}{\overline{P}-P}\right)$$

$$\frac{dR}{d\tau} > 0 \quad \Rightarrow \quad E > -\left(\frac{\overline{P}}{\overline{P}-P}\right).$$

Appendix 4: The Current Account and Debt Sustainability

The simulations reported in the main text indicate that, if domestic demand in the UK economy grows at the same pace as in the rest of the developed world, then it is likely that the current account deficit will deteriorate on trend. This makes sense, given the fact that in the past, the trend rate of growth in the UK economy has needed to be below the OECD trend in order to produce an unchanged path for the current account. On our forecasts for UK and OECD economic activity over the medium term, there may be a tendency for the current account position to deteriorate and, since it is already in deficit, this could clearly be a matter of some concern. This naturally raises the familiar but complicated question of whether it is 'safe' to run a current account deficit of any size for any length of time.

There is no straightforward answer to this question, but there are a series of logical building blocks which can help us to reach a judgement.

Firstly, there is the question of the 'sustainability' of the UK's external debt position, and how this is related to the balance-sheet positions of the UK public and private sectors. We have written a good deal in the last two Green Budgets about the sustainability of public sector debt, and exactly the same principles can be applied to the private sector.

The concept of sustainability relates to the long-term behaviour of debt relative to income. Obviously, if the UK economy - or any of the sectors or agents within it - is in a position where debt is likely to rise indefinitely relative to income, then lenders will become concerned about the future servicing of their loans. At some point, they are likely to force a sharp adjustment on the borrower, involving either higher interest rates or a pay-down of outstanding debt. Either way, the borrower will be forced to reduce expenditure on goods and services relative to income in order to reduce the debt or pay extra interest. If this happens suddenly to the whole economy simultaneously, then a recession can ensue, as it did in 1990-92. If the government is concerned to avoid sudden adjustments of this sort, as it should be, then the external debt position should be of some concern.

It is very easy to define debt sustainability more rigorously. For any sector, the financial deficit can be divided into a primary (non-interest) component (f), and an interest component (ib), where i is the nominal interest rate and b is outstanding debt/income. The interest component will rise relative to income if the nominal interest rate is greater than the growth of income. Removing inflation, this is equivalent to saying that the interest component will rise relative to income if the real interest rate (r) exceeds the real rate of growth of income (g).

In fact, the interest burden relative to income rises by $(r\text{-}g)b$. The definition of sustainability requires that the overall debt burden does not rise. Therefore any rise in the interest burden must be offset by a primary financial surplus. This produces the simple condition for debt sustainability:

$f=(r\text{-}g)b$.

For the government, this condition requires that the primary budget balance must be in surplus if r exceeds g. For the economy as a whole, it requires that the non-interest current account deficit must be in surplus if r exceeds g *and* if the economy is already in a position of net external debt.

Public and Private Sustainability

If the UK economy as a whole is in a position of debt unsustainability, then it must logically follow that either the private sector position is unsustainable or the public sector position is unsustainable. Many economists, going back at least as far as Professor Max Corden in 1977, have argued that there is a crucial policy difference between an external debt problem which stems from the public sector and one which stems from the private sector. The assumption here is that the private sector should be allowed to adjust its savings and investment without interference from policymakers. If private investment exceeds savings, then there will be an increase in borrowing, but in the private sector this can only occur if there are willing lenders who find the relevant private credit an acceptable risk.

None of this, the argument goes, should be seen as a problem for the government. If foreign lenders become concerned about the debt position of the UK private sector, then an adjustment process will automatically occur, involving a rise in net private saving and a consequent correction of the current account deficit.

By contrast, the government must, of course, be concerned about the sustainability of its own debt position. Although this also depends on the willingness of private sector lenders to accept the government's credit, the government can in effect borrow against its right to tax or monetise its debt in the future. It would probably not be optimal for the government to do this for very long. The implication of this is that the government should only be concerned with its own debt sustainability, but not with external debt sustainability *per se*.

While some of these points seem valid, there is one crucial caveat which should be made. The experience of private sector debt markets in the past does not suggest that the markets can be left safely to their own devices to ensure that adjustment processes will be smooth. Instead, there tend to be strong cycles in which excess debt is accumulated in an environment of extraordinary optimism about economic prospects, followed by a sudden shock which leads to a dramatic correction in debt ratios and in private expenditure.

At the very least, this leads to greater volatility in the real economy than would otherwise be the case. More likely, it depresses the medium-term growth rate as well through hysteresis effects (lower investment in an uncertain environment and higher long-term unemployment). If this is accepted, then the government should indeed be concerned about an excessive build-up of external debt by the private sector (and, incidentally, it should also worry about a build-up of internal debt by one part of the private sector relative to another).

The most recent example of this pattern in the UK came in the borrowing surge of the late 1980s, followed by the extraordinarily sharp correction of the early 1990s. Although this was entirely a private sector phenomenon, with no role whatever for the government budget balance which simultaneously moved into large surplus, it surely cannot be thought to have been an optimal experience. Admittedly, there is a very real doubt about whether the government can do any better than the private sector in seeing trouble looming, but it is quite definitely a legitimate area of concern for policymakers. In the late 1980s, the first signal that something was going badly wrong came from the trade figures, though these were derided by the Chancellor at the time. A key question now is whether a similar mistake might be made again.

Sustainability in 1994-98

What does the sustainability condition imply about the UK economy today? At the end of 1993, the CSO estimates that the UK enjoyed a net asset position with the overseas sector of £27 billion, equivalent to 4.3% of GDP, a tiny amount. Assume that the real rate of return on assets is 5%, while the growth in income is 2.25% per year. This produces a sustainable non-interest current account deficit of 0.1% of GDP.

In 1994, the UK seems likely to run a slightly higher non-interest (primary) current account deficit than this rule would imply. The official CSO estimates show a primary current account deficit running at an annual rate of £12.4 billion (almost 2% of GDP) in the first half of 1994. On the face of it, this seems to be considerably greater than the sustainable deficit, so the UK external position is not at present sustainable.

However, we need to make a further adjustment to this result. The UK enjoys capital gains on its overseas assets worth around 1% of GDP each year, and this is not included anywhere in the current account figures. (This exists because a large proportion of the UK's external assets are equity-based, while most of its liabilities to foreigners are in short-term debt instruments.) This adjustment should be removed from the 1994 primary current account deficit, leaving a final figure of about 1% of GDP. This is still well above the sustainable deficit so, unless something in the economic environment changes, the UK's external balance-sheet position would continue to deteriorate indefinitely.

On reflection, this is not too surprising, since the PSBR in 1994-95 will approach 5% of GDP, a figure which could hardly be thought to be sustainable. However, the government is now in the process of implementing a programme of fiscal tightening amounting to about 3% of GDP over the three years, and we show in Chapter 5 that this will put the UK public sector back into a sustainable debt position by the time that the economy returns to trend working by 1997-98.

Is this the end of the problem? The answer is no, since the period of 3% per year GDP growth which is required to reduce the PSBR to an estimated 2-3% of GDP - thus restoring debt sustainability in the public sector - is likely to lead to a deterioration in the current account deficit. This would still leave the UK economy as a whole in an unsustainable external position. By implication, what will have happened is that the private sector will have moved from a sustainable debt position now to an unsustainable position in 1997, thus moving in precisely the opposite direction to the public sector.

'Sustainability' will have been passed from one domestic sector to the other, like a hot potato.

This, of course, assumes that there will be strong growth in domestic demand in the next four years, despite the tax increases. An alternative would be that the growth of domestic demand slows down spontaneously, taking the GDP growth rate to (say) less than 2% per year. If this occurs, the financial position of the private sector would remain so strong that the external debt position would be sustainable, with the current account deficit quite likely being eliminated. But the slow rate of growth in the economy would leave the PSBR in excess of 3% of GDP by 1997, and the public sector would not therefore return to debt sustainability despite the tax increases. The appropriate policy to follow in this scenario would be to ease monetary policy, since this would improve the PSBR without leading to any early problems with the current account.

Obviously, the policy dilemma is much more difficult if domestic demand remains strong, thus resolving the PSBR problem but causing some difficulty with the current account. We consider this to be the most likely scenario. If GDP growth were to exceed 3% per year for any length of time - in effect, a rerun of the late 1980s - it is likely that both the current account and the inflation rate would quickly deteriorate, forcing the government first to tighten monetary policy to shore up the exchange rate, and later to tighten fiscal policy again. Although this cannot be dismissed as a possibility, the particular combination of events that triggered the late 1980s boom - low interest rates, tax cuts, excess optimism about employment prospects and the housing boom - do not seem likely to be reproduced in full in the next couple of years. For one thing, the stance of fiscal policy will be very different this time.

It is more probable that domestic demand growth will be robust but not explosive. Our most likely scenario has GDP growth at around 3% per year, which (on unchanged exchange rates) would keep core inflation inside the target band in 1997 but would probably cause the current account deficit to widen to 2-2$^{1}/_{2}$% of GDP. As noted above, this combination would be sufficient to solve the sustainability problem of the public sector, but leave the private sector at least temporarily in an unsustainable debt situation.

The policy implications of these various scenarios are discussed in the main text.