Options for 1994

The Green Budget

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7 Ridgmount Street
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Published by

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

ISBN 1-873357-31-1

Printed by **Williams Lea Research** a member of the WLG Williams Lea Group

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Preface

The Budget on 30 November will be the first of the new unified Budgets, presenting decisions on taxation and public spending together. This shift to an earlier, unified Budget was seen by some commentators at the time of its announcement as a major step towards a more open and sensible budgetary procedure. Such hopes seem unlikely to be fulfilled, since the main change is simply one of timing. The new procedures were not designed to increase consultation. The Budget tax changes will still be presented on Budget Day as a package which, to quote Sir Geoffrey Howe in 1977 is "receptive to neither the benefit nor the opportunity of prior examination or constructive comment". Decisions on the aggregate level of government spending for the next three years will be made in the summer, well in advance of final discussion about the content of the Budget.

Our aim in the *Green Budget* is to provide the sort of assessment of the state of the recovery and the option for public finances that would be found in a government Green Paper on the Budget so as to provide a basis for an informed debate, in the hope that the Chancellor and his advisers are listening.

1 The 1994 Budget

Mr. Kenneth Clarke, the new Chancellor of the Exchequer, faces difficult decisions as he prepares to deliver his Budget, the first to bring together the presentation of tax and spending decisions. In March, his predecessor, Norman Lamont, faced current and prospective levels of public borrowing that clearly made budgetary tightening necessary. In November, nothing will be quite so clear; the economy is recovering, tax increases have already been announced, and public sector borrowing is set to fall. What Mr. Clarke must decide is whether the Public Sector Borrowing Requirement (PSBR) will fall far and fast enough. And if action is to be taken, the balance between spending cuts and tax increases, and the nature of such cuts and increases, must all be determined.

This *Green Budget* focuses on the huge uncertainty facing the public sector finances, reflecting inevitable doubts about the state of the economy in four or five years time. We outline the macroeconomic background to the Budget, both for the world and the UK. We consider ways of assessing what government policy should be on the public finances, and project public finances into the medium term. We discuss the judgements Mr. Clarke may make in his Budget, and analyse potential areas of change both in taxation and public spending.

Macroeconomic Background

Unusually for recent years, the performance of the economy has mirrored quite closely that expected at the time of the last Budget. The economy clearly bottomed out in the first quarter of 1992, and the recovery is now underway. After several years of retrenchment, which contributed to the recession, private sector finances are now in much better order, and there seems to be little further reason for either the personal or company sectors as a whole to cut back their spending.

The two main risks to the recovery are that continued weakness overseas will hit exports, and that the impact of fiscal tightening in the UK will depress consumer spending. There is little the government can do to affect growth in overseas economies, but the impact of fiscal tightening could be offset by further cuts in interest rates. Subject to these risks, the Goldman Sachs forecast, which is similar to the consensus, is for GDP to grow at an annualised rate of 3% into the medium term. With this growth we should see unemployment drift downwards. The outlook for inflation is good for the immediate future, although we expect inflation to break through the 4% barrier by the late stages of this Parliament if the economy grows at 3% p.a.

In the medium term the problem for economic policy is whether growth at 3% is possible for long enough to remove the public finance constraint without leading to inflation and balance of payments worries. This is not a new problem for the UK, but there is a breathing space of a year or two before these problems are likely to bite.

The Fiscal/Monetary Mix

Thus far, Mr. Clarke has made no changes to either the monetary or fiscal policy he inherited from his predecessor, and there has been no obvious trigger for such a shift, but this cannot be expected to last. How should the balance of fiscal and monetary policy be determined?

Understanding the development of monetary aggregates is very difficult at present, because the velocity of circulation of both M0 and M4 is so volatile. This volatility makes setting monetary targets and interpreting breaches in them hazardous and uncertain. Given this uncertainty, the exchange rate inevitably emerges once again as central for monetary policy decision-making. Three possible triggers seem to exist for a base rate cut in the near future. First, convincing signs of a weakening in economic activity; second, renewed sterling robustness in the face of further declines in European interest rates; third, further tightening in fiscal policy announced in November.

In some recent years, fiscal and monetary policy seemed to be working against each other, but in 1992 and 1993 both were acting to stimulate the economy. As we look to 1994, fiscal policy will tend to depress the economy, while the lagged effect of earlier interest rate cuts will still be boosting activity. By 1995, the overall policy thrust will be contractionary, even without any new budgetary tightening announced on 30 November.

If Mr. Clarke decides to tighten monetary policy further there is a strong case for combining this with a further loosening of monetary policy so as to provide stimulus to the economy while encouraging a rebalancing of the demand away from consumption and into exports and investment.

Optimal Fiscal Policy

Mr. Clarke has said on many occasions that the PSBR is too high and may not fall quickly enough without further action. The government's view of what level the PSBR should settle at when the economy returns to trend is unclear, although the Lawsonian doctrine of zero borrowing still seems to have some followers.

The popular view that increases in the national debt pass "burdens" on to future generations is misleading, since when governments borrow from their own citizens they leave the nation as a whole neither better nor worse off. Increasing debt, for a given level of public expenditure, is very similar to postponing raising tax revenue. This may or may not be a bad thing, although there are two different questions to be asked. First, how far should public debt fluctuate with the level of economic activity and, second, what should the long-run "steady state" level of debt and borrowing be?

Although classical and Keynesian economists might have differing frameworks for thinking about debt, both would allow debt to rise in recessions and fall in booms. Classical economists, who seek to minimise the distortions which arise from frequent tax changes, argue that tax rates should be constant, allowing the "automatic stabilisers" to work. Keynesian analysis might allow greater fluctuations in the PSBR because action beyond simply allowing automatic stabilisers to work could be desirable to stabilise output. But this says nothing about the average level around which debt should fluctuate in the course of the cycle.

Discussion of the appropriate level of debt often focuses on the question of sustainability, defined as the level of borrowing that would produce a stable public debt/GDP ratio in steady state. We calculate borrowing levels needed to achieve debt sustainability by 1997-98, when we next expect the economy to be running at "normal" capacity. Achieving sustainability in 1997-98 implies a debt ratio of 52% then. If inflation settles at 4%, and is expected to remain there, the budget deficit that achieves sustainability is 3.3% of GDP. If inflation settles at 1%, and is expected to remain

there, the required Budget deficit is 1.7% of GDP. If inflation settles in the middle of its target range, at 2.5%, and is expected to remain there, the required Budget deficit is 2.5% of GDP.

These calculations give some idea of appropriate borrowing levels, but are based on assuming that we should stabilise the debt/GDP ratio in 1997-98 at 52% of GDP without providing any rationalisation for selecting this particular figure. Sustainability calculations such as these do not provide a rule for determining the appropriate level of debt in the long run.

One suggestion for such a rule is the so-called "golden rule", which is that government should hold the ratio of its debt to its tangible assets constant. This happens if it always keeps the PSBR equal to its net investment. If the government were to follow such a rule, and with sustainable borrowing, its assets would rise in line with GDP.

Unfortunately, it is difficult to translate these broad principles into a rule which can be used in practice by the public sector. Not only is it even harder to value public sector assets than private sector assets, because of the lack of an active market in many cases, but drawing a line between current and capital spending is close to impossible. Building a new motorway is clearly capital spending, but so might be a large part of education spending. These problems of measurement make any estimate of the optimal value of public debt in the long term very difficult, even if it is accepted that debt should be brought into line with tangible assets.

Nonetheless, it seems sensible for governments to have at least some idea of whether their tax and spending plans are tending to increase or reduce the net worth of the public sector. In the past few years, the public sector's net worth has been declining at an alarming pace. Examining the current level of public sector asset creation (PSAC), and assuming that past PSAC trends are reproduced into the future, suggests that in 1997-98 the government would need to restrict its borrowing to about £20-£24bn, or 2.5-3% of GDP. By coincidence, this is a similar figure to that required to achieve debt sustainability in that year.

The Public Finances

For the first time in many years, we expect the forecast of the PSBR made at Budget time, of £50bn for 1993-94, to turn out to have been accurate. We do not share the common view that the pick up in activity has already caused the PSBR to undershoot targets.

In 1994-95 we expect to see the beginning of a steady decline in the PSBR to around £43bn. The most significant cause of the reduced PSBR is a strong rise in direct tax revenues, partly reflecting pre-announced tax increases, and partly wage, employment and profit growth. This forecast is subject to a wider margin of error than those in previous *Green Budgets* because, like the government, we are making forecasts earlier this year, with much less published data.

Our forecasts of the state of public finances in the medium term once again show a very wide range of potential outcomes. Our central forecast shows GDP growth at 3% from 1994-95 on. Our high growth scenario assumes annual growth of 3.5%, and our low growth scenario 1.8%. We assume all pre-announced tax changes are implemented, but that tax policy is otherwise unchanged. On spending, rather than take the

government plans, we assume that spending rises in real terms at the same rate as was achieved in the corresponding period of the 1980s cycle under Mrs Thatcher and Chancellors Howe and Lawson.

Our central case sees the PSBR falling to £30bn, 3.6% of GDP by 1997-98. Our high growth scenario produces a PSBR of £8bn, our low growth one of £62bn. Although £30bn is our best estimate, there is great uncertainty about this figure. Public spending control more effective than that achieved in the first half of the 1980s and/or more buoyant growth than we are assuming, and/or more inflation could produce a PSBR in 1997-98 that was acceptably low without any further action to raise taxes or cut spending.

Nonetheless, a PSBR of 3.6% of GDP, our central estimate, is not low enough to achieve debt sustainability, or to satisfy some version of the golden rule. Added to this we should remember that the government is likely to want to cut tax rates in the run-up to the next election, that there are always risks that the economy will perform less well than forecast, that it is politically easier to reverse unnecessary announced tax increases or spending cuts than to announce unexpected tax increases or spending cuts, and that the November 1993 Budget is likely to be the last politically acceptable occasion for fiscal tightening.

Overall, we feel that the sensible and risk-averse action will be to announce fiscal tightening that will amount to around 1% of GDP per year by the end of the Parliament. Since significant tax increases are already planned for 1994-95 it would seem appropriate to phase fiscal tightening over several years, with only slight additional tightening in 1994-95, perhaps some £1bn, rising to some £6bn by 1996-97. Fiscal tightening of this magnitude should allow monetary policy to be somewhat looser than would otherwise have been the case. While Mr. Clarke has said in the past that he is opposed to delayed implementation of tax changes, he will have little option but to phase any significant changes he announces. Large changes in public spending cannot be made quickly, and with £6bn of tax increases already planned for April 1994, further large increases in tax might seem too draconian to take immediate effect.

The arguments for action to reduce the deficit are less strong for the November Budget than they were for the March Budget, but are in our view still persuasive. It is possible that action announced now will turn out to have been unnecessary, but such a scenario relies on an extremely optimistic conjunction of economic events, and action announced now could be reversed without too great a cost. In the much more likely event that the public finances will require further action, the economic and political costs of delaying decisions beyond the November Budget could be high. Those who believe that the public finances are headed for disaster are probably far too gloomy, but further action is still warranted. Mr. Clarke should imitate his predecessor, and tighten fiscal policy a little more, albeit in the medium term.

Closing the Gap

The first of the new unified Budgets inevitably raises a question as to whether tax increases or spending cuts should be the method of achieving a given level of fiscal tightening. Our overall view is that the public spending targets for years beyond 1994-95 are already so low as to make it unlikely that they will be achieved. This means that although some spending programmes may have their planned allocation reduced, this will largely be to offset increases elsewhere. Further fiscal tightening

through public spending reductions seems certain to require radical change of a type we have not yet seen, and which would be difficult to implement this side of a general election. The burden of fiscal tightening is likely to fall on taxation.

While it is true that much of the tax rate cutting activity of the second half of the 1980s focused on reducing income tax rates, we do not expect to see increases in income tax rates announced in November, although other increases in income tax are quite possible. Specifically, it seems likely that personal tax allowances and the threshold for higher rate income tax will once again not be adjusted for inflation, raising a little less than £1bn. More radical change, perhaps to be phased in, might be to restrict the value of the main Personal Allowance (PA) in the same way as the value of Married Couple's Allowance (MCA) is to be restricted, to the 20% starting rate of income tax. This change could raise over £5bn. Restricting the value of the PA to the basic rate of 25% would raise around £1-£1.5bn, but might be a first step towards a goal of 20% relief. Phasing out of MIRAS could in time raise another £3-£4bn per annum at current interest rates. Tax increases of this sort would go beyond the net change we feel to be appropriate, but would therefore leave scope for politically attractive significant widening of the 20% rate band, allowing the government to claim that they were making progress towards their goal of a 20% basic rate of income tax. Alternatively, there could be a cut of one percentage point in the basic rate of income tax.

The other main personal income tax, National Insurance contributions (NICs) is to see an increase of 1% in the employee's rate in April 1994, announced in the March 1993 Budget. Further large changes here seem unlikely in November, although tightening of the system to reduce artificial avoidance and some increases in NICs for the self-employed are feasible.

There has been much discussion of further changes to VAT. The inflationary and political costs of this make major change difficult, although this may not protect newspapers, books, magazines, and transport. There is some possibility that the imposition of the full rate of VAT on fuel could be brought forward, although this would presumably only be possible if compensation for those on low incomes were also to be implemented in April 1994.

Company taxation, in particular the taxation of dividends was something of a focus of the March Budget. Both the Foreign Income Dividends (FID) and International Headquarter Companies (IHC) schemes seem set to be legislated for in the post-Budget Finance Bill. There has been a recent flurry of debate about the tax treatment of stock dividends, but we feel that the argument for changing their tax treatment is relatively weak. Of greater possible interest is to take further the reduction in the Advance Corporation Tax (ACT) rate, the basic rate of tax on dividends and the tax credit repayable to exempt shareholders, which were cut to 20% in the March Budget. A reduction to zero would raise some £3bn and would certainly remove the surplus ACT problem. But such a change would also hit the Stock Market and be very unpopular with the pension funds.

Environmental taxes may once again be on the Chancellor's Budget list. Mr. Lamont announced in March a commitment to increase petrol duties by 3% p.a. in real terms into the medium term. Further change in the structure of motoring taxes is a possibility. More dramatic innovation such as road pricing or landfill levies may also be considered. Road pricing still faces technological constraints; most feasible schemes would probably be more effective as revenue raisers than as a means of changing behaviour.

Spending

As already noted, we believe the scope for reducing the aggregate level of government spending to be slight in the next three or four years, not least because there are a number of pressure points where spending is likely to outstrip plans.

Social security, which accounts for almost 30% of total government spending, seems set to rise further. The growing number of lone parents, and the number of long-term sick is likely to be sustained. Along with higher spending on Housing Benefit these trends make annual real growth of 2.5%-3% probable. The imposition of VAT on fuel is likely to lead to some discretionary increases announced in November.

There are some areas with potential for cuts within the social security budget, although the two areas where the targeting of spending by income is least close, Retirement Pension and Child Benefit, are protected by manifesto commitments. Invalidity Benefit, Unemployment Benefit and Housing Benefit are the most probable candidates for cuts.

Spending on health is another area where the published plans are for a very dramatic slow-down in growth. While allocations from the contingency reserve may go some way towards increasing the planned growth to realistic levels, it still seems likely that spending will overshoot in the face of technological and demographic change. The upward drift of spending may be somewhat offset by further pressure being imposed on drugs budgets, and possible increases in revenue from prescription charges.

The defence budget is already shrinking in real terms, and has fallen from over 5% of GDP in 1984-85 to a little over 3% now. Further cuts in excess of those planned may be possible, perhaps leaving defence spending at only 2% of GDP, but then would change the nature of our defence capability.

2 The Economic Forecast

2.1 The World Economy

Growth prospects in the OECD area remain poor. Outside the UK, the strongest signs of economic activity are to be found in the United States, Canada and Australia where growth in the region of 2.5% is expected this year and next. In Japan, the outlook for growth has worsened, due partly to the yen's strength and partly to less policy stimulus than was once thought likely. Japanese GDP will probably stagnate this year, with the expectation of only a modest improvement to 1.5% in 1994. Growth prospects are poorest in Continental Europe. After an outright recession this year in almost all EC countries (the UK being a notable exception), an anaemic recovery is generally expected in 1994, leading to a further rise in European unemployment. The Goldman Sachs forecast is for growth in the G-7 countries to subside from 1.8% in 1992 to 1.2% this year, and then recover to a subpar 1.9% next year. This represents a downwards revision to growth of 0.8% and 0.7% in 1993 and 1994 respectively compared to the forecasts made at the time of the last Green Budget in January. Other forecasters have made similar downward revisions to activity projections over the past few months.

Even in the US where growth has been strongest, it can hardly be described as robust. GDP rose at an annualised rate of 1.2% in the first half of 1993 and, although some acceleration seems likely in the second half, many of the traditional sources of growth are lacking. First, fundamental changes in the US financial system have made housing activity less cyclical than in the past. A second obstacle to strong US growth is the rising level of import penetration which diminishes the knock-on effects of any pick-up in domestic demand. Third, employers remain exceedingly reluctant to take on full-time workers. In addition to these factors, there is a shift underway in fiscal policy from a trend of fiscal stimulus to one of restraint.

The US recovery has been relatively sluggish by historical standards, despite the substantial easing in monetary policy which has taken place in recent years. An additional problem within Europe is that many countries are still labouring under an extremely tight monetary policy, whether measured in terms of real interest rates or by the shape of the yield curve. The problem lies essentially with Germany, both because of the importance of its economy for other European countries and because many EC countries still seem to feel obliged to follow the German monetary policy stance whether this is appropriate for their own domestic economic conditions or not. West German GDP is likely to decline by 2% this year, but because inflation pressures are declining only slowly, albeit from a peak rate of inflation of less than 5%, the Bundesbank has adopted a cautious approach to lowering interest rates.

In principle, there is now much more scope for other European countries to go it alone. The decision in early August by the remaining ERM members to allow their currencies to fluctuate within 15% bands either side of each currency's central rate offers a degree of monetary policy independence unseen in Europe for more than 20 years. This greater independence has yet to be exercised, partly because for years the aim of many EC countries has been to constrain rather than encourage the use of the exchange rate as a policy instrument. Europe has now become a region of reluctant floaters. In time this reluctance is likely to diminish but this will not happen quickly enough to stimulate

anything other than a meagre recovery in 1994. With exports to Europe accounting for over 60% of Britain's overseas trade, the prolonged European recession represents a key threat to growth prospects in the UK.

Table 2.1. Forecasts for the World Economy

% Change from Previous Year	1992	1993	1994
OECD real GDP			
HMT	1.5	1.5	2.8
OECD	1.5	1.2	2.7
Goldman Sachs	1.8	1.2	1.9
OECD consumer prices			
HMT	2.8	2.5	2.5
OECD	3.6	3.3	3.0
Goldman Sachs	3.0	2.8	2.6
UK export markets			
HMT	4.5	3.8	4.8
OECD	5.2	3.0	5.3

Notes: Goldman Sachs and HMT figures for GDP and inflation relate to G-7 only. HMT figures for inflation relate to Q4. OECD inflation forecasts relate to consumers' expenditure deflators. HMT and OECD figures relate to manufactures only. HMT figures for 1994 are for first half only.

Sources: HMT - HM Treasury, Budget March 1993.
OECD - Economic Outlook, July 1993.
Goldman Sachs - International Economics Analyst, October 1993.

2.2 The Domestic Economy

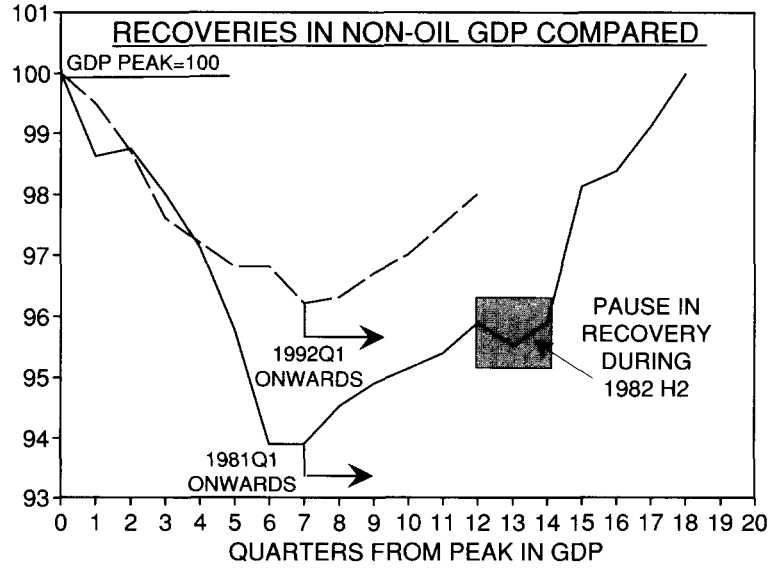
Recent revisions to national accounts data show that the recovery in UK economic activity has been firmer than originally believed. GDP bottomed in the first quarter of 1992 and the recovery has now lasted as long as the recession. However, output in the second quarter of 1993 was still almost 2% below the peak reached in the middle of 1990. Of the 2% rise in GDP recorded in the last 12 months, domestic demand contributed 0.8% with net trade contributing the rest. Within domestic demand, consumer spending contributed 1.2%. Investment and government spending were broadly flat, while stockbuilding made a negative contribution of 0.3%.

At first sight it appears that the recovery may have been built on shaky foundations. The increase in consumer spending has relied on a drop in the personal savings ratio since real personal disposable income has declined by 1.5% over the past year. The savings ratio has now fallen continuously from a peak of 13.3% in 1992Q3 to 10.1% in the second quarter of 1993. Without this drop in savings, the economy would have remained stuck deeply in recession over the past 12 months.

The boost to GDP growth from net trade has not come from exports. These have stagnated as a strong rise in exports to non-EC countries has been offset by a fall in exports to the EC. But imports have declined sharply. The fall in aggregate imports is very suspicious since over the latest year there has been a surge of 10.8% in the volume of imports from non-EC countries offset by a 13.6% drop in imports from the EC. It is almost inconceivable that the trend in import volume has been so different between EC countries and non-EC countries. The hope is that there is a black hole in the EC trade data and that exports and imports have both been depressed to a similar extent. If so, the overall trade figures may be reasonably accurate. If the figures are not accurate, it is perhaps most probable that both imports and stockbuilding have been understated. In this case future data revisions may leave the path for GDP broadly unchanged but change the split between domestic demand and net exports. However, this would also result in an upward revision to the current account deficit at some point in the future.

Greater comfort is given by the output components of GDP. These indicate that the recovery in output has been broadly based, with construction output being the only significant drag on activity. By virtue of its size, the service sector has been the major contributor to growth. Compared with the previous cycle, non-oil GDP has grown at about the same pace since the trough as in the 1981-82 recovery. On that occasion, however, the economy faltered temporarily at the equivalent stage of the recovery, reflecting the severity of the recession abroad. But even if there were to be no further growth in on-shore GDP during the second half of 1993, which seems unlikely, non-oil GDP would still rise by 1.3% in calendar-1993. This is still stronger than the government's forecast of 1% growth in 1993 made in the March Budget.

Figure 2.1



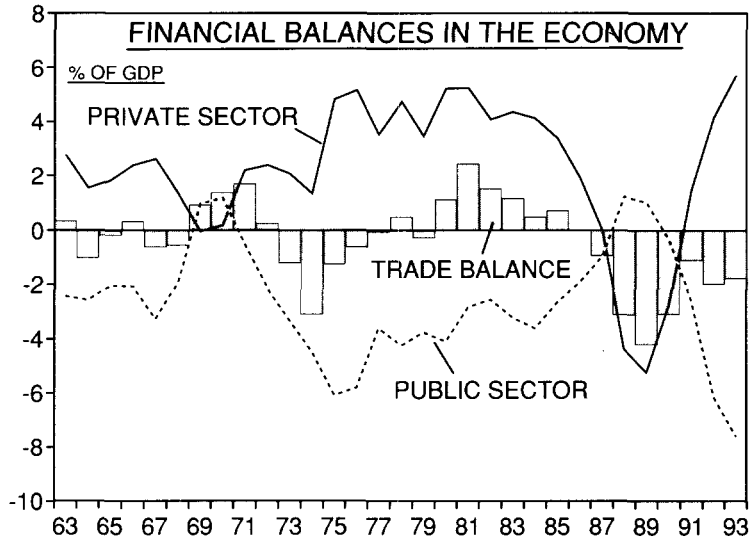
Going forward, there is clearly a great deal of uncertainty about whether the recovery in economic activity can be maintained since it depends, among other things, on highly uncertain developments abroad, and on whether the personal savings ratio can be relied upon to fall further in order to sustain the upward momentum in consumer spending. Some commentators have already started to express concern that the economic recovery may be faltering. In particular, after rising steadily in the early months of the year, manufacturing output has stagnated over the summer, with a rise of just 0.1% in the three months to July on the previous three months. The rise in output earlier this year was accompanied by a steady fall in unemployment. However, since July unemployment has risen by 10,000, raising further doubts about the strength of the recovery.

It is probably too early to say whether the economy has slowed significantly over the summer. Business and consumer surveys generally remain upbeat about economic prospects and whatever doubts there may be about manufacturing output and unemployment, there is certainly no evidence that consumer spending is slowing down. Retail sales volume is maintaining its strong pace of expansion, rising by 1.0% in the three months to August for a year-on-year increase of 3.8%. This is in line with the results of the CBI Distributive Trades Survey. Consumer credit, M0 and new car sales have also all maintained a strong upwards trend in recent months.

Forces for Recovery

In the year ahead, it seems most probable that a greater contribution to growth will need to come from domestic demand than has occurred over the past year. This should be possible now that the private sector's finances have improved significantly. One of the prime causes of the recession was the need for the private sector to correct the serious deterioration in its financial position which arose during the 1980s boom. The personal sector responded by cutting back sharply on consumer spending and on the evidence of the last year this adjustment seems to have come to an end. The company sector responded with substantial cuts in employment, investment and stockbuilding. As a result, the company sector returned to financial surplus during the first half of 1993, raising hopes that the cutbacks in company spending will now cease. Taking individuals and companies together, the private sector ran a financial surplus of 5.7% of GDP in the first half of 1993. This has only ever once been exceeded - in 1976 when the surplus reached 6.1% of GDP - and there seems little further reason for the personal or company sectors as a whole to retrench.

Figure 2.2



This augurs well for maintaining the personal savings ratio on a declining path. This will be needed since growth in real personal disposable income (RPDI) is likely to remain sluggish. Total personal income will be boosted by the resumption of an upward trend in employment and by a slight acceleration in wage increases, but much of this will be offset by the impact of tax increases. As a result RPDI is expected to stagnate next year. (The freezing of personal tax allowances, the restriction of tax relief on mortgage interest payments and on the Married Couple's Allowance, the increase in employees' National Insurance contributions, and the imposition of VAT on fuel and power will all bear heavily on individuals' real disposable income next year.)

However, it is quite normal for the savings ratio to drop sharply during the early stages of a recovery period. For example, following the 1980 recession, the savings ratio fell from a peak of 14.9% in 1980Q4 to a short-term low of 8.9% in 1983Q3. During this period RPDI rose by only 1%. Indeed, given the sharp decline in interest rates and inflation in the last three years, a somewhat larger drop in the savings ratio might have been expected over this period than has actually taken place. Savings have probably been kept high by the very large level of personal debt in relation to income, especially when considered in conjunction with the unprecedented drop in nominal house prices that has occurred. Now that the housing market appears to have stabilised, this should become less significant for the savings ratio as people start to feel increasingly more comfortable about the amount of housing debt held. As this factor wanes in importance, there should be scope for the savings ratio to continue on a downwards path during the course of 1994, thereby helping to support continued growth in consumer spending. This conclusion is also suggested by the behaviour of reported consumer confidence. According to Gallup consumer confidence remains on a gradually improving trend. Memories of the recession are becoming less painful and the survey shows a steady, if slow, strengthening in the

willingness of people to make major purchases. Recent readings of consumer confidence, if maintained, would be consistent with consumer spending growth being held at an annualised rate of around 2% over the next year.

Turning to companies, a sharp increase in profits and significantly lower interest payments have restored a financial surplus to the company sector for the first time in six years. The company sector's financial balance as a percentage of GDP is closely related to trends in the investment share. Now that companies are running a financial surplus again, there seems little reason to expect any further cutback in investment in relation to GDP. Indeed given the likelihood of a rapid rise in profits over the next two years, there seems plenty of scope for investment to rise faster than GDP to prevent the financial surplus from widening too much. Furthermore, with the stock/output ratio back at a more normal level, there seems little reason to expect firms to continue to cut back stocks in the months ahead. Indeed as the recovery in economic activity continues, firms will be able to increase their holdings of stocks while still allowing the stock/output ratio to fall. This would be consistent with stocks making a positive contribution of about 0.5% a year to GDP growth in each of the next 2 to 3 years.

Activity Forecasts

While there is clearly a great deal of uncertainty about whether the recovery in economic activity can be maintained, the healthy state of the private sector finances offers considerable encouragement that domestic demand can rise to fill the gap which is likely to be left by net trade in the year ahead. It does seem feasible that the personal savings ratio can be maintained on a downwards path in this low interest rate, low inflation environment despite the persistence of a high personal sector debt/income ratio. With firms increasingly having more funds at their disposal, a significant positive contribution to growth could come from stockbuilding (although stocks have a high import content) and from investment.

There are two main risks to the recovery: continued weakness overseas adversely affecting exports and the impact of fiscal tightening on consumer spending. There is little the government can do about the former. In the case of the latter, further fiscal tightening can be offset by further cuts in base rates, and most forecasters are predicting a decline in base rates to around 5% by next spring. Taking these risks into account, the Goldman Sachs forecast, which is similar to the consensus, is for GDP to grow at an annualised rate of around 3% from now on. This would result in growth of about 2% in calendar-1993, strengthening to just under 3% in 1994. This sort of growth rate would be likely to produce a modest downward drift in unemployment to around 2.7 million by the end of next year.

Inflation

Many forecasters have been surprised by the continuing improvement in underlying inflation that has been recorded since Britain left the ERM. Excluding mortgage interest payments, underlying retail price inflation has remained comfortably within the government's target range of 1-4%; in August, inflation on this measure was running at 3.1%. Cost pressures in the economy are very subdued and with the economy continuing

to grow at or below its trend rate, it would be virtually unprecedented for the genuine core rate of inflation to increase significantly in the next 12-18 months (at least in the absence of an external shock).

The low level of cost increases is due to two factors. First, raw material prices remain relatively subdued despite the depreciation of sterling over the past year. Although producer input prices rose by 6.2% in the year to August, the level of input prices has been unchanged on a seasonally adjusted basis since last February. The other factor is the continuation of extremely low rates of increase in labour costs. Basic pay settlements are running at around 2%, and although there are signs that settlements are beginning to stabilise, this is at a level which is three percentage points lower than anything achieved during the 1980s.

Table 2.2. Demand Prospects

Annual % Change, Volume	1992	1993	1994
Private consumption			
HMT		1.3	1.8
Goldman Sachs	0.0	1.7	1.7
Consensus		1.9	2.1
Total fixed investment			
HMT		0.5	2.8
Goldman Sachs	-1.1	2.1	5.1
Consensus		1.7	4.1
Exports of goods and services			
HMT		5.5	10.5
Goldman Sachs	2.6	0.6	3.4
Consensus		5.3	5.0
Imports of goods and services			
HMT		4.8	9.3
Goldman Sachs	5.7	-2.7	5.9
Consensus		4.5	5.2
Real GDP			
HMT		1.3	3.0
Goldman Sachs	-0.4	2.0	2.8
Consensus		1.6	2.7

Notes: HMT figures for 1994 are for first half only.

Sources: HMT as Table 2.1.
Goldman Sachs - UK Economics Analyst, October 1993.
Consensus - 'Forecasts for the UK Economy', HM Treasury, September 1993.

It is very important to maintain relatively low rates of basic pay settlements, since the surge in labour productivity which took place in the early recovery phase has now started to slow down. During 1994, the expected further slow-down in productivity growth is likely to lead to some worsening in labour cost inflation for the whole economy, but even allowing for some modest pick-up in wage inflation next year, labour costs are likely to rise by only around 2%. If this is the case, there is almost no chance at least in the absence of a further large sterling devaluation of any significant worsening in the core rate of inflation during next year.

However, the headline rate of retail price inflation, which in the past has had important effects on the level of pay settlements and on market sentiment, has risen from a low of 1.2% in June to 1.7% in August. It will continue to increase quite rapidly as the effects of last year's mortgage rate cuts drop out of the annual comparison. A further worrying feature for the government is that their chosen target variable (retail prices excluding the mortgage rate but including taxes) will be impacted next year by the increase in VAT and other administered prices which are scheduled to take effect next April. It seems quite possible that these tax effects will push the annual rate of underlying inflation above 4% for a short while next spring. This should prove to be a blip, and would be unlikely to draw a policy response.

In March, the government forecast that underlying inflation would run at 3.75% in both the fourth quarter of 1993 and the second quarter of 1994. This seems a little pessimistic for the end of this year and a little optimistic for mid-1994. The Goldman Sachs forecast is for underlying inflation to be running at 3.4% and 4.0% respectively in these two periods. A drop in underlying inflation seems possible during the second half of 1994 to around 3.6% by the fourth quarter. Consensus forecasts for inflation are broadly similar. The genuine core rate of inflation (excluding all tax effects and the mortgage rate) would decline to around 3% by the end of next year on these forecasts.

Table 2.3. Other Key Indicators

	1992Q4	1993Q4	1994Q2	1994Q4
Price inflation (%)[1]				
HMT		3.8	3.8	-
Goldman Sachs	3.7	3.4	4.0	3.6
Consensus		3.2	-	3.7
	1992Q4	1993Q4	1994Q2	1994Q4
Unemployment (m)				
Goldman Sachs	2.92	2.89	2.83	2.72
Consensus	2.92	2.91	-	2.80
	1991	1992	1993	1994
Current account (£bn)				
HMT[2]			-17.5	-18.5
Goldman Sachs	-7.7	-8.6	-12.4	-19.6
Consensus			-15.6	-16.3

Notes: [1]RPI excluding mortgage interest payments.
[2]1994 H1 at an annual rate.

External Trade

The apparent collapse in import volume from EC countries is highly suspicious and forecasts for external trade are subject to even greater uncertainty than usual. The prospects for net trade seem less favourable in the immediate future. In the absence of a marked recovery in world economic activity, a deterioration in export performance seems possible in the months ahead as some of the initial boost to exports from the depreciation of sterling wears off. With UK domestic demand growing more rapidly than domestic demand growth abroad, the growth in import volume is also likely to pick up. This is likely to bring the recent improvement in the trade and current account deficits to an end. The Goldman Sachs forecast is for the current account deficit to worsen from about 2% of GDP in 1993 to about 3% of GDP next year.

3 The Economy in the Medium Term

3.1 Policy Objectives

The key objectives of government economic policy over the remainder of this Parliament can be stated simply: to secure sustained non-inflationary growth at a pace sufficient to reduce unemployment and the PSBR without running into a crisis on the balance of payments. These objectives are not mutually exclusive - rapid growth will help to reduce unemployment and the PSBR - but they may at times conflict since rapid growth could also re-ignite inflation and balance of payments concerns.

The objective to which the government has attached the most weight since leaving the ERM is the need to maintain underlying inflation (defined as the RPI excluding mortgage interest payments) within a target range of 1-4%. The government has actually gone further than this by stating that the objective is to have inflation in the lower half of this band by the end of the current Parliament.

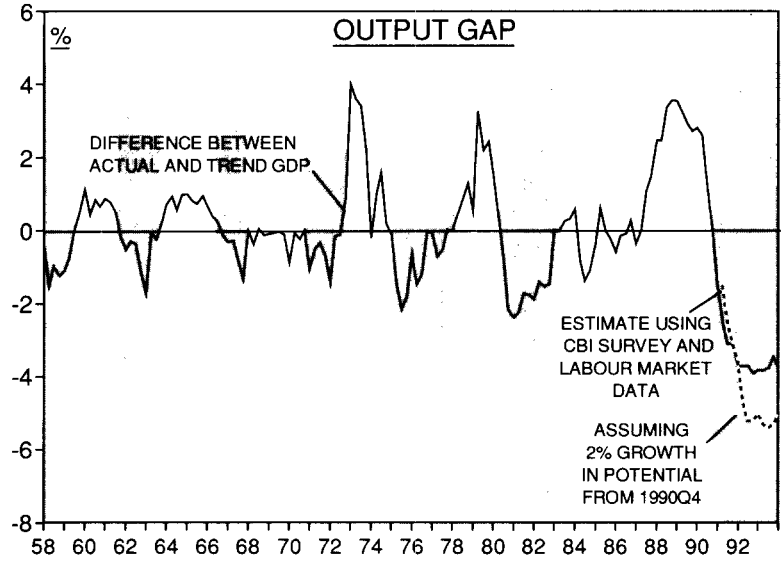
Given the importance attached to the inflation constraint, the key question to address is, how fast can the economy grow and for how long while respecting the inflation target. The implications for the PSBR, the current account and unemployment can then be assessed. It is to be hoped that the economy can grow quickly enough to take up idle resources without creating either a rise in inflation or an unsustainable balance of payments position. If it cannot, the UK will be consigned to exceptionally high unemployment and considerable problems with the public finances over the medium term.

The Elimination of the Output Gap

The starting point for any analysis must be to determine where the economy is relative to its productive potential since the size of the output gap gives an indication of how fast and for how long the economy might be able to grow in the years ahead. Unfortunately, estimates of the amount of spare capacity in the economy are extremely difficult to make with any degree of certainty. A simple extrapolation of a 2% growth trend since the second half of 1990, when the economy was probably last at trend, suggests that GDP is currently around 6-7% below trend. Although this accords with estimates published by the OECD, this seems highly implausible since it implies an output gap of more than twice the size experienced during either of the other two previous deep recessions in the post-war period.

The problem with this "straight line" method is that it ignores the erosion of plant capacity and of labour skills caused by a long and deep recession. Estimates made by Goldman Sachs based on CBI survey and labour market data suggest that the output gap may in fact be no more than 3-4%. This is in line with a range of estimates published by the Bank of England in its August *Inflation Report*. Nevertheless, this should still permit several years of relatively strong growth in GDP without the running of severe inflationary risks.

Figure 3.1



In order to produce an estimate of the possible rate of GDP growth that can be achieved over the medium term, we need to make several assumptions. First, we assume that GDP is about 3-4% below potential in 1993-94. Second, we assume that potential GDP will from now on grow by 2% a year. Third, we assume that the economy will eliminate the current spare margin of capacity at a rate of around 1% a year. In so doing, we derive our central estimate for growth in real GDP over the medium term. The growth rate rises from 2.2% in 1993-94 to 3% in 1994-95 (in line with the Goldman Sachs short-term forecast) and continues at a rate of 3% a year for the subsequent three years. Given the fact that the labour force is likely to expand only slowly over the next few years, this rate of GDP growth should be sufficient to produce a continuing decline in unemployment at an average rate of around 0.5-1% a year.

The Inflation Constraint

Many of the inflation fears expressed by commentators in the immediate aftermath of sterling's depreciation on leaving the ERM have not been realised. With so much slack in the economy, it is unsurprising that this should have been so since the disinflationary pressures were intense immediately prior to the depreciation. However, this does not mean that the inflation dragon has been slain. All mainstream macroeconomic models suggest that a sterling depreciation will eventually feed through one-for-one into prices but this can be over a long time period. Whether or not this is of concern depends on the path for inflation in the absence of the depreciation.

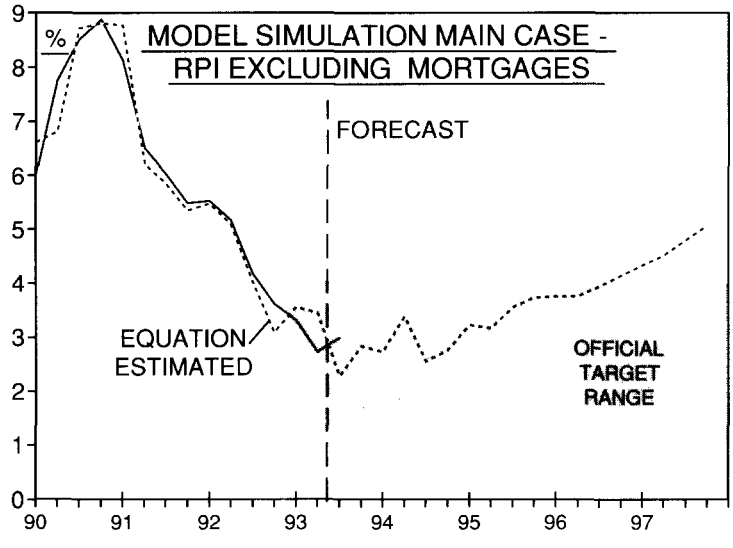
The importance of the output gap is that historically it has been rare for there to be any significant deterioration in inflation performance until most of the spare capacity in the economy has been used up. It is of course theoretically possible for core inflation to decline as the amount of slack in the economy is reduced. The economy can continue to work below potential (measured, for example, by the "natural" rate of unemployment in the labour market and the equilibrium level of capacity utilisation in the product

market), while GDP simultaneously rises faster than its trend rate of growth. During this phase, the existence of idle resources can contribute to continued disinflation within the economy.

While this is a good first approximation of the inflation process, the actual dynamics are obviously a little more complicated than this. The disinflationary "levels" effect can be offset by an inflationary "change" effect as output expands faster than its trend rate, and there are considerable lags in the inflation process. The actual outcome is essentially an empirical issue and will depend not only on the degree of slack within the economy but on the speed with which it is taken up and on other factors, such as the behaviour of sterling.

According to recent work by Goldman Sachs it is possible for the economy to enjoy a sustained period of above trend growth without running into serious inflation problems. Specifically, it is assumed that: (i) real GDP grows by 3% a year, leading to the elimination of a 3-4% output gap over the next 3-4 years; (ii) unemployment falls to a rate of 7% by 1997; and (iii) sterling depreciates by a further 10% over the next three years. On these assumptions, there should be a small improvement in underlying inflation next year followed by a gradual rise in the following three years. Core inflation remains in the government's 1-4% target range until 1996. By 1997, however, inflation has risen to over 5%, and it continues to rise thereafter, even if we assume that the economy grows at trend from that date. This is because the lagged effects of sterling depreciation, lower unemployment and tighter capacity utilisation only come through fully over several years.

Figure 3.2



The Balance of Payments Constraint

Inflation should not prove to be a binding constraint on output growth for the next couple of years at least, providing there is no major depreciation of sterling. However, adverse developments in the balance of payments could eventually pose a significant threat to recovery especially since the current account deficit is already running at almost 2% of GDP. No trends in the economy are inexorable of course, and the balance of payments over the next few years is not set on some predetermined path. Rather it will be determined by a number of fundamental factors such as price competitiveness and economic growth both in the UK and overseas. Some of these factors are obviously beyond the government's control, while some of them can be affected by the setting of macroeconomic and microeconomic policy at home. But it is difficult to overlook the fact that in four of the last five recovery periods the current account deteriorated markedly as domestic demand grew faster than GDP.

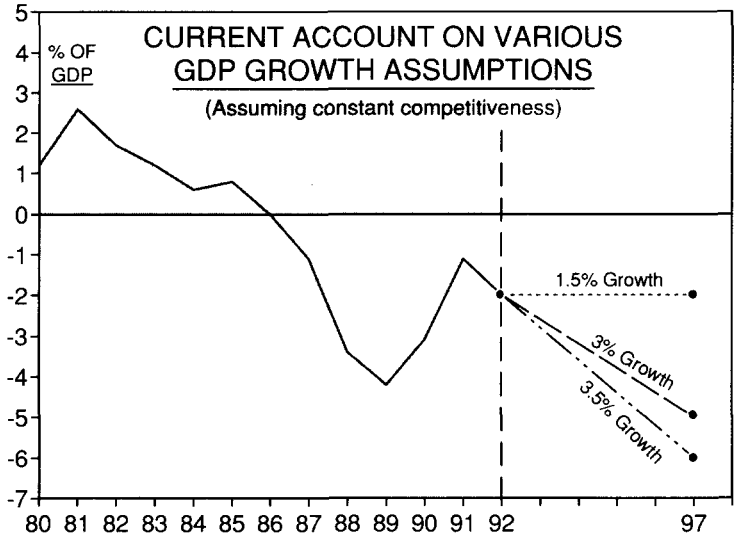
The results of research by Goldman Sachs reported in the last *Green Budget* characterise the dilemma facing the government. If competitiveness remains unchanged, then UK GDP needs to grow at least 1% less rapidly than the OECD average to keep the current account roughly unchanged. If the UK grows faster than this, then the level of competitiveness needs to improve to head off a worsening in the deficit. If the UK were to grow at the same rate as the rest of the OECD, competitiveness would need to improve by about 1% a year to prevent the current account deficit from deteriorating.

Taking into account the lagged effects of the worsening in competitiveness which took place before Britain left the ERM and the current weakness of the world economy, UK GDP growth might need to be restricted further to maintain a stable current account deficit at unchanged levels of competitiveness. The OECD might reasonably be expected to experience a period of above trend growth in the next few years, perhaps averaging 3.5% a year over the next five years, but this still means that on unchanged competitiveness, a maximum growth rate of 1.5-2% in UK GDP is all that might prove feasible. This would lead to a further trend rise in unemployment, and to an untenable rise in the ratio of government debt to GDP.

Assuming instead a prolonged period of 3% a year growth in GDP, along with unchanged competitiveness, the current account position would be expected to deteriorate steadily, and the deficit could reach 4-6% of GDP by 1997. One option for the government is simply to allow this deterioration in the trade deficit to occur unchecked. It has frequently been argued that the financing of the current account deficit is entirely a matter for the private sector, provided that the counterpart in the domestic economy is a deficit in the private sector rather than in the public sector, since the private sector could not run a deficit in the first place unless finance was available.

This argument obviously carries much less weight now given the current size of the PSBR. More generally, the lesson of the 1980s is that no government can be indifferent to a widening in the current account deficit. "Automatic" financing will only occur for as long as foreigners are content to accumulate UK assets. They may be willing to do so if (i) GDP growth remains robust, indicating that sterling denominated returns on

Figure 3.3



UK capital are attractive; and (ii) inflation remains subdued, leading to confidence that these sterling denominated returns can be translated back into foreign currencies at relatively stable exchange rates.

These conditions should be met for a while. But as soon as growth starts to falter, or inflation threatens to rise, the existence of a large trade gap can suddenly become menacing for the economy as it becomes extremely hard to finance, except via short-term capital inflows requiring very high rates of interest in the UK. Benign neglect of the current account deficit could easily sow the seeds of the next recession.

Given recent data, the current account seems unlikely to be a serious problem for financial markets for some time. But it would be very optimistic of the government to conclude that the current account deficit will not prove to be a problem if the UK achieves a satisfactory rate of GDP growth over the medium term. The overwhelming likelihood is that it will prove to be a constraint on the recovery in a way which did not apply in the 1981-88 period, simply because the starting position for the current account deficit was so much stronger in 1981 than it was in 1992.

Conclusion

Clearly, there is some tension between the objective of reducing the inflation rate and restraining an adverse trend in the current account. The best way of achieving sustained non-inflationary growth without a deteriorating current account would be to adopt measures which improve the supply side performance of the economy. Exchange rate depreciation is essentially a demand side measure which may buy a little time to address the fundamental problems of the economy but it is not a panacea, and is not seen as such by the government. Devaluation in the past has always been the result of previous economic failures, and has never been the prelude to more than a short period of economic success. The 1992 devaluation is likely to be no different unless the current breathing space is used for supply-side reform. Nevertheless, the government should, at the very least, seek to avoid a real exchange rate appreciation during the recovery in economic activity.

Indeed, in view of the difficulty of designing policy to improve the supply side performance of the economy, and of the undesirability of suppressing GDP growth to only 1.5% a year, there might need to be a policy bias in the direction of achieving further gains in competitiveness. Eventually, a decline in sterling might be seen as necessary by the government or, more likely, by the financial markets.

According to the models used by Goldman Sachs, it should be possible to combine a modest further sterling depreciation, of the order of 10% over the next three years, with a reasonable period of above trend growth without running into significant early problems with either inflation or the current account deficit. However, it may well be impossible to reduce inflation to the bottom half of the 1-4% band by the end of this Parliament, unless the amount of slack in the economy is greater than we have assumed. If the government is serious about reducing core inflation further over the lifetime of this Parliament, it would probably be unwise to rely on more than a couple of years of above trend growth of the order of 3% a year to reduce the PSBR to a sustainable level.

4 The Mix of Fiscal and Monetary Policy

4.1 Introduction

The Chancellor has so far made no change either to the framework of monetary policy, or to the level of base rates, since he took over at the Treasury. Essentially, there has been no compelling need to change policy: GDP growth has been satisfactory, there has been no build-up of any sort of inflation pressure, and the exchange rate has traded in a relatively narrow range. This relaxed state of affairs might continue for a while longer, but there are still nagging worries that policy-makers might either be leaving interest rates too low for too long, or alternatively that they may be showing too little concern about the potentially damaging effects of high debt ratios on the durability of the pick-up in domestic demand. As the Budget approaches, there is also the crucial issue of whether to change the fiscal/monetary mix still further.

Faced with these familiar dilemmas, it would be desirable to be able to turn to the monetary aggregates for guidance on policy. This continues to be a matter for intense debate among economists, and for concern among policy-makers. The Treasury's Forecasting Panel spent some time debating monetary developments at its summer 1993 series of meetings, without reaching any definitive conclusion.

The Panel felt that narrow money remains a good indicator of current activity, though without any causal role. The 12-month growth rate in M0 is currently running at 5.2%, which appears to be indicating a strengthening recovery in activity. On broad money, M4 growth is running at only 3.7%, and the Forecasting Panel said that there were clear risks that broad money may continue to be weak for some time, with new mortgage commitments remaining subdued in view of the historically very high ratios of the mortgage stock to both personal incomes and the value of the housing stock. Furthermore, the Panel noted that experience from the US indicated that, even with extremely low interest rates, broad money could be slow to accelerate. This schizophrenic behaviour of the monetary aggregates is likely to leave the Chancellor with major problems of interpretation for some time.

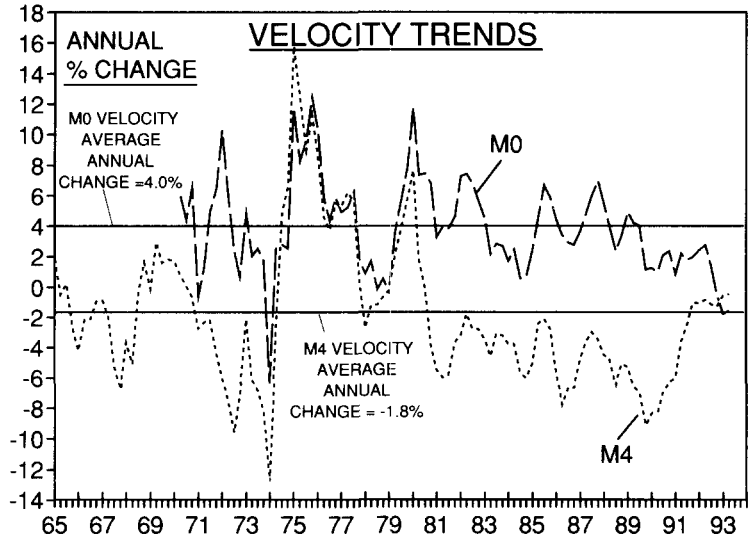
4.2 Monetary Targets and Velocity Changes

The velocity of circulation of both M0 and M4 can be extremely volatile, which makes it dangerous to rely solely on these indicators for the setting of monetary policy. Over the past 25 years, the velocity of M0 has *increased* on average by around 4% a year, while that of M4 has *decreased* by about 2% a year. Thus, for any given path for money GDP, the mid-point of a target range for M0 growth would historically have needed to have been on average 4 percentage points lower, while that for M4 would have been 2 percentage points higher.

But the velocity of M0 has been sufficiently volatile that for any given money GDP objective, the target range for M0 would need to be 8 percentage points wide to have a 90% probability that any recorded M0 growth rate within target would be consistent with the money GDP objective. In the case of M4, the target range would need to be 12 percentage points wide. This is not of much practical use to policy-makers. Even then, in one year out of ten, the desired growth of money GDP would be achieved with monetary growth outside its target range.

These difficulties are well illustrated by the recent changes in the behaviour of both M0 and M4 velocity.

Figure 4.1



M0 velocity has actually declined in the last 12 months by about 2%, as compared with an average annual increase of around 4% in the previous 25 years. The most likely explanation for this sudden change in the behaviour of M0 velocity is that interest rates have fallen to exceptionally low levels, so the desire of the personal sector to economise on notes and coins holdings has been reduced.

Another possible factor is the downward distortion to the GDP deflator which has occurred as a result of the deterioration in the terms of trade following the sterling devaluation. In the 12 months ended 1993Q2, the GDP deflator rose by only 1.4%, while the consumers' expenditure deflator rose by 3.5%. Since M0 holdings are mainly used to finance consumption, the rate of growth of nominal consumers' expenditure may be a more relevant factor for M0 than the rate of growth of nominal GDP. The velocity of M0 relative to consumers' expenditure has been approximately flat in the last 12 months, as compared to a decline in M0 velocity of about 2% when measured relative to nominal GDP. This explanation makes recent M0 velocity look less abnormal, but it has still been unusually depressed in the last 12 months.

This has important consequences for policy. If M0 velocity is now stable, instead of rising by 4% per annum, this implies that the target range for M0 growth should be increased from 0-4% to 4-8%, a very major amendment indeed. It would, in turn, imply that there is no reason to become concerned about M0 growth running at 5.2%, since this would be just inside the bottom end of the target range, instead of slightly above the top end of the range.

When the government set its M0 range for 1993-94, it was aware of the possibility that the trend in M0 velocity may be changing, perhaps on a permanent basis.

In fact, in the *Budget Red Book*, the Treasury states: "If M0 velocity trend were to fall back to the 2% or so average annual increase recorded in the 1950's and 1960's, M0 growth could remain at, or above, the top end of a 0 to 4% range as long as inflation remains in the upper half of its 1 to 4% target range; especially when real GDP is growing faster than trend and the once-for-all effects of recent cuts in interest rates continue to

come through. The government has decided to retain a 0 to 4% range for M0 for the present. But the possibility that there has been a change in the velocity trend will have to be borne in mind in assessing M0 performance in relation to this range over the year ahead. The M0 range will be treated as a monitoring range rather than a target, because the government now has a target for the inflation rate itself."

The implication of these remarks, which were not widely commented upon at the time of the Budget, is clearly that the authorities may turn a blind eye to above-range M0 growth this year, on the grounds that they feel unsure about the underlying trend in velocity.

Given the uncertainty about M0 velocity, it would be very convenient if M4 velocity were performing in a more predictable fashion, since this could be used as the ultimate arbitrator for policy decisions. However, this is unfortunately not the case. The government's monitoring range for M4 over the rest of this Parliament (3-9%) is centred on a 6% growth rate, which implies that the Treasury expects M4 velocity to be broadly unchanged over the next 4 years. This would be a marked change in the trend for M4 velocity, compared to what had happened in the previous 25 years, when it fell on average by almost 2% a year.

Virtually all of this trend decline in M4 velocity actually occurred during the 1980s. In the 1960s and 1970s, M4 velocity was broadly stable, which is what the Treasury is assuming will occur again during the 1990s. Empirical studies suggest that the main determinant of M4 velocity is the ratio of personal sector wealth to income. If wealth increases, people are content to hold more bank and building society deposits for any given level of income, and so velocity falls.

With house prices declining over the past 2 to 3 years, the ratio of personal sector wealth to GDP has fallen back slightly from its peak reached in 1989. This has been accompanied by a change in the trend in velocity of M4 which, as we have seen, has been broadly stable since the second half of 1990. Going forward, the authorities appear to be assuming that the trend of wealth to income will be more stable than it was during the 1980s, leading to greater stability in M4 velocity. In addition, any effect which financial liberalisation may have had in depressing M4 velocity may now be over.

If we take it as a working assumption that M4 velocity will remain stable over the next few quarters, then growth in M4 at least at the centre of its target range would seem appropriate. Anything less than this is likely to be consistent with real GDP growth of considerably less than 3% per annum (assuming that the GDP deflator will increase by around 3-4% per annum). This means that the government would welcome faster growth in broad money, if it emerged.

4.3 Money and Interest Rates

Where does this leave base rate policy? In the March *Budget Red Book*, the Treasury stated that it would be "a cause for concern" if either narrow or broad money moved outside its monitoring range, but that evidence from any one indicator would have to be weighed against the message from other indicators in judging the outlook for inflation. The overriding consideration would be whether the government's inflation objective seemed likely to be achieved in an unspecified future period, probably extending over a year or two ahead.

At present, in view of the uncertainties involved in assessing the behaviour of both M0 and M4 velocity, it would be surprising if the Treasury's view of inflation prospects were materially altered by small variations in the growth rate of either of these monetary aggregates. Therefore, almost by default, the exchange rate once again emerges as central for monetary policy decisions.

In the Treasury's Budget forecast for inflation, the government's target variable (the retail price index excluding mortgage rates) was shown to increase by 3.8% in the year ended 1994Q2, just inside the top end of the 1-4% target range. This forecast was prepared on the usual assumption that the sterling exchange rate would be stable (at around 80 on the effective index). Obviously, this therefore implies that a relatively small decline in the effective exchange rate below 80 would probably result in inflation running above the top end of the target band during 1994, at least on the Treasury's forecast. This might be enough to persuade the government to tighten monetary policy, though it is possible that they could decide to do nothing on the grounds that the breaching of the inflation target could be temporary, and would be triggered only by the fact that indirect tax effects are likely to add about 0.7% to the inflation rate (as measured by the government's target variable) next year.

On the other hand, it also follows that a significant rise in the exchange rate from the levels assumed in the Budget forecast could produce an inflation outturn substantially below the top end of the 1-4% target range. Although the government might be content with such an outturn, it seems more likely to conclude in present circumstances that this should trigger an easing in monetary conditions in order to ensure that the growth in real GDP is robust and sustained.

There are therefore three possible triggers for a base rate cut in the next few months. The first would be a further slackening in economic activity. Although recent data have been mixed, there is as yet no strong sign from any of the major business surveys that the upturn is under threat. There will probably be periods when the data will turn soggy, but these should prove temporary.

The second possible trigger for lower base rates would be renewed sterling robustness in the context of further declines in European interest rates. Although the DM has recently reasserted itself as Europe's strongest currency, sterling has traded comfortably against other European currencies and the dollar, and the effective exchange rate could rise when European interest rates fall further. It is possible that the government might start to think about a base rate cut if the sterling index rose above about 83-85.

Third, interest rates could be reduced if the Chancellor decided to introduce a further tightening in fiscal policy in November.

4.4 The Fiscal/Monetary Mix

The tax increases announced by Mr. Lamont in the March Budget amount to 1.0% of GDP in 1994-95 and to 1.4% of GDP in 1995-96. In addition, the share of public spending in GDP is scheduled to decline by 1.5 percentage points in the next two years. On a cyclically adjusted basis, the fiscal policy stance is therefore likely to tighten by more

than 2% of GDP in the next two years, following an easing of around 3% of GDP in the last two years. This is obviously a very marked swing in budgetary policy, and the Chancellor will need to take a view on its likely effect on the economy.

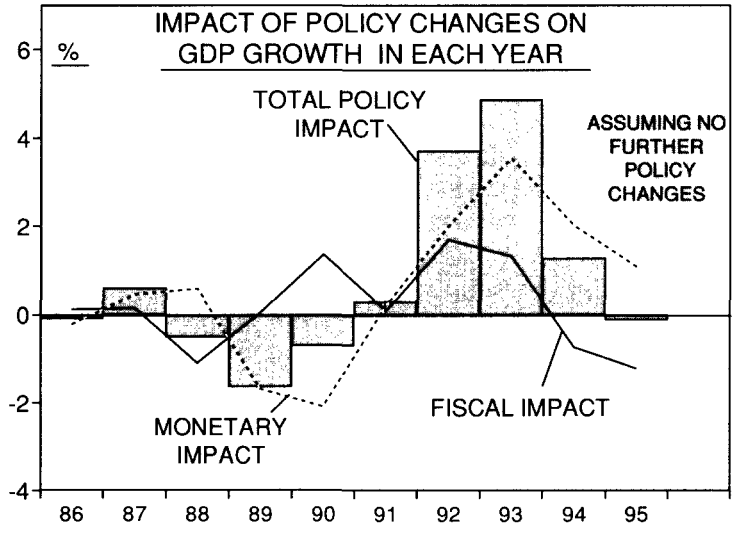
Some economists would argue that the impact of tax changes on aggregate demand is rather small, since consumers are rational enough to realise that lower taxes today must inevitably imply higher taxes tomorrow. However, these "Ricardian equivalence" arguments do not apply with such force to changes in public spending. Furthermore, the major econometric models of the UK economy generally do not in practice exhibit the property of Ricardian equivalence - tax changes **do** affect aggregate demand, with most of the effect being felt within the first 18 months of the tax change being implemented.

It may be reasonable to assume, as a broad brush approximation, that GDP growth will be depressed by around 1% a year in both 1994 and 1995 as a result of the fiscal tightening already announced. (This assumes that the short-run multiplier in the economy is around unity, and that about 80% of any fiscal effect comes through in the first year, with the remainder being felt in the second year.) Taken in isolation, this would appear to be worrying for the sustainability of the economic recovery.

However, even without any further base rate cuts, there should still be some additional stimulus in the pipeline from the interest rate cuts that were announced before February 1993, and this should continue to support economic activity.

It would be wrong to be over-precise about the relative effects on economic activity of these offsetting fiscal and monetary impacts. However, it is necessary to form a broad judgement in this area, and the accompanying graph is intended to assist in this direction. The fiscal effects shown in the graph are derived by the methodology described above. The monetary impacts are taken from an average of the effects of base rate changes in the six major econometric models of the UK economy which are currently supported by public money (including those of the Treasury and Bank of England).

Figure 4.2



These effects are intended to incorporate both the direct impact of monetary policy changes on domestic demand, and the indirect impact which stems from changes in the exchange rate. A 1% cut in base rates boosts real GDP by 0.5% in the first year, by a further 0.4% in the second year, and by a further 0.3% in the third year, making 1.2% in all. The "monetary policy impact" shown in the graph takes into account the lagged effects of the major tightening in policy which took place up to 1990, and of the historically unprecedented easing which has taken place since then.

It is clear from the graph that monetary and fiscal policy have often been working against each other in the past few years, but that monetary policy has generally had the more powerful effects. For example, from 1989-91 fiscal policy cumulatively added about 1.5% to GDP, but monetary policy depressed GDP by 3.6%, thus explaining a large part of the recession. In 1992 and 1993, fiscal policy added 3.0% to GDP growth, and monetary policy for once worked in the same direction, adding a further 5.6%. No wonder the economy embarked on a reasonable recovery, despite the downdraught it experienced in these two years from world activity!

In the next two years, monetary and fiscal policy will once again be working in opposite directions. As noted above, fiscal policy will subtract a cumulative 2.0% from GDP in 1994 and 1995 taken together. Meanwhile, even if base rates remain unchanged at 6% throughout this period, the lagged stimulatory effects of previous base rate cuts will add about 3.1% to GDP over the next two years. Therefore the overall policy effect will be rather small, but will tend to be positive rather than negative.

Of course, all these effects are measured relative to what would otherwise have occurred, assuming that policy had remained unchanged. Given the continuing depressive effects on UK activity of weak world trade growth and high levels of domestic debt, it is possible that this small policy boost will not be sufficient to keep real GDP growing at the pace necessary to reduce unemployment. At present, the savings ratio in the UK is about 3-4 percentage points higher than would have been expected on the past relationships between monetary policy and consumer behaviour, and it is quite likely that monetary policy will for some time remain less effective at stimulating consumer spending than usual.

Furthermore, with the economy working so far below capacity, and with domestic inflation pressures still so subdued (especially in the labour market) the Chancellor might decide that he is justified in taking greater short-term risks with inflation than with activity and unemployment. If sterling were to rise significantly as other European countries reduce their interest rates, Mr. Clarke would probably feel justified in cutting UK base rates.

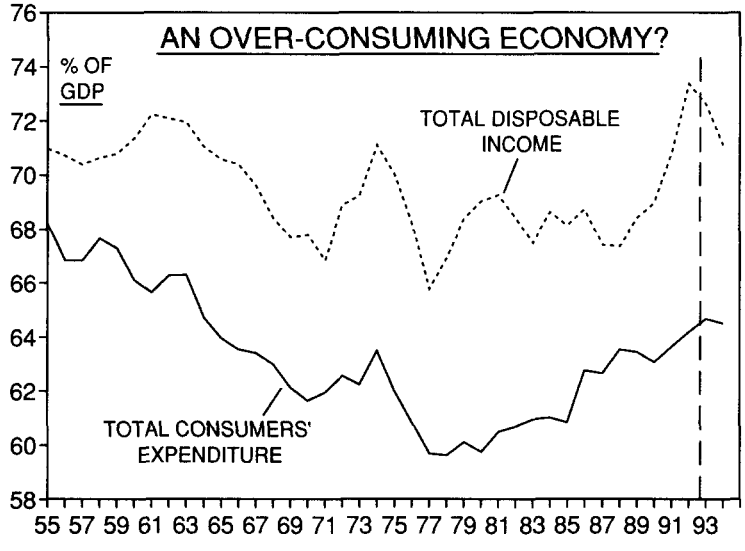
However, the case for a further easing in overall monetary conditions (taking base rates and sterling together) must rest primarily on the outlook for fiscal policy. As explained above, the fiscal changes so far announced will depress GDP by about 2% over the next two years, but this is likely to be offset by a slightly larger positive impulse from monetary policy, even with base rates remaining at 6%. If Mr. Clarke decides to tighten fiscal policy further, this could tilt the balance in favour of lower base rates, providing sterling is approximately stable.

The medium-term fiscal arithmetic outlined in chapter 6 suggests that policy might have to be tightened by a further 1% of GDP in order to reduce the PSBR to less than 3% of

GDP by 1997-98. This is a very small amount in the context of the uncertainties involved in calculating this figure, and taken alone it might not be sufficient to persuade the Chancellor to raise taxes again.

However, there are other reasons, unconnected directly to the PSBR, for reducing public consumption or increasing the burden of personal taxation in the next five years. It is now extremely well known that the trade deficit is unusually large for the present stage of the economic cycle, as is the contribution of net trade volumes to GDP. The share of personal consumption in GDP is correspondingly large - around 65%, compared with 20-year average prior to 1985 of about 61%. There is a similar "excess" of real personal disposable income in GDP at the present time.

Figure 4.3



Consumption is, of course, a highly desirable end-product of a successful economy, but the UK should be seeking to maximise consumption over a long period. If increased consumption over short periods is attained at the expense of net trade volumes or (even worse) investment in physical and human capital, then this can reduce the trend rate of growth in GDP, and restrict the level of consumption in the long run. This may well have happened in the UK since 1985, and it is important to redress the balance over the next few years. Ideally, the government needs to shift resources out of short-term consumption (public as well as private), and into both exports and investment.

The best way of ensuring that this shift can take place is to keep interest rates relatively low, encouraging the real exchange rate to remain at or below current levels, but at the same time to reduce public consumption or to increase the burden of tax on the consumer sector. There is a case for arguing that these consumption-reducing measures should probably build up to at least 2-3% of GDP over the next four years. Since the government has recently re-affirmed its medium-term spending targets at unchanged levels, higher taxation would need to bear the brunt of this action.

It is unlikely that the Chancellor will feel that further tax increases of this magnitude are politically feasible, even if he agrees in principle that they are desirable. However, he has already hinted that some further tax measures will be forthcoming in the Budget. In deciding this, he may have been motivated by a combination of the above arguments with (i) the need to maximise the chance of introducing pre-election tax cuts in 1996 should public borrowing decline unexpectedly rapidly, and (ii) the need to maintain financial market confidence in the meantime.

As discussed in chapter 6, we assume that Mr. Clarke will announce tax increases which will raise around £1bn in 1994-95, £4bn in 1995-96 and £6bn in 1996-97. This further tightening in the fiscal stance of almost 1% of GDP in the third year would justify a base rate cut of 1% to leave the overall mix of policy unchanged in terms of its impact on activity over this period.

5 "Optimal" Fiscal Policy

5.1 Introduction

The new Chancellor Kenneth Clarke has said on many occasions since taking office that the present level of public borrowing is unacceptably high, and has also indicated that the downward medium-term path for the PSBR which was envisaged in the March 1993 Budget may need further attention. Indeed, Mr. Clarke has identified the high level of public borrowing as the single greatest threat to the nascent recovery in activity, and he has frequently complained about the build-up of debt interest which is scheduled to take place over the medium term. The rise in central government debt interest - from 2.9% of GDP in 1992-93 to 3.6% in 1995-96 and probably to over 4% in 1997-98 - will require the Treasury to increase tax revenue or to reduce other forms of public expenditure by the same amount each year in the long term. This is sometimes described as "passing a burden onto future generations", or even as"wasting money" which could be better spent elsewhere.

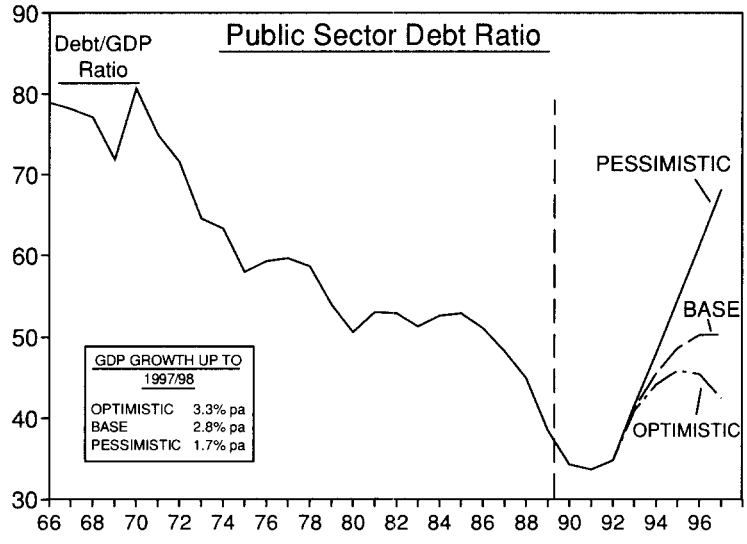
In fact, the Conservative government often speaks as if the optimal level of public debt is zero. Ever since Nigel Lawson's Chancellorship, the official target has been to balance the budget (though this objective has been postponed beyond the horizon of the latest set of medium-term fiscal plans). If the budget were indeed to be balanced over the cycle - entailing budget surpluses in booms and deficits in recessions - then in the long term the stock of public debt would remain unchanged in nominal terms, and the ratio of public debt to GDP would eventually dwindle towards zero. But is this really optimal? Should the government aim to wipe out the national debt? Or is this an unnecessary objective, as well as a pious one? And, if so, how should the government decide what the level of debt/GDP should be over the medium term? These issues are addressed in this chapter.

5.2 The "Burden" of Debt

As already noted, public debt is usually frowned upon because it is said to involve transfering "a burden" onto future generations, a procedure which is often referred to as "robbing our children". As we shall see later, there are circumstances in which an increase in public borrowing can lead to a decline in investment in the economy, and therefore to an acceleration in the time path for consumption. But when expressed in the simple terms usually used in the political debate, the "burden" argument is misleading. The government's debt is almost all owed to our own citizens, not to foreigners, so the nation as a whole does not incur a debt to other countries when the government runs a deficit; by the same token, the current generation as a whole does not transfer a net burden to future generations when debt increases.

What does happen, however, is that future UK citizens need to pay more tax in order to service the higher government interest payments which will in future be made to other UK citizens. This leaves the nation as a whole no better or worse off; indeed, the citizens on either side of the ledger might easily be the same people.

Figure 5.1



Thus an increase in public debt - excluding that small part which is owed to foreigners - involves nothing more than a series of transfers between British individuals. When the debt is incurred, savers make a transfer to the taxpayer. When the debt is serviced or redeeemed, taxpayers make the reverse transfer back to savers. The act of increasing debt (for any given level of public expenditure) is therefore equivalent to a postponement of the need to raise tax revenue.

This may or may not be a bad thing. Both Keynesian and classical economists would agree that there are times when it is appropriate for a government to incur a build-up of debt, just as it is optimal for a family or private company to do so. In discussing these matters, it is useful to separate the question of cyclical fluctuations in public debt as economic activity varies from the question of the long-term "steady state" level of debt which the government might run. Both these questions are important, and often they are confused.

5.3 Debt and the Economic Cycle

Both Keynesian and classical economists would agree that a build-up of debt during a recession can enhance an economy's long-term performance, provided that there is a presumption that the debt will be paid off in subsequent booms.

The classical case is quite subtle. It is not based on the need to use government borrowing to stabilise demand and therefore to dampen economic fluctuations - remember that in classical economic models, the business cycle is an equilibrium phenomenon which stems

from the optimising behaviour of rational economic agents. Nevertheless, classical economists would accept that public borrowing should rise when activity is cyclically depressed.

This rests on a belief that taxation has distortionary effects on the economy. Income tax, for example, reduces the return to work effort and might therefore reduce GDP as people respond to higher tax rates by substituting more leisure time for fewer working hours. According to the classical textbooks, the optimal way of dealing with these distortions is to set tax rates such that the debt ratio is "sustainable" over the medium term (see below for a definition of this term), and then leave these tax rates unchanged as the economy experiences booms and slumps. This naturally implies that the budget will move into deficit in recessions (compared to its long-term sustainable level), and into surplus during subsequent upswings.

Furthermore, classical models give us some clue about how much the PSBR should be allowed to rise during the recession - it should simply be by the amount of the "automatic" increase in the PSBR which occurs when the cyclical decline in tax receipts and increase in public spending take effect. This is essentially the reasoning behind the proposition that the "automatic stabilisers" should be allowed to work - a proposition which has now been largely accepted by the government. Provided that the tax system works such that these stabilisers are symmetrical in economic upswings and downswings, then a fiscal rule of this sort would leave the debt/GDP ratio stable over the long term.

If the government suspects that a permanent economic shock has occurred which has resulted in the PSBR running above the optimal cyclically-adjusted level, then classical economists would argue that the situation should be remedied by announcing an immediate and permanent increase in tax rates to restore the deficit to the correct level. Otherwise, tax rates should be left unchanged.

The Keynesian case for running a government deficit in a recession is more familiar and more obvious: when private sector demand is slack, an excess of government expenditure over revenue will tend, in a Keynesian model, to help stabilise the level of output in the economy. The Keynesian approach would agree that at least the full operation of the economic stabilisers should be allowed to take place, but the optimal amount of extra borrowing might be considerably more if that were necessary to stabilise output. In fact, it is perfecly open to Keynesians to argue that tax rates should be reduced in recessions, thus causing the PSBR to fluctuate by much more than the automatic stabilisers alone would imply.

This has led to the suggestion that there may be a "trade-off" between (i) the benefits of extra output when the government runs a deficit during a recession and (ii) the long-term costs of requiring higher tax rates to service the additional debt in the long term. Such a trade-off would exist only if the debt accumulated during a recession were not paid off during a boom, but in view of the gradual up-trend in public debt ratios in most democratic countries, that might be a reasonable assumption to make. Nevertheless, it is very difficult to quantify the optimal amount of debt which should be accumulated during a recession, because both the costs and benefits are impossible to assess accurately.

On the benefit side, there is much dispute about the impact of expansionary fiscal policy on activity. Some economists would argue that "Ricardian equivalence" applies, and that the private sector will not respond to debt-financed expansions in fiscal policy, since they will rationally perceive that taxes will need to be higher in the long term to service the debt. This could induce consumers to save more now in order to pay higher taxes later, in which case aggregate demand would not respond to a fiscal stimulus. But there are doubts whether consumers in the real world can be expected to act so rationally, and the empirical evidence on the question is inconclusive.

Turning to the longer-term costs of higher tax rates to service debt, there is even less consensus. It has not been conclusively established whether increased tax rates result in reduced work effort; indeed, the opposite might be the case. It is probable that higher marginal tax rates do involve some loss of economic efficiency, which might be quite serious over time, but there are ways of raising revenue while minimising these effects.

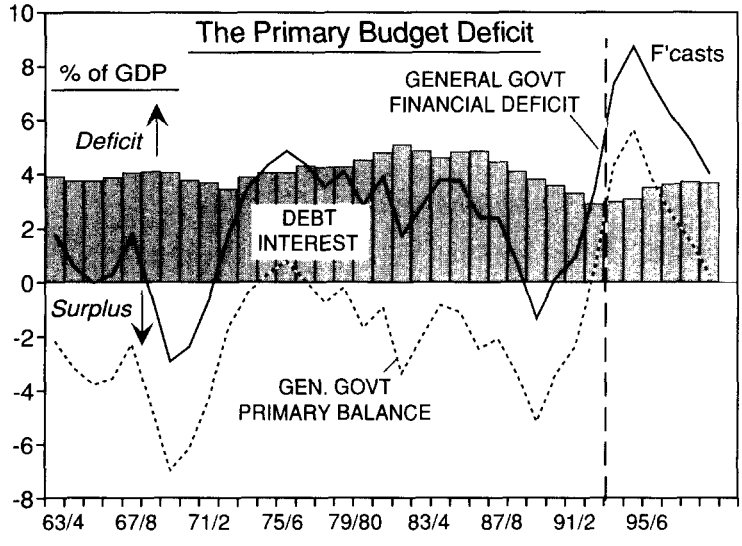
The balance of economic evidence probably suggests that fiscal stimuli during recessions are reasonably successful in stabilising demand and activity, while the longer-term supply-side losses from higher tax rates are typically rather nebulous. If this is true, a case can be made for introducing Keynesian fiscal measures during recessions. But surely no one would seriously argue that it is optimal for the debt thus incurred to be left in place during the subsequent economic recovery. If that were done, there would be an upward ratchet in the debt/GDP ratio during every recession, and eventually debt would rise explosively.

It is surely more sensible to argue that there should be a long-term target for the debt ratio, around which the actual ratio should fluctuate with the economic cycle. Classical economists would argue that these fluctuations should be limited to those which reflect the operation of the automatic stabilisers, while Keynesians could argue for reductions in tax rates during recessions, and increases in rates during recoveries. But neither side would argue for unlimited increases in debt from one cycle to another. Something else must determine the appropriate long-term target for public debt.

5.4 Sustainability of Budget Deficits

Discussion on this issue usually 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 explosive growth in the money supply as the government covers its deficit by issuing money, or it will 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 increase 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.

Figure 5.2



Calculations of debt sustainability involve manipulations of the government's budget constraint, and we describe the nature of these manipulations in Appendix 3. The budget constraint requires that the budget deficit must be financed either by the issuance of bonds, or by an increase in the monetary base. In the case of the UK, the PSBR is not typically financed to any large extent by a rise in the monetary base, and in any case the monetary base is currently only about 3% of GDP, so the government cannot "print money" to finance a significant proportion of its budget deficit.

As shown in Appendix 3, 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. (In this version, we assume that velocity is constant in the long term.) 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.

In order to do this, we assume that in steady state inflation will run at 4% per annum, real GDP growth will be 2% per annum, the debt ratio will stabilise at 52% of GDP, the velocity of circulation of the monetary base is 30, and the real rate of interest is 4%. Using these figures, we calculate that the non-interest budget surplus which the government needs to run in order to stabilise the debt/GDP ratio is around 0.9% of GDP.[1]

To this we need to add debt interest to attain the overall "sustainable" level for the PSBR at the end of the current Parliament. Let us assume that inflation settles at the top end of the government's target band, 4%, and is expected to remain there. With real interest rates at 4%, nominal interest rates will be 8%, and debt interest will be about 4.2% of GDP. This implies that the UK can run an overall budget deficit equal to a little over 3% of GDP (3.3% to be precise - the primary surplus of 0.9% subtracted from debt interest of 4.2% of GDP) while stabilising the debt ratio if inflation runs at 4% per annum.

A sustainable steady state position of this sort will have another useful feature, which is that it will tend to produce stability in the ratio of government debt/money in the economy. This assumes that the demand for money grows in line with nominal income (or that the velocity of circulation is stable). This is important, since in steady state, at given interest rates, we might expect the private sector to wish to adjust its holdings of financial wealth such that the ratio of debt/income and the ratio of money/income were approximately constant. Once the government has achieved sustainability for its budget deficit, this result will tend to be attained. The government's financial arrangements, including the mix between its fiscal and monetary policy, will under these circumstances tend to proceed in harmony with the private sector wishes to adjust its financial portfolios. Any other outcome may require there to be changes in relative returns on financial assets in order to persuade the private sector to hold the assets issued by the government.

Note that if the government were to reduce its inflation target, then the steady state PSBR would also need to be reduced. This is because debt interest would fall as nominal interest rates fall with inflation. For example, if the government wished to reduce inflation to the bottom end of its target range (1%), and if the financial markets expected this to be achieved, then nominal interest rates would eventually fall to 5%, and debt interest would drop to 2.6% of GDP. The PSBR consistent with this inflation target would be 1.7% of GDP (i.e. 2.6% debt interest less the primary surplus of 0.9%).

By similar reasoning, if the government wished to hit the centre of its inflation target (i.e. 2.5% per annum), the PSBR objective would be 2.5% of GDP. Each different inflation rate produces a different PSBR target.

One way of looking at this is to say that, for any given level of b (the debt ratio), the size of the government's required primary surplus is principally determined by real factors - specifically the excess of the real rate of interest over the real rate of economic growth.

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1 The primary surplus does of course vary with inflation, but the variation in this case and those which follow is less than 0.1% of GDP so has been ignored for simplicity.

This does not vary with the inflation target. However, the overall PSBR required for sustainability does vary with inflation, since the inflation rate is likely to affect interest rates and debt interest.

So have we now reached the end of the story? Unfortunately not, since we have not yet offered any rationale for fixing the debt/GDP ratio at an arbitrary level such as 52%. Recall that this was originally chosen only because that is the level which will be reached on present forecasts by the time the economy returns to "normal activity" in 1997. The above calculations take that objective as a starting point, and then calculate what level of budget deficit is consistent with it, given the inflation and real interest rate assumptions which seem appropriate. If we take away the starting point, then the conclusion obviously falls.

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. For example, the gross government debt ratio for Britain this year is likely to be around 48%, as compared to 47% for Germany, 57% for France, 65% for the US, 86% for Canada and 115% for Italy. So what should determine the appropriate level of the debt ratio in the long run?

5.5 Government Assets and Net Worth

As in the case of any private sector entity, it is not sensible to consider public debt in isolation. We need to look also at the asset side of the government's balance sheet. If the government wishes to leave its net worth unchanged from one year to the next, then its net borrowing must be equal to its net addition to tangible assets (i.e. gross investment less capital depreciation and asset sales). Unlike the case of a private company, however, the government is not forced by the discipline of the market place to ensure that its net capital investment rises in line with outstanding debt, thus leaving net worth unchanged.

This is because lenders to the government will not assess its creditworthiness solely by reference to its net worth. Because of the Treasury's power to raise taxation in future years if this should prove necessary to remain solvent, the private sector may well be willing to continue lending to the government even when its net worth is shrinking, and even when its net worth is insufficient to match outstanding debt. In this latter case, if the affairs of the government were unexpectedly "wound up", then the sale of assets would be insufficient to pay down the debt, and the government could remain solvent only by raising money from taxpayers to pay off any debt left uncovered after asset sales. It would also be possible, in extremis, to increase the money stock with the same purpose in mind. Since these options are not open to a private entity, governments are able to ignore their balance sheet position for much longer than private companies or individuals.

This does not, however, imply that they would be wise to do this. Debt and assets must be planned together, and this relationship may help us to be slightly more specific than we have been up to now about the "optimal" level of government debt. For a private company, the value of the capital stock at replacement cost (i.e. its tangible plus intangible assets) should tend over time to be equal to its debt plus its equity. Since governments do

not issue equity, it might make sense for them to set debt equal to their tangible assets. (This assumes that they do not wish to borrow against their one great intangible asset, which is the ability to raise tax in the future.)

Translating this into flow concepts, the government can hold its debt equal to its tangible assets if is always keeps 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. It has also in the past been suggested by Treasury authors as a useful rule to be adopted in this country. (See, for example, John Odling Smee and Chris Riley, "Approaches to the PSBR", *National Institute Economic Review*, August 1985.)

If the government follows this rule, and if its borrowing is "sustainable" in the sense defined above, then its assets will rise in line with GDP. This in turn would imply that the flow of public services supported by these assets would rise in line with income (assuming the rate of return on public assets is constant over time) and - if the income elasticity of demand for public services is unity (admittedly a big "if") - then the provision of public services would rise in line with the demand for them.

The government, however, needs also to be concerned about the accumulation of assets by the economy as a whole, and therefore the relationship between its own investment and private investment. An increase in government borrowing, with government investment left unchanged, will tend to increase consumption in the economy at the expense of investment, and will thus redistribute consumption in favour of present generations and away from future generations. (This assumes that Ricardian equivalence is not complete.) If it can be shown that the private sector has a tendency to "over-accumulate" capital, then it might be optimal for the government to borrow more than it invests. But if it is assumed that the private sector is accumulating the optimal amount of capital, then the government should seek to avoid distorting this equation by borrowing more than it invests. Under these circumstances, any extra government borrowing (which tends to reduce private investment and increase consumption) should be matched by additional public investment. Again, this would be an argument in favour of the "golden rule" of public finance.

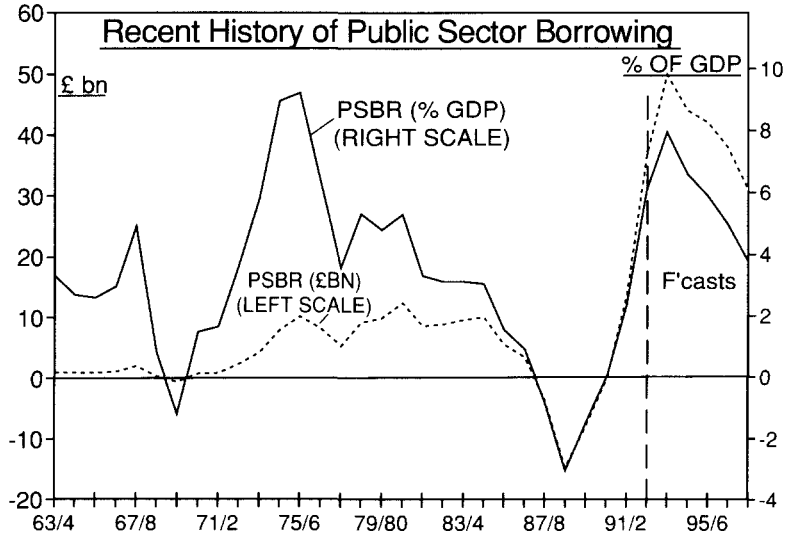
Unfortunately, it is far from straightforward to translate these broad principles into a functional rule which can be used in practice by the public sector. The very nature of the public sector means that in many cases there is no active market for its assets. Public assets are therefore even more difficult to value than their private sector equivalents. Furthermore, it is difficult to draw the line between capital and current spending in the public sector. Some items of spending which are officially classified in the national accounts as "current expenditure" yield a return in future years, so there is a case for reclassifying a proportion of such spending as investment. Military hardware and education spending which enhances human capital are two obvious examples. Finally, the government's balance sheet should in theory reflect items such as the present value of public sector pension commitments (i.e. intangible liabilities), but these are not usually included in official estimates.

All of these problems are important, and they make it difficult to estimate a precise value for the optimal level of public debt in the long term, even if it is accepted that debt should be brought into line with tangible assets. However, it is probably wise for governments to have at least some idea about whether their tax and spending plans are tending to increase or reduce the net worth of the public sector, and it is possible to go some way towards implementing this limited objective.

5.6 Government Borrowing and Asset Creation up to 1997-98

The PSBR in 1993-94 will be about £50bn, or 8% of GDP. The borrowing requirement has occasionally been as high as this in the past, for example in the mid-1970s, but there are some reasons for suggesting that the situation now is more worrying than it was then. One such reason is that the general government deficit is now much higher than it was in the mid-1970s. Then, about one third of the PSBR was due to the financial deficit of the public corporations, which like other companies in the producing sector had moved into financial deficit as a result of the oil price shock. The remainder of the government accounts ran a deficit in 1975-76 of 5% of GDP, as compared to 8% now.

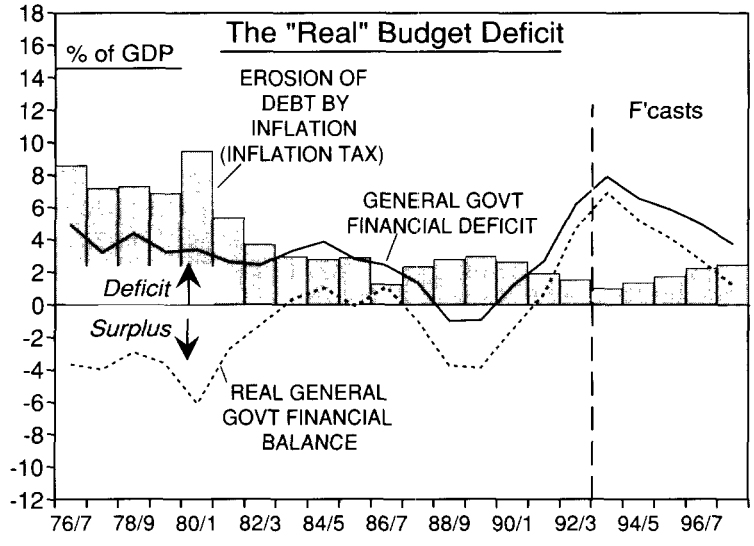
Figure 5.3



In addition, the government's primary deficit, currently around 5% of GDP, is much higher than it was in the 1970s, when it was generally in surplus. Furthermore, with inflation now running at much lower levels than in the 1970s, the erosion of public debt through rising prices (the inflation tax) is much smaller now than it was then. Put together, these factors mean that the government's debt ratio is rising at an alarming rate - in fact, by

about 6 percentage points a year, as compared to a slight fall in the debt ratio in the mid-1970s (entirely due to unanticipated inflation). Dr. Bill Robinson, special adviser to Mr. Lamont 1991-93, has calculated that the debt ratio is now rising at a faster rate than ever before in peacetime.

Figure 5.4



Fortunately, it is doing so from a very low base, so the government has several years in which to address this problem before it becomes too serious. What should it do?

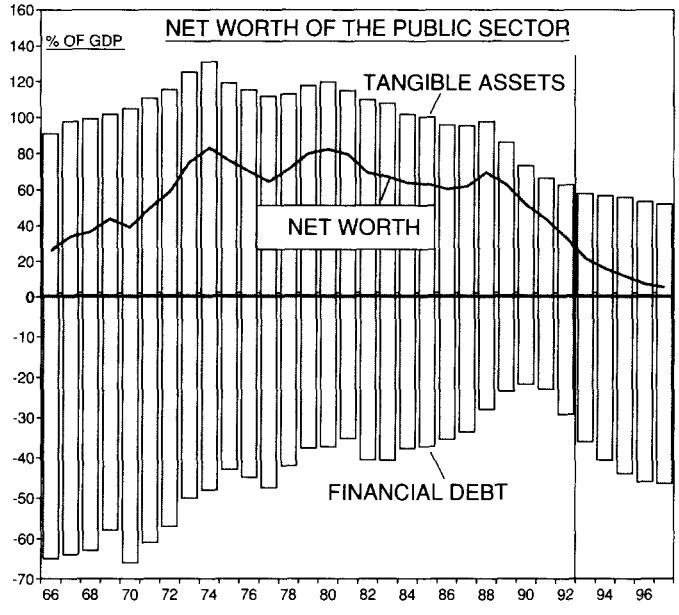
In the January 1993 *Green Budget*, we argued that it should seek to stabilise the debt/GDP ratio by the time the economy returned to "trend" capacity working. Assuming the output gap in the economy is now around 4%, and that GDP growth proceeds at an average of 3% per annum during the recovery period, normal capacity working would occur in 1997-98. On the calculations outlined above, net debt would be stabilised thereafter at about 52% of GDP if the PSBR by then were reduced to 3.3% of GDP with inflation running at 4%, or to 1.7% of GDP with inflation running at 1%. These are the two outliers produced by the top and bottom end of the government's inflation target. To simplify, we shall use the centrepoint of the inflation target, which produces a PSBR objective of 2.5% of GDP.

Before Mr. Lamont announced his tax increases in March 1993, there seemed little prospect that the government could attain this objective. Even with Mr. Lamont's tax increases, it is somewhat touch and go whether it will be achieved unless further fiscal action is taken. On our central economic assumptions, the PSBR would fall to about 3.6% of GDP by 1997-98, thus requiring a further fiscal tightening of 1% of GDP to achieve debt sustainability if nominal interest rates were based on the expectation that inflation would be in the centre of its 1-4% target range thereafter.

Obviously, this is a very small tightening given the huge uncertainties in projections of this sort. However, there are other reasons why the Chancellor might opt for a larger tightening in fiscal policy in November. First, there is the question of the fiscal/monetary mix, discussed in chapter 4. Second, there is the "golden rule", and the relationship between public sector assets and public debt.

As explained above, we can discuss the golden rule as a stock concept relating to the relationship between tangible assets and net financial debt, or as a flow concept relating to net investment and the PSBR. The *United Kingdom National Accounts Blue Book* has just been published by the Central Statistical Office, and this contains updated estimates for the public sector balance sheet up to 1992. At the end of last year, the official estimate of tangible assets was £374bn, compared to £174bn of net financial debt. If these figures are reliable, then the public sector is comfortably observing the golden rule in terms of the stocks of assets and liabilities on its balance sheet, and it would continue to do so even if public debt increased substantially. This may be seen as an argument for saying that the PSBR does not need to be brought down as sharply as the "sustainability" arithmetic suggests. The public sector could achieve debt sustainability more slowly, adding more to the stock of outstanding debt in the meantime, and still end up with assets comfortably outstripping debt.

Figure 5.5

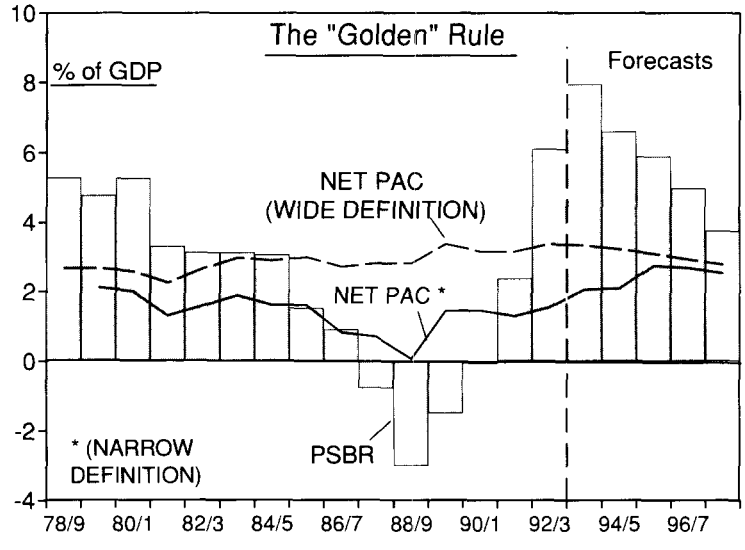


It is debatable, however, whether the absolute levels of these stock concepts are very meaningful, and recent changes in the balance sheet are much less comforting. According to the *Blue Book*, the government has not been investing enough since 1988 to maintain its net worth unchanged. Tangible assets were 98% of GDP in 1988, since when they have

fallen to only 63% of GDP - an alarming rate of decline. Meanwhile, net financial debt (on CSO definitions) has risen from 28% of GDP to 29%, producing a halving in public sector net worth from 70% of GDP to 34% in just four years.

Flow concepts - net investment and public borrowing - also suggest that public sector net worth is probably declining. This is illustrated in Table 5.1, which shows the government's most recently published estimates of public sector asset creation (PSAC), with certain adjustments made to make the figures more suitable for assessing whether the golden rule is being observed. PSAC differs in several respects from more familiar concepts such as public sector gross domestic fixed capital formation (or gross "investment"). 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. It is therefore an extremely broad definition of how much the government is contributing to gross investment each year, no matter whether this investment is in the public or private sector.

Figure 5.6



Even on this definition, PSAC has been little changed in real terms since 1978-79, and has fallen slightly in recent years. But the definition is too broad for our purposes, since it does not include capital depreciation, and therefore substantially overstates the contribution of the government to the nation's stock of capital each year.

Our estimate of the public sector's contribution to national net worth is obtained by subtracting capital depreciation from PSAC. In the latest year, this produces a figure of £20bn. We call this net PSAC (wide definition).

Table 5.1. Public Sector Asset Creation and Net Worth

	Current Prices			1991-92 Prices		
	1978-79	1985-86	1992-93	1978-79	1985-86	1992/93
Public sector asset creation						
- Central government	4.8	10.9	16.2	13.0	15.7	15.6
- Local authorities	3.9	6.3	8.5	10.5	9.1	8.2
- Public corporations[1]	2.4	4.1	5.7	6.5	5.9	5.5
Total	11.1	21.3	30.3	30.0	30.6	29.3
less						
Capital depreciation	6.4	10.4	10.0	17.3	14.9	9.6
equals						
Contribution to national net worth[2]	4.7	10.9	20.3	12.7	15.7	19.7
less land sales	0.1	1.8	1.5	0.3	2.6	1.4
less asset sales	0.4	2.7	8.0	1.1	3.9	7.7
equals						
Contribution to national net worth[3]	4.2	6.4	10.8	11.3	9.2	10.6

Notes: [1]excludes industries privatised before 31 March 1992 (though capital depreciation includes these industries).
[2]net public asset creation (wide definition).
[3]net public asset creation (narrow definition).

The term "wide definition" is used because this measure of net PSAC relates to the whole economy, and not simply to the net worth of the public sector. If we wish to narrow the definition to the increase in public sector net worth only, we need to subtract land and asset sales. (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 net PSAC (narrow definition) of about £11bn in 1992-93.

Which of these figures is appropriate for the golden rule? Net PSAC (wide definition) tells us how large the PSBR can be if government borrowing is to leave unchanged the net worth of the entire economy. This is the appropriate definition if we are concerned with optimising the time path for investment and consumption in the economy as a whole. Net PSAC (narrow definition), by contrast, tells us how much the government can borrow without reducing the net worth of the public sector. This definition is appropriate if we

are considering, for example, how easy it might be to finance the PSBR in future. (This is because the private sector may be more willing to lend money to the government if it believes that it has some "asset backing" for the loans.)

If these principles were to be implemented today, they would suggest that the PSBR should be running somewhere between £10bn and £20bn. Obviously, with a PSBR running at £50bn, the golden rule is not currently being met in flow terms, and the net worth of the public sector is continuing to fall sharply. However, we argued above that it was appropriate for the PSBR to exceed temporarily its long-run target while the economy is in recession, as long as the opposite occurs in the boom. It follows that the net worth of the public sector will fall in recessions, and rise in booms.

What matters is what happens when the economy returns to "normal" capacity working, which we assume to be in 1997-98. By then, if the past is any guide, gross PSAC will be roughly the same in real terms as it is now, which means that it will be running at about £36bn. Net PSAC (wide definition) will be about £24bn, and net PSAC (narrow definition) will be about £20bn. Note that the difference between the wide and narrow definitions of net PSAC shrinks as the privatisation programme declines in importance.

In order to observe the golden rule in 1997-98, the government therefore needs to restrict its borrowing to about £20-24bn, or 2.7% of GDP. By coincidence, this is a similar figure to that required to achieve debt sustainability in that year. The PSBR target which keeps public debt growing in line with GDP also ensures that public sector net worth stabilises, and that the public sector's assets grow in line with GDP. This would appear to be a sensible target for the PSBR by 1997-98.

On our central economic assumptions, the government will come quite close to achieving this target by the end of this Parliament without further tax increases. Nevertheless, the Chancellor may prefer to raise some additional revenue now for several reasons. First, the main threat to the economic recovery in the next few years may well come from the trade deficit. This threat can be lessened by keeping the exchange rate competitive, and this can be promoted by a tighter fiscal/easier monetary mix. Second, this tilts the composition of spending away from consumption and towards investment. Third, raising some additional revenue now (albeit phased over a couple of years) could create room for pre-election tax cuts.

6 Public Finances and Budgetary Strategy

6.1 Introduction

The last five years have seen a rapid and dramatic deterioration in the state of public sector finances. Especially over the last year, and possibly even more in recent months, the level of public borrowing and appropriate responses to it have been debated furiously both within and outside government. In the run-up to the Budget in March of this year it was quite easy to take a firm stance in favour of action to reduce borrowing, because it was clear that only on the most optimistic of assumptions would the public finances come back into order as a result of economic recovery. For the November Budget, the appropriate course of action is less dramatically obvious. In March, the then Chancellor, Mr. Lamont, announced tax increases that will raise £10bn p.a. from 1995-96 on. The recovery in activity that seemed to be evident in the spring is now clear, and the most likely outlook is for a period of stable non-inflationary growth. We expect the Chancellor to publish forecasts in the FSBR in November for the PSBR into the medium term that will show it falling faster and further than the forecasts published in March. Despite this, we still believe that the most sensible course will be to opt for the announcement of further fiscal tightening in the November Budget, although once again it will make sense to phase in changes over several years.

We begin this chapter with our own forecasts of the PSBR in 1993-94 and 1994-95. We then extend these to 1997-98. Finally, we explain why we believe further fiscal tightening is warranted in the November Budget.

6.2 The Public Finances in the Short Term

The PSBR in 1993-94

For the first time in many years, we expect the forecast of the PSBR of £50bn for the coming year, made at Budget time, to turn out to have been quite accurate. The macroeconomy seems likely to perform very much as expected, and this carries through fairly automatically to the public finances. We assume the government will meet its spending targets for 1993-94. Table 6.1 shows our public finance forecasts for 1993-94 and 1994-95. This table reproduces the format of the forecast table at the front of the *Red Book*. The forecasts are described in greater detail in Appendix 1. We are expecting an outturn for the PSBR in 1993-94 of £49.6bn.

Table 6.1. The Public Finances 1993-94

£bn	1993-94 FSBR	1993-94 IFS Forecast	1994-95
Income tax	57.5	57.5	64.6
Corporation Tax	14.6	16.0	19.8
Petroleum Revenue Tax	0.6	0.6	0.9
Capital Gains Tax	1.0	1.0	1.0
Inheritance Tax	1.3	1.3	1.4
Stamp Duties	1.7	1.7	1.7
Total Inland Revenue	76.7	78.1	89.3
VAT	39.9	39.0	42.3
Petrol	12.7	12.6	13.9
Tobacco	6.6	6.7	7.0
Alcohol	5.1	5.3	5.8
Betting and gaming	1.1	1.1	1.2
Customs duties	1.9	1.9	2.0
Agricultural levies	0.2	0.2	0.2
Total Customs and Excise	67.5	66.8	72.3
Vehicle excise duties	3.7	3.7	3.8
Oil royalties	0.7	0.7	0.7
Rates	13.3	13.3	13.9
Other taxes and royalties	4.6	4.6	4.8
Total taxes and royalties	166.5	167.2	184.9
National Insurance contributions	39.1	39.0	44.2
Council Tax	8.2	8.2	8.5
Interest and dividends	4.8	4.8	5.1
Gross trading surplus and rent	10.5	10.5	9.4
General government receipts	229.1	229.7	252.1
Central government expenditure	166.4	166.4	172.2
Central government support for LAs	58.4	58.4	61.5
Local authority self-financed	11.1	11.1	11.0
Public corporations	3.9	3.9	1.9
Reserve	4.0	4.0	7.0
New control total	243.8	243.8	253.6
Cyclical social security	15.1	15.1	16.0
Central government debt interest	19.4	19.4	23.5
Accounting adjustments	7.5	7.5	8.5
General government expenditure	285.8	285.8	301.6
Privatisation	-5.5	-5.5	-5.5
General government borrowing requirement	51.2	53.7	44.0
Public corporations borrowing requirement	-1.0	-1.0	-1.0
Public sector borrowing requirement	50.2	49.6	43.0

The PSBR in 1994-95

Next year we expect to see the beginning of a steady decline in the PSBR, to around £43bn. Once again, we assume that the government will meet its spending targets for 1994-95.

The most significant cause of the reduced PSBR is a strong rise in direct tax revenues. Both personal income tax and National Insurance contributions revenues rise as a result of changes announced in the March Budget, and they also benefit from stronger wage and employment growth. We expect corporation tax revenue to recover strongly following large increases in corporate profits in 1993-94.

Indirect taxes are also boosted by the March Budget changes with the imposition of VAT on domestic fuel beginning to take effect in April 1994, and further real increases in excise duties on petrol.

Our final PSBR forecast is close to that from the March FSBR.

We should stress that this forecast is subject to a wider margin of error than those in previous *Green Budgets* because, like the government, we are making forecasts earlier this year with much less published data. A great deal of the uncertainty relates to the uncertainty surrounding our forecasts of the economy. Table 6.2 lists our forecasts for the variables that largely determine tax revenue, and our estimates of the impact of a change of one percentage point in the level of any of these variables.

Table 6.2. Macroeconomic Assumptions and Sensitivity Analysis

Percentage Growth	1993-94 (%)	1994-95 (%)	Sensitivity (£bn)
GDP	2.2	3.0	n/a
Average earnings	3.3	4.2	1.3
Consumer prices	3.4	3.7	0.9
Consumers' expenditure	1.8	1.8	0.9
Corporate profits (previous year)	9.5	20.0	0.2

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

6.3 The Public Finances in the Medium Term

The main prerequisite for a projection of the public finances is a view of the likely path of the economy. Our projections are discussed in detail in Appendix 1, but in Table 6.3 we show three possible paths for real GDP.

Table 6.3. Alternative Macroeconomic Working Assumptions

Percentage Growth		1993-94	1994-95	1995-96	1996-97	1997-98
GDP	Optimistic	2.7	3.5	3.5	3.5	3.5
	Baseline	2.2	3.0	3.0	3.0	3.0
	Pessimistic	1.5	1.5	1.8	1.8	1.8

We use three separate paths because we are keen to emphasise the uncertainty that surrounds any forecast for either the economy or public sector borrowing as far as five years from now. Even if macroeconomic forecasting were an exact and accurate science, it could not predict and take account of external shocks to the economy such as the oil price crises of the 1970s, the Stock Market crash of 1987 or political crises.

Our central baseline path for the economy predicts GDP growth of 2.2% for 1993-94, and then sees the growth rate settling at around 3%. Although this is higher than the UK historical trend, and higher than the peak to peak or trough to trough growth rate we expect, of some 2%, it reflects the significant catch up to the trend path for GDP which we can expect after so deep a recession. In this central case we expect to see employment stabilise and then begin to rise in 1994-95. Inflation is expected to rise to 3.7% by 1994-95, remain around this level in 1995-96, but then rise steadily, reaching 5% by 1997-98.

Our optimistic scenario is based on annual GDP growth settling at 3.5%, rather than 3%, which leads to higher employment growth, but also higher inflation. Our pessimistic scenario shows the economy failing to catch up with the old GDP trend; this implies stagnation for employment and very low rates of inflation.

Our medium-term projections assume no changes to government tax policy other than those already announced, such as the imposition of VAT on domestic fuel and the annual 3% real increase in excise duties on petrol and DERV.

Projections for government spending are more difficult to make than those for taxation. One route is simply to take the government's published plans for public spending and assume that these will be achieved. This is what we expect to be done in the FSBR, since it would be hard for the government to appear to increase public spending plans. However, after several years of rapid real increases in spending, the targets for the middle years of the 1990s assume extremely low real growth in spending even if the government's inflation forecasts are accurate. Since our forecast of revenues is based on significantly higher price inflation and therefore earnings inflation than the government's forecasts, if we use government spending targets with our revenue forecasts we are implying real *reductions* in public spending by the later years of the Parliament. Our main case is therefore to take current government spending plans for 1994-95, but thereafter to assume a 2% annual real increase in public spending. This 2% is the underlying average increase in spending on goods and services during the corresponding period of the 1980s' economic cycle, when the Prime Minister was Mrs Thatcher, and the Chancellors Sir Geoffrey Howe and Nigel Lawson. It is possible that the current government will restrain public spending significantly more successfully than its predecessors, but seems unlikely. So as to err on the side of caution,

we cap the annual spending increase of 6% in nominal terms, so that if the GDP deflator rises at more than the government's 4% inflation target (as it does in 1996-97 and 1997-98), we assume lower real increases in spending.

For completeness, and also to show the sensitivity and uncertainty surrounding forecasts of this type, we present in Appendix 1 the outcome simply assuming the government hits its planned spending.

Table 6.4 shows the key elements of our main, baseline forecast. Government receipts grow steadily as the recovery proceeds. Public spending also rises steadily, as we have assumed. As a result of this the PSBR declines every year from now, although the decline from 1994-95 to 1995-96 is small, because of the reduction in privatisation proceeds. By 1997-98 the PSBR has fallen to just over 3.5% of GDP.

Table 6.4. The Public Finances in the Medium Term. Government Spending Growth at 1980s, Levels from 1995-96

£bn	1993-94	1994-95	1995-96	1996-97	1997-98
Inland Revenue	78	89	103	116	131
Customs and Excise	67	72	78	83	88
Total taxes and royalties	167	185	206	225	246
General government receipts	230	252	278	302	329
Control total	244	254	268	286	307
General government spending[1]	286	302	321	341	361
Privatisation	-6	-6	-1	-1	-1
Public corporations borrowing	-1	-1	-1	-1	-1
PSBR	50	43	41	37	30

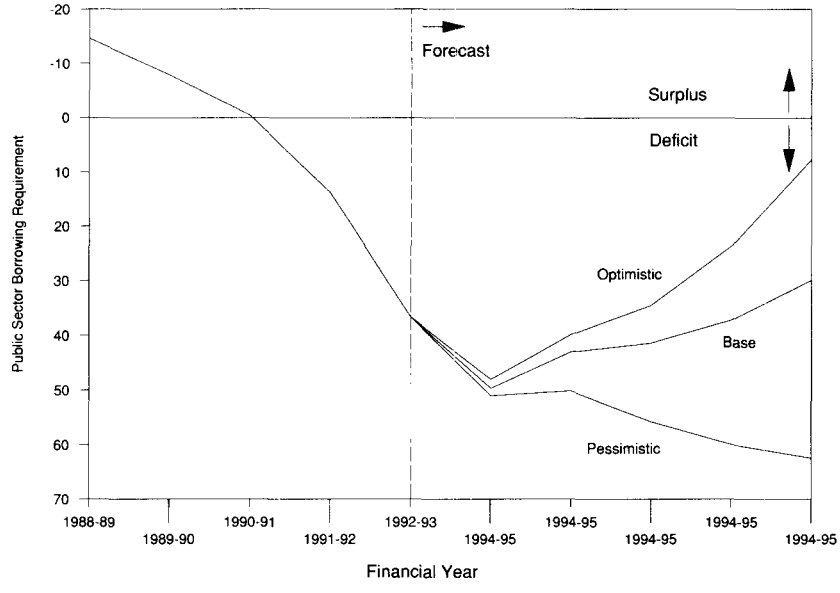
Notes: Figures may not sum exactly to the PSBR due to rounding.
[1]Excluding privatisation proceeds.

Table 6.5 and Figure 6.1 show the main case PSBR under the three different growth scenarios. These forecasts underline an obvious though important point: the outcome for the public finances is critically dependent on the performance of the economy. The path for the PSBR in the three scenarios begins to diverge in 1994-95 and covers a range of £54bn by 1997-98. Although the growth assumptions in these cases are at the extreme ends of what is plausible, none of the scenarios could be thought of as absurd.

Table 6.5. The PSBR in the Medium Term: Sensitivity Analysis

		1993-94	1994-95	1995-96	1996-97	1997-98
PSBR	Optimistic	50	40	35	24	8
(£bn)	Baseline	50	43	41	37	30
	Pessimistic	51	50	56	60	62
PSBR	Optimistic	7.9	5.9	4.8	3.0	0.9
(% of GDP)	Baseline	7.9	6.5	5.8	4.9	3.6
	Pessimistic	8.0	7.8	8.3	8.6	8.7

Figure 6.1
The PSBR in the Medium Term: Sensitivity Analysis



6.4 Budget Strategy for 1994-95

The PSBR will peak in 1993-94 and then fall, and should reach £30bn, 3.6% of GDP by 1997-98. Although this is our best estimate, there is great uncertainty about this figure. Public spending control more effective than that achieved in the first half of the 1980s and/or more buoyant growth than we are assuming, and/or more inflation could produce a PSBR in 1997-98 that was acceptably low without any further action to raise taxes or cut spending.

Nonetheless, as discussed in chapter 5 a PSBR of 3.6% of GDP is not low enough to achieve debt sustainability, or to satisfy some version of the golden rule. Added to this we should remember that the government is likely to want to cut tax rates in the run-up to the next election, that there are always risks that the economy will perform less well than forecast, that it is politically easier to reverse unnecessary announced tax increases

or spending cuts than to announce unexpected tax increases or spending cuts, and that the November 1993 Budget is likely to be the last politically acceptable occasion for fiscal tightening.

Overall, we feel that the sensible and risk-averse action will be to announce fiscal tightening that will amount to around 1% of GDP per year by the end of the Parliament. Since significant tax increases are already planned for 1994-95 it would seem appropriate to phase fiscal tightening over several years, with only slight additional tightening in 1994-95, perhaps some £1bn, rising to some £6bn by 1996-97. Fiscal tightening of this magnitude should allow monetary policy to be somewhat looser than would otherwise have been the case. While Mr. Clarke has said in the past that he is opposed to delayed implementation of tax changes, he will have little option but to phase any significant changes he announces. Large changes in public spending cannot be made quickly, and with £6bn of tax increases already planned for April 1994, further large increases in tax might seem too draconian to take immediate effect.

It is interesting in this context to note quite how large the tax cuts of the 1980s were. Even restricting our attention to direct personal taxes, we find that to restore the system to its 1986 structure would raise some £19.5bn, as shown in Table 6.6. Mr. Lamont announced tax increases in March will reverse only half of these cuts.

Table 6.6. Revenue Raised from Reversing Selected Personal Direct Tax Changes

Measure	Revenue (£ bn)
(i) Basic rate of income tax back to 30%, lower rate abolished;	14.0
(ii) All higher rates of income tax restored (assumed all higher rate thresholds would have been price indexed), no restriction of mortgage interest relief	2.0
(iii) Restoration of old NICs structure	3.1
(iv) ALL OF THE ABOVE	19.5

Source: IFS Tax and Benefit model.

The arguments for action to reduce the deficit are less strong for the November Budget than they were for the March Budget, but are in our view still persuasive. It is possible that action announced now will turn out to have been unnecessary, but such a scenario relies on an extremely optimistic conjunction of economic events, and action announced now could be reversed without too great a cost. In the much more likely event that the public finances will require further action, the economic and political costs of delaying decisions beyond the November Budget could be high. Those who believe that the public finances are headed for disaster are far too gloomy, but further action is still warranted. Mr. Clarke should imitate his predecessor, and tighten fiscal policy a little more, albeit in the medium term.

7 Issues in Taxation

In this section 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 change in the November Budget, and issues for longer-term tax reform.

We begin by examining the direct tax system for individuals. Although many of the tax cuts of the second half of the 1980s took the form of reductions in income tax rates, it seems unlikely that this government would choose to raise revenue by reversing any of those reductions. If money is to be raised from income tax, changes rather like those announced by Mr. Lamont in March, which concentrate on base extension rather than rate increases, seem the most likely route. On National Insurance contributions, similar arguments apply.

Turning to indirect taxes, we assess the arguments for further extension of the VAT base. Just as for domestic fuel, the imposition of VAT on the remaining zero-rated commodities would hit those on low incomes, although compensation could be paid. Even if Mr. Clarke had the political courage to face the uproar further major extension would create, the impact on inflation of such a change probably rules it out. Much the same argument applies to large general increases in excise duties.

Company taxation could once more be at the centre of attention after the November Budget. Announcements of legislative action to implement schemes for Foreign Income Dividends and International Headquarter Companies seem very likely. There is also the possibility of further revenue raising by further cutting the ACT rate, the basic rate of tax on dividends and the tax credit to pension funds. Large amounts of money are at stake. The arguments about increasing capital allowances to encourage investment continue, as does the debate about R&D and the tax system.

Finally, we consider taxation and the environment. We examine options for road pricing, and conclude that the options open in the short term would be most effective as revenue raisers rather than as a way of altering vehicle use. We also discuss the possibility of landfill levies.

7.1 Direct Taxes on Individuals

The principal obstacle to raising additional revenue through personal direct taxes is that significant increases in income tax and National Insurance contributions (NICs) were announced in the March Budget and have mostly yet to take effect. Almost unnoticed, Norman Lamont announced income tax and NIC increases which will raise an additional £4.3bn in 1994-95 and £5bn per year thereafter. Table 7.1 lists the main measures involved and how much each will raise.

In the remainder of this section we consider both the scope for additional revenue raising via income tax and NICs, and also the structural issues which the Chancellor may wish to address.

Table 7.1. March 1993 Budget: Main Income Tax and NIC Measures

Measure	Yield (+)/Cost (-) £ m Changes from an Indexed Base		
	1993-94	1994-95	1995-96
Income tax			
Allowances and basic rate limit frozen	660	920	960
Married Couple's Allowance restricted to 20%	-	910	1170
20p band widened	-300	-710	-850
Mortgage interest relief reduced to 20%	-	820	870
Company cars, fuel and vans	200	345	390
Relocation relief restricted	-	200	200
Total Income Tax	560	2485	2740
National Insurance contributions			
Employees	-	1750	2100
Self-employed	-	40	110
Total NICs	-	1790	2210
Total income tax + NICs	560	4275	4950

Source: FSBR.

Income Tax

Raising Revenue

There are essentially only two ways of increasing income tax: to increase the amount of personal income which is subject to tax at a given rate or to increase the rates at which tax is charged. In recent years income tax increases have all been of the first type and there is every reason to suppose that this will be the case again this year. Increasing income tax rates is probably the most high-profile way of raising tax and is remembered long after technical changes to the values of allowances and exemptions have been forgotten.

There are a number of ways in which the base for income tax could be widened. The two most obvious routes, both used in the March Budget, are to reduce the value of the tax-free personal allowances and to reduce the extent to which other expenditures (such as mortgage interest payments and pension contributions) are allowable against tax. We consider each in turn.

(i) Personal Allowances

Under the present system, a certain amount of each individual's income is not subject to income tax. For a single person below pension age the relevant amount is currently £3445 per year. Higher allowances apply to those over pension age, whilst married couples are given an additional allowance, currently £1720 for those under pension age. Beyond this tax-free allowance, the first £2,500 of income is taxed at 20%, the next £21,200 at 25% and the remainder at 40%. At present around 5 million people pay tax at 20%, 18 million at 25%, and around 1.6 million at 40%.

One consequence of this system is that tax-free allowances are of more benefit to those who pay higher rates of tax. This is illustrated in Table 7.2. The first row of the table shows the amount of income tax currently payable by a single person earning £20,000 per year. The next row shows how much tax would be paid by the same individual if the tax-free allowance were to be abolished overnight. The effect of this change on the individual's tax bill is then shown. The calculations are then repeated for the case of a single person earning £40,000 per year.

Table 7.2. Income Tax Bills of a Single Person Earning (a) £20,000 and (b) £40,000 per Year with and without a Tax-free Allowance

	Tax Calculation	Tax Bill
£20,000 salary		
Allowances as at present	£2,500 @ 20% + £14,055 @ 25%	=>£4,014 (1)
No allowance	£2,500 @ 20% + £17,500 @ 25%	=>£4,875 (2)
	"Value of Allowance" (2)-(1)	=>£ 861
£40,000 salary		
Allowances as at present	£2,500 @ 20% + £21,200 @ 25% + £12,855 @ 40%	=>£10,942 (3)
No allowance	£2,500 @ 20% + £21,200 @ 25% + £16,300 @ 40%	=>£12,320 (4)
	"Value of Allowance" (4)-(3)	=>£ 1,378

The calculations in Table 7.2 show that the effect of the £3,445 allowance is to reduce the tax bill of a basic rate taxpayer by £861 per year and that of a higher rate taxpayer by £1,378 per year. In this sense personal allowances are "worth more" to those paying higher rates of tax. By similar reasoning, the personal allowance is worth still less to someone paying income tax at the 20% rate.

The measures announced in the March 1993 Budget went some way to reducing this anomaly. With effect from April 1994 the value of the Married Couple's Allowance (MCA) will be the same for all taxpayers. With a view to raising revenue, the value of the allowance will be "levelled down" so that higher rate and basic rate taxpayers receive only the same benefit from the allowance as lower rate taxpayers do at present.

The value of the allowance to a lower rate taxpayer is currently £344 per year (20% of £1,720). Henceforth, taxpayers entitled to the MCA will have their tax bills calculated as if the MCA did not exist, and will then have that bill reduced by £344 - the value of the allowance to a 20% taxpayer.[1]

One option for the Chancellor would be to extend this approach to all personal allowances. Whilst limiting the value of the MCA raises around £1bn per year, restricting the main personal allowance to 20% would raise more than £5bn. This is because, whilst the value of the MCA goes only once to each taxpayer couple, the personal allowance goes to all 24 million taxpayers. Table 7.3 shows the effects of restricting the personal allowance to 20% on households at different income levels.

Table 7.3. Distributional Effect of Restricting the Value of Personal Allowances to 20%

Decile Group	Effect on Net Income	
	In £ per week	As % of net income
1 (poorest)	-0.05	-0.06
2	-0.06	-0.06
3	-0.47	-0.45
4	-1.75	-1.26
5	-2.87	-1.63
6	-3.74	-1.76
7	-4.52	-1.84
8	-5.05	-1.85
9	-5.67	-1.73
10 (richest)	-9.84	-1.90
Whole population	-3.41	-1.58

Source: IFS Tax and Benefit Model.

Clearly a reform of this sort would represent a very hefty increase in taxation especially if it were to be imposed on top of the tax increases already announced. It would bear particularly heavily on high earners who currently gain most benefit from the personal allowances.

One way to mitigate the effects of such a reform would be to spend some of the proceeds on widening the 20% income tax band. This band was set at £2,000 when it was introduced by Norman Lamont in the 1992 Budget, was widened to £2,500 for the current financial year and is set to be increased to £3,000 in April 1994. If restricting the value of allowances were to be presented as part of a move towards a 20% standard rate of income tax, then widening the 20% band would add credibility to this claim and would also reduce some of the cash losses.

1 Tax-paying pensioner couples will also have the value of their allowance restricted to 20%, but the size of the allowance will be increased in April 1994 to reduce cash losses for pensioners.

Table 7.4 shows the distributional effects of a package which involves restricting allowances to 20% but spending half of the revenue raised in widening the 20% band. We estimate that the band could be widened to around £5,250 on this basis. This package still raises more than £2.5bn, but, as Table 7.4 shows, produces significantly lower losses among those on lower incomes.

Table 7.4. Distributional Effect of Restricting the Value of Personal Allowances to 20% Coupled with Widening the 20% band to £5,250

Decile Group	Effect on Net Income	
	In £ per week	As % of net income
1 (poorest)	-0.01	-0.01
2	-0.01	-0.01
3	-0.10	-0.09
4	-0.47	-0.34
5	-0.92	-0.52
6	-1.37	-0.64
7	-1.85	-0.77
8	-2.32	-0.85
9	-2.88	-0.88
10 (richest)	-6.99	-1.34
Whole population	-1.69	-0.78

Source: IFS Tax and Benefit Model.

Another way of "giving back" some of the £5.7bn raised by restricting allowances to 20% would be to reduce the standard rate of income tax at the same time. A cut to 24% would reduce the revenues gained to around £3bn, whilst a cut to 23% would leave only around £400m net additional revenue.

A less drastic change would be to restrict the value of personal allowances to 25%. This might be presented as another step on the road to an eventual 20% basic rate. On the assumption that the change would be introduced in such a way as to benefit lower rate taxpayers (whose allowance may effectively be worth less than 25% at present) this would yield around £1.2bn. If lower rate taxpayers did not benefit then the yield would be £1.4bn.

Another less radical option would be to freeze the personal allowances rather than to increase them in line with inflation. With inflation in the year to September 1993 at 1.8% this measure, coupled with freezing the point at which higher rate tax starts to become payable, would raise an extra £670 million per year. This is precisely what Norman Lamont did in the March 1993 Budget when setting allowances for 1993-94. With low inflation this is a relatively inconspicuous and painless way of raising income tax. For reference, Table 7.5 provides a "ready-reckoner" of the amounts which could be raised by these various possible changes to income tax rates and allowances.

Table 7.5. Income Tax Ready-Reckoner

Measure	Estimated Annual Yield (£ m)
Restrict personal allowances to 20%	£5,700
Restrict personal allowances to 20% and widen 20% band to £5,250	£2,800
Restrict personal allowances to 20% and cut basic rate to 24%	£3,000
Restrict personal allowances to 20% and cut basic rate to 23%	£400
Freeze personal allowances and basic rate limit	£670
Restrict personal allowances to 25%	£1,200-£1,400

Source: IFS Tax and Benefit Model.

(ii) Tax Reliefs

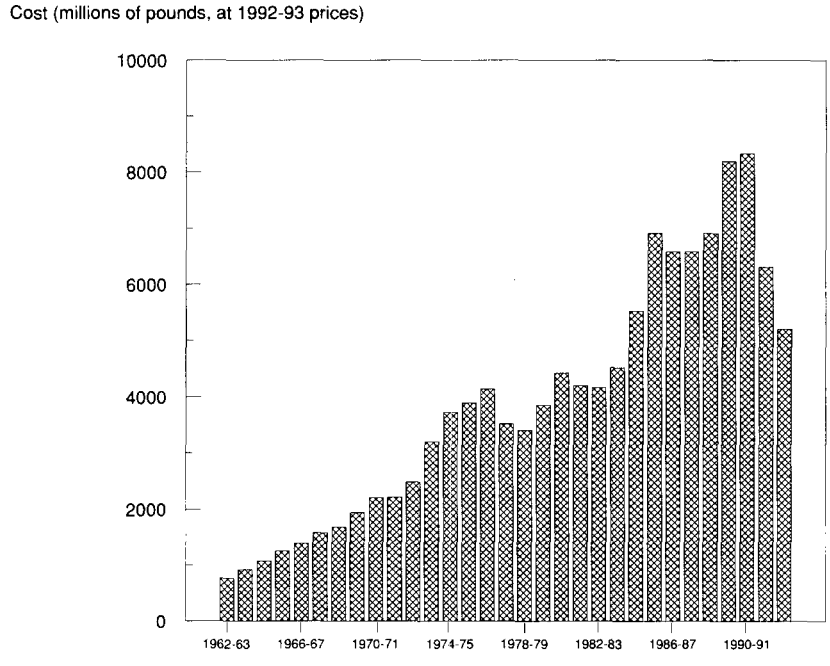
A range of expenditures may be offset against an individual's income when liability for income tax is assessed. The two most important are mortgage interest payments and payments to an approved occupational or personal pension scheme. Similarly, certain categories of income are partially or wholly exempt from tax. These include dividends and capital gains on shares held in a Personal Equity Plan (PEP), interest income on a Tax-Exempt Special Savings Account (TESSA), earnings received from a Profit-Related Pay (PRP) scheme, and many others. One way of increasing revenues would be to limit the scope of tax reliefs and exemptions of this sort.

The scope for progress on this front may however be rather limited. Considering, first, mortgage interest relief, the value of the relief has already been restricted to the basic rate in the 1991 Budget and with effect from April 1994 will be restricted to the lower (20%) rate. These structural changes, coupled with falling interest rates and a freezing of the £30,000 ceiling on the part of a mortgage qualifying for relief mean that the real cost of mortgage interest relief is currently only around two thirds that of its peak in 1990-91 (see Figure 7.1).

Given the continued fragility of the housing market it seems unlikely that there will be further reductions in the value of mortgage interest relief (MIR) in the short term. However, in the longer term it seems likely that the demise of MIR will continue. The two restrictions in the value of the relief announced in the past three years indicate that MIR is no longer the political sacred cow that it was once perceived to be. A gradual phasing out of the relief cannot therefore be ruled out.

The area of tax relief for pension contributions may seem more promising for a Chancellor in search of extra revenue, but again there are considerable problems. At present, contributions into an approved occupational or personal pension are allowable against income tax at an individual's marginal rate. Thus, as with personal allowances, a given contribution will reduce the tax bill of a higher rate taxpayer by more than that of a basic rate taxpayer. Income and capital gains inside the pension fund are not taxed, but the resulting pension is subject to income tax. An individual is however allowed to take up a part of the fund in the form of a tax-free lump sum.

Figure 7.1
The Value of Mortgage Interest Relief in 1992-93 Prices (1962-63 to 1992-93)



With the exception of the tax-free lump sum, the taxation of pension contributions might be thought to be appropriate. If individuals choose to defer their earnings by placing them into a pension fund, then it seems reasonable to exempt that slice of earnings from tax and to tax it when it is eventually received in the form of a pension. Furthermore, given the likelihood that the government's review of social security spending is likely to result in further reliance on private pension provision, it would seem odd to make the general tax position of such pension schemes less favourable.

The tax-free lump sum is (to quote Nigel Lawson) a "much-loved but anomalous" feature of the tax system. Reform would be politically unpopular and would need to protect the reasonable expectations of those close to retirement who have been contributing to such schemes for decades in the expectation of such a tax privilege. A gradual phasing out of the tax relief is perhaps the most that a Chancellor can hope for and, given that the total value of the relief is only around £1bn per year, this is unlikely to be a significant source of short-term revenue.

There is also likely to be relatively little scope for raising extra revenue from cutting back on existing exemptions such as TESSAs and PEPs. Since the idea of these schemes was to encourage savings and shareholding respectively, any reduction in the tax privilege associated with them would run the risk of reversing any progress made. It is also the case that the Exchequer cost of these reliefs (£300 million in the case of TESSAs, £150 million for PEPs) is relatively modest, compared for example with the amounts involved in the main personal allowances.

One relief where there is some scope for restricting cost is Profit Related Pay (PRP). PRP is supposed to be that part of pay which varies with changes in the profits of businesses. Money paid to employees under PRP for the current year's profits is relieved of income tax up to a limit of 20% of pay or £4,000, whichever is lower. Over the past year there has been a leap in the number of PRP schemes registered with the Inland Revenue and the number of employees in these schemes has risen by 54%. This might suggest that PRP is finally becoming popular, successful and providing the right incentives to employees in these schemes. Unfortunately, there is evidence that suggests that new schemes are largely designed as tax avoidance schemes, with little relation to the performance of the firm. We might expect some tightening of the regulations of PRP to stop schemes which have tenuous links to the performance of firms and therefore limit rises in PRP's estimated cost of £300 million.

Business Expansion Scheme

One form of tax relief the abolition of which has already been announced is the Business Expansion Scheme (BES). This scheme, which was introduced in 1983 to provide income tax relief for additional outside equity investment by individuals in certain types of unquoted UK trading companies, will be abolished in December of this year. The abolition was announced in Norman Lamont's 1992 Budget.

Investors obtain relief at their marginal tax rate on investment made in a company under BES. Furthermore once shares have been held for five years they become exempt from capital gains tax; the BES involves a double tax relief, neither the money invested nor the gains made attract any tax. This makes the tax treatment significantly more generous than under other schemes such as PEPs where tax relief is available only on income and capital gains received, not on the actual investments made.

The BES was introduced to apply only to investment in unquoted trading companies. It is not possible to buy shares quoted on the Stock Exchange as it is under PEPs. The risks associated with new investments in such companies are generally greater than those associated with investment in the general stock market and this risk is the main justification for the generous tax treatment. Nevertheless, many companies attempted to minimise the risk involved while still qualifying for the relief. The riskiness of investments under BES was effectively minimised in 1988 when BES relief became available for investment in companies providing private rented housing. Investment in such companies is virtually risk free - given rent levels a certain level of investment in a certain amount of housing is fairly sure to provide a certain level of income. Indeed many companies involved in the provision of private rented housing and making use of the BES to attract investors provide guaranteed rates of return to the investors.

Especially for higher rate taxpayers this can provide very high rates of return on investments. Effectively for each 60 pence they put into a scheme, the government provides 40 pence in tax relief. Not surprisingly the BES for companies involved in private rented housing has proved popular. In 1991-92 over 90% of BES investments were in such companies. Inland Revenue figures suggest that not only did the extension of BES to companies providing private rented housing double the amount of money being invested through BES, it also greatly reduced the amount of investment in other types of BES companies. So in 1987-88, the year before the extension of eligibility just over £200 million were invested in BES companies, none providing private rented housing. The next year, 1988-89, saw a jump in BES investments to £421 million of

which £368 million were invested in housing companies. By 1991-92, the latest year for which figures are available, £410 million of a total £450 million in BES investments were invested in companies providing private rented housing.

There is little doubt that these tax reliefs have increased private sector provision of rented accommodation, but they have done so at a substantial cost. Inland Revenue statistics suggest that the total cost to the Exchequer of BES reliefs in 1992-93 was £380 million. Much BES- financed accommodation is used by local authorities for the temporary housing of homeless families. IFS estimates suggest that this type of provision can cost the public sector over 50% more than some comparable temporary housing initiatives.

But if the government does want to continue to encourage the private sector to continue providing accommodation to rent, it might well be looking for some cheaper means of providing subsidies or incentives to the private sector to do this. Some announcement on this issue in the Budget is possible.

Structural Issues: The Rate Structure

As well as using the tax system to raise extra revenue, the Chancellor will wish to give thought to the sort of income tax structure he would like to see in the longer term. In this section we focus particularly on the structure of income tax rates. The section on NICs deals with the interactions between income tax and NICs.

From the time when the Conservative Party came to power in 1979 until the 1992 Budget, there was a gradual simplification of the income tax rate structure. Immediately prior to the 1979 General Election there were 11 different rates of income tax, ranging from the "reduced rate" of 25% to the top marginal rate of 83% on earned income and 98% on investment income. Successive Conservative Budgets simplified this structure, first scrapping higher rates above 60%, next abolishing the reduced rate band, then abolishing the 15% investment income surcharge, and finally in 1988 abolishing all higher rates above 40%. This produced an income tax system with just two rates - a basic or "standard" rate of 25% paid by around 95% of all taxpayers and a higher rate of 40% paid by the richest taxpayers.

A tax system in which most individuals face the same marginal rate of tax has many attractions. One of these is administrative simplicity, particularly when it comes to taxing income at source. Where most individuals face the same tax rate, banks and building societies can deduct the correct amount of tax from interest before it is paid and there is no need for a complex system of tax reclaims to accommodate variation in individuals' marginal tax rates.

It is also the case that a system with a very wide standard rate band can still be highly progressive. As we have argued consistently in successive Green Budgets, provided there is a significant tax-free allowance then even a single rate income tax would result in richer households paying a much higher share of their income in tax than poorer households. Evidence for this claim comes in Table 7.6 which shows, for 1993-94, the proportion of income taken in income tax for individuals at different income levels. Although the vast majority of taxpayers pay tax at the 25% standard rate, the average tax rate can be seen to rise sharply with income.

Table 7.6. Proportion of Income Taken in Income Tax 1993-94

Range of Total Income (lower limit)	Average Amount of Tax (£)	Average Rate of Tax (%)
3,445	130	3
5,000	450	7
7,500	910	10
10,000	1610	13
15,000	2660	15
20,000	4200	18
30,000	7080	21
40,000	20770	29
All ranges	2450	16

Source: Inland Revenue Statistics, 1993.

Given the attractions of a simple structure of income tax, Norman Lamont's decision in the 1992 Budget to reintroduce a reduced rate band (this time at 20%) came as something of a surprise. This reform was presented both as a tax-cut targeted on the low paid (whereas in fact they would have done better from an equal cost allowance increase) and also as the first step in moves towards a 20% standard rate of income tax.

Leaving aside the desirability or otherwise of a 20% standard rate, it is clear that if we are currently in the transition to a 20% standard rate then we may have a very long time to wait. If successive Chancellors were to continue widening the 20% band by £500 per year as has been the trend so far, and even if the basic rate limit of £23,700 were to remain frozen, then the 25% band would not disappear for another 40 years. More seriously, whilst the abolition of the 25% band would cost only around £7bn, the main emphasis of tax changes over the next few years is likely to be in the direction of net increases. Cuts on the scale required to bring the swift imposition of a 20% standard rate look very unlikely without significant increases in some other part of the tax system.

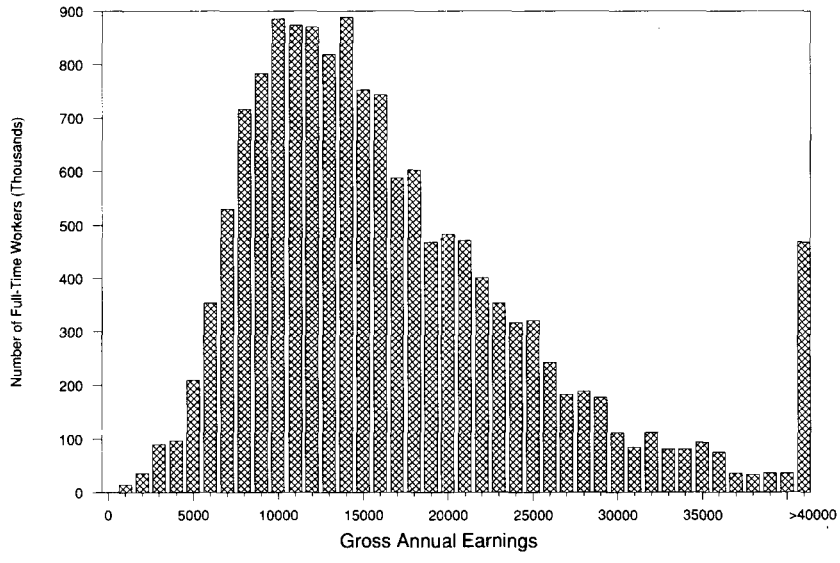
It therefore looks as though we are likely to face a three-tier income tax structure for many years to come. What is likely to change however is the balance between the numbers of individuals paying lower, standard and higher rate tax. When the lower rate band was widened from £2,000 to £2,500 in April 1993 this increased the number of lower rate taxpayers from four million to five million and this number will increase by a further million in April 1994. At the same time, the number of higher rate taxpayers is also set to increase steadily. There are a number of reasons for this latter trend.

In the first place, the threshold at which higher rate tax becomes payable (known as the "basic rate limit") has been frozen in three of the last four Budgets. Since April 1990 average earnings have risen by more than 20% and but for the effects of the recession this change alone would have added significantly to the number of higher rate taxpayers.

Secondly, each time the value of an allowance is restricted to the standard or lower rate, this increases the number of higher rate taxpayers. What happens in practice is that an individual's income tax is worked out as if the allowance did not exist and then the tax bill is reduced by the value of the allowance to a lower rate taxpayer. The consequence of this is that a married person earning, say, £28,000 will be a basic rate taxpayer this year (because £28,000 minus £3,445 minus £1,720 is less than the basic rate limit of £23,700) but will be a higher rate taxpayer next year (because £28,000 minus £3,445 is more than the basic rate limit).

The effect of repeatedly freezing the basic rate limit and of restricting allowances on the number of higher rate taxpayers becomes greater the longer the policy persists. This is because when earnings rise relative to the basic rate limit, a denser part of the income distribution is reached. This is illustrated in Figure 7.2. We calculate that whilst a 5% fall in the basic rate limit relative to average earnings would add around 200,000 to the number of higher rate taxpayers, a 10% fall would add more than 500,000 - well over twice as many.

Figure 7.2
Distribution of Full-Time Earnings in 1993-94



Source: 1992 Family Expenditure Survey

The conclusion of all this is that existing trends are taking us in the direction of a tax system with three rates - 20%, 25% and 40% - and possibly with roughly similar numbers of people paying each rate. It is difficult to see any particular justification for such a system in terms of equity or efficiency, either economic or administrative.

National Insurance Contributions

The other main personal direct tax is National Insurance, levied on employees, employers and the self-employed and raising £39bn in 1993-94. Once again we consider here the scope for additional revenue raising and for structural reform in this area.

The Current System

At present about 60% of the total yield from NICs comes from employers, with the majority of the remainder coming from employees and around 3% coming from the self-employed. In the case of employees, NICs are levied on gross earnings between a Lower Earnings Limit (LEL) and an Upper Earnings Limit (UEL), currently £56 and £420 per week respectively. For those with earnings above the LEL the employee rate is 2% on the slice of earnings up to the LEL and then 9% on earnings up to the UEL. No further contributions are payable on earnings above the UEL.

The structure of employer NICs is more complex, with the main differences being that the main rate of employer NICs is higher at 10.4% and that there is no upper limit on the earnings on which employer NICs are due. The employer NICs rate is payable on the whole of an employee's earnings and not just that part which is above the LEL.

The NICs structure for the self-employed is different again. Self-employed people with income above a "small earnings exemption" pay a flat rate weekly contribution, currently £5.55 per week. Those with profits above a "Lower Profits Limit" (LPL) also pay a contribution of 6.3% on profits between the LPL and an upper limit identical to that for employees. Self-employed people pay no "employer" National Insurance contributions and therefore face a much lower NIC bill than would an employee and employer in respect of an otherwise identical job.

Raising Revenue

As with all taxes, the only alternatives for raising the revenue from NICs are widening the tax base and increasing the tax rate. Both of these approaches have been adopted in recent years. On the tax base, employer NICs have been extended to cover payments via a number of benefits in kind including company cars and financial instruments such as gilts. Prior to these changes employers had an incentive to provide remuneration in these ways to avoid paying employer NICs. On the tax rate, from April 1994 the main rate of employee NICs will rise to 10% whilst the rate for the self-employed will rise to 7.3%.

Given that an increase in NICs has already been announced for 1994-95 it seems unlikely that the November Budget will produce further changes to the rate of NICs. More likely are measures to counter avoidance by further widening the base of NICs. In the longer term, a structural reform which aligned NICs and income tax more closely could produce both an increase in revenue and an important simplification in the personal tax system. It is to this possibility that we now turn.

Structural Issues: The Link with Income Tax

A Chancellor interested in the efficiency of the tax system and not just with the scope for raising additional revenue would do well to address the interaction between the income tax and National Insurance systems. Whilst some progress has been made in this area, much still remains to be done.

At present, employees face two direct taxes on their personal income - income tax and employee NICs. The two taxes are levied at different rates, on different tax bases and over different periods. The difference in tax base provides incentives for tax evasion (witness the payment of some employees in cocoa beans to avoid NIC liability), the existence of a ceiling on employee NICs reduces the overall progressivity of the tax

system in an arbitrary way, and the existence of two separate taxes adds unnecessarily to the costs of administration both among employers and by government. In short, there is a strong case for rationalising the system of personal direct taxation.

The simplest rationalisation would be to scrap the separate system of NICs for employees and the self-employed and to raise income tax rates to recoup the revenue forgone. The two main objections to this approach are as follows:

(i) The "Contributory Principle" - payment of NICs brings entitlement to contributory benefits such as the state retirement pension. To scrap NICs would bring an end to a system of "social insurance" which has been popular for half a century.

(ii) Losers - it would be difficult to scrap NICs and increase tax rates by a similar amount without producing a large number of losers. Principal losers would include the self-employed (who pay a lower rate of NICs and are not liable for employer NICs) and those with earnings above the Upper Earnings Limit who would pay extra tax on earnings above this level.

Neither of these objections seems insurmountable. As far as the "Contributory Principle" is concerned, it is difficult to see that there is much principle left to defend. Perhaps the clearest demonstration of this took place in the mid-1980s when the government took the decision to scale down the benefits available under the State Earnings Related Pension Scheme without any corresponding reduction in contributions. More subtly, but perhaps more significantly, the value of the basic state pension continues to fall every year relative to average earnings despite the fact that NICs continue to be linked to earnings. Very few people would remain wedded to a private insurance scheme which went on demanding the same premiums whilst unilaterally cutting back on the amount of insurance cover being provided.

The most appropriate response to the various groups of losers will vary, but none presents an insuperable obstacle. Losses amongst the self-employed would simply represent the ending of an unnecessarily favourable regime. Latest government estimates put the value of NI concessions to the self-employed at around £1.5bn. This represents the saving from the lower rate of NICs less any corresponding reduction in benefit entitlement. There can be little justification for preferential treatment on this scale. Whilst the sudden imposition of NICs on a basis comparable with employees might be too draconian, this would certainly seem to be a direction in which the tax system should be moving.

As regards losses amongst those with earnings above the upper earnings limit, this problem is likely to become progressively less important. As regards the part of earnings above the UEL which is also above the basic rate limit, the overall tax burden could be kept unchanged by reducing the higher rate of income tax at the same time as the ceiling on NICs was abolished. In this way the combined tax rate on this slice of income would stay at 40%.

The problem has always been the slice of earnings between the UEL and the start of higher rate tax. Those with earnings in this band would not gain from a cut in the higher rate of income tax but would lose from being charged an extra 9% on the slice of earnings above the UEL. However, with the starting point of higher rate income tax being regularly frozen whilst the UEL rises each year in line with prices, the width of this gap is likely to continue to fall. Furthermore, if the value of the personal allowance were to be restricted to the standard or lower rate then, as discussed earlier, individuals

would become higher rate taxpayers at lower levels of gross pay. With all personal allowances restricted, higher rate tax would effectively begin at gross pay of £23,700. With an Upper Earnings Limit currently at £21,840, three years' indexation at just 3% would close the gap completely.

Steps have already been taken to improve the interaction between income tax and employee NICs. Most notable have been attempts to harmonise the base between the two taxes by bringing benefits-in-kind such as company cars into the National Insurance net. However, much still remains to be done. A new Chancellor wishing to establish a reputation for reform might well act to bring about a major simplification in personal taxation by bringing together income tax and National Insurance. If such a change seems too bold, further steps could be taken to align the two tax bases.

Hypothecating Taxes

There has been a good deal of recent discussion about the possibility of increasing the use of hypothecation in the tax system. An hypothecated tax is one the revenue from which is committed to a particular spending programme. The clearest example of an hypothecated tax in the UK tax system is National Insurance contributions (NICs), the great bulk of which are automatically spent on social security benefits.

NICs portray very clearly the inadequacies of hypothecated taxes, but also the quality which makes them attractive to politicians. There is a clear choice to be faced for any so-called hypothecated tax: is spending on the specified area really to be determined by revenue from the hypothecated tax or not? If the hypothecated tax is truly to determine spending we have the absurdity that spending will be cut during recessions and increased during booms. We surely cannot intend that health or social security spending should be cut or raised simply because of the state of the economy. In the case of NICs there is certainly no link between social security spending and the state of the economy. In the early 1980s when NIC revenue was low because of unemployment, the government simply raised NIC rates. In the late 1980s when the boom raised NIC revenues, general taxation subsidy to social security was cut. In the 1990s, as recession has cut revenue and increased spending, the general subsidy to social security was increased. NICs as a so-called hypothecated tax have imposed neither an upward or downward constraint on government spending, or revenue, or the allocation of spending between programmes.

NICs *do* demonstrate the quality that politicians like about hypothecated taxes, which is that because the population seems to believe that NICs are spent on something 'good', and determine in some way the level of that spending, they are less resistant to paying NICs than they are to paying other taxes. The fact that more of the population believe that NICs are allocated to the NHS, which they are to only a small extent, than believe that they are allocated to the retirement pension, which they are to a far greater extent, demonstrates the further fact that misinformation here is rife.

Hypothecated taxes could only constrain government where they were allocated to genuinely marginal projects and where the level and allocation of government spending apart from the marginal project is entirely and irrevocably set in current and future years. Since such a set of criteria cannot be met, we must accept that any further hypothecated taxes would principally be an exercise in deceiving voters that their tax payments controlled government spending in a way which they simply will not. Further

hypothecation might make it possible to raise more revenue, but if our experience with NICs teaches us anything, it would be on the basis of misleading taxpayers rather than expanding democracy.

7.2 Indirect Taxes

In the past, Conservative Chancellors have often relied upon the indirect tax system as a means of raising revenues. The apparent wisdom behind altering the balance of taxation from direct to indirect is grounded in the assertion that the disincentive effects of high marginal rates of direct taxation can be avoided by a shift to indirect taxes.

> *"the plan to extend VAT is good economics. Indirect taxes are a more efficient way to raise revenue than direct taxes, because they do not weaken the incentive to work."* The Economist, 9-15 October 1993

The intellectual justification for this widely held view is, however, questionable. There is no doubt that the real level of incomes does have an effect on work incentives. Direct taxes reduce disposable incomes, and thereby the amount of goods and services which can be bought for a given supply of labour. Indirect taxes reduce the real value of incomes and hence also reduce the amount of goods and services which can be bought for a given supply of labour. To say that one has an incentive effect while the other does not is clearly nonsense.

In preparing for this Budget the Chancellor will be conscious that he already has two major indirect tax reforms in the pipeline: real increases in petrol duties and the imposition of VAT on domestic fuels. This section of the Green Budget will first look briefly at these two main pre-announced budget measures. The rest of the section will consider the Chancellor's remaining indirect tax options covering excise duties and VAT.

The Pre-Announced Budget Measures

In the spring Budget the Chancellor announced a plan to make real increases in petrol and DERV duties of 3% per year in future budgets and to impose VAT on domestic fuels. The rises in petrol duties represent a broadly progressive and relatively non-controversial tax reform. At the time of the spring Budget real petrol prices had fallen to around 80% of their 1980 value and the policy was presented as part of the government's plans to honour its commitments to the UN Convention on Climate Change. Perhaps more importantly, motorists have generally become accustomed to increases in petrol duties in recent years. The extension of VAT to domestic fuels, however, has proved deeply unpopular.

The principal objections made to charging VAT on domestic fuels concern the distributional impact on the old and the poor. Taxing goods which are considered neccessities, in the sense that their importance within the household budget falls as income rises, will generally involve a regressive distribution of the additional tax burden: the extra tax will represent a higher proportion of the incomes of the poor than the better-off. Automatic compensation in the form of the indexation of social security benefits will cost around £750 million per year once the tax is fully introduced. These automatic measures (related to the impact of the tax change on the RPI) will not, on average, provide adequate compensation for those in receipt of state benefits because poorer households spend a larger than average share of their budgets on fuel. Any

additional help offered to those worst hit will further reduce net revenues. We discuss this further in chapter 8. While EC rules mean that the government could decide to halt the VAT increases at the transitional rate of 8% if it wished, that seems unlikely given that most of the political costs have now been incurred.

Table 7.7. Revenue Effects of Charging VAT on Domestic Fuels and the 3% Real Increases in Petrol and DERV Duties

	Changes from an Indexed Base			
	1993-94	1994-95	1995-96	1996-97
VAT on domestic fuels	-	950	2,300	3,000
Petrol and DERV	105	520	950	1,150*

Note: * IFS estimate.
Source: HM Treasury (1993).

Table 7.7 shows the future revenues accruing under the plans to raise petrol and DERV duties by 3% in real terms in future Budgets, and the imposition of VAT on domestic fuels. The sums raised are large, around £4bn from 1996-97 onwards. Even after compensating those who are worst hit by ending zero-rating for fuel, the government could still have around £3bn worth of extra revenues in the pipeline. It is against this background that the Chancellor will frame his indirect tax policy for the coming year.

Excise Duties

A common feature of recent Budgets has been the increase of excise duties in line with inflation. Table 7.8 below reports the course of the real value of excise duties over the last 10 years. In the case of tobacco, duty increases above the rate of inflation are usually justified on health grounds. Further increases will probably be defended as being in line with the government's announced target of a reduction of one third in the number of smokers by the year 2000. The evidence on the price sensitivity of the demand for tobacco indicates that the reduction in consumption brought about by politically plausible tax rises alone will be slight. The aim of reducing the number of smokers could be enhanced if the message conveyed by increased taxation were reinforced by other measures such as health education campaign or an advertising ban.

Duties applied to leaded petrol too have shown real increases which have been used to encourage the switch to unleaded fuel and DERV. The real value of duties on beer, wine and spirits, however, remains low in historical terms, and the rate on spirits was frozen in nominal terms in the spring Budget as a concession to whisky makers.

While a real increase of 3% in petrol duties has already been announced, it is hard to predict whether the Chancellor will seek to revalorise other excise duties in line with the RPI. Failure to do so could cost £500 million in revenues forgone. The currently low, albeit rising, rate of inflation means the familiar trade-off between the inflationary impact of excise duty increases and the additional revenues they generate may be a less acute problem now than it has been in recent Budgets. Table 7.9 below illustrates the price effects of excise duty revalorisation.

Table 7.8. Real Value of Excise Duties: 1983-1993 (Base: 1984=100)

Year	Beer	Wine	Spirits	Tobacco	VED	Petrol	Unleaded	DERV
83	95	131	103	92	99	100		101
84	100	100	100	100	100	100		100
85	103	103	97	103	106	100		100
86	97	98	92	110	101	102		102
87	94	94	89	107	97	99	94	99
88	95	95	86	107	93	100	90	100
89	89	89	80	101	88	94	81	94
90	89	89	82	103	81	96	83	96
91	89	89	82	108	74	101	87	101
92	89	89	82	114	78	104	87	101
93	91	91	80	120	87	111	94	108

The Table shows the effect on prices and duties of the revalorisation of the main excise duties, as well as the effect of the increases in petrol duties. It also illustrates the effects of across-the-board increases of 10% and 15% in nominal duties. The RPI effects of each reform show that worries over inflation need not necessarily constrain the Chancellor's freedom to act.

It can be argued that the tax differential in favour of unleaded petrol has largely served its purpose and could be reduced. Figure 7.3 shows the share of the market for petrol accounted for by unleaded petrol and the duty differential with leaded petrol.

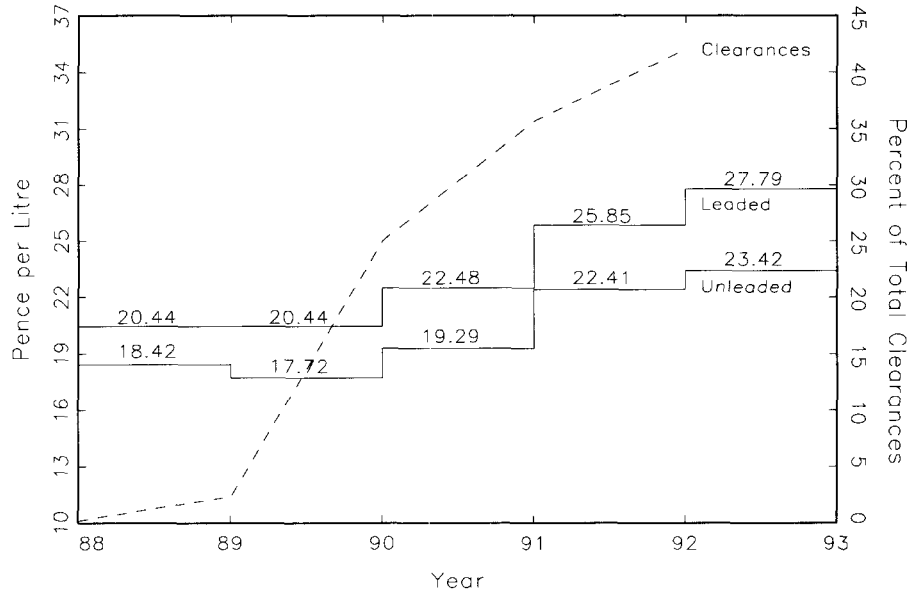
Table 7.9. Price Effects of Excise Duty Changes

	Beer	Wine	Spirits	Tobacco	Leaded Petrol	Unleaded Petrol
Current						
Duty (p)	24.45	99.20	555.00	97.50	30.58	25.76
VAT (p)	20.25	46.51	171.54	27.52	8.15	7.43
Ad valorem (p)				48.30		
Price (p)	135.98	312.31	1151.75	241.51	54.75	49.88
Uprating 1.94%[1]						
Duty (p)	24.92	101.12	565.77	99.39	32.11	26.86
VAT (p)	20.34	46.85	173.42	27.85	8.42	7.65
Ad valorem (p)				48.88		
% Price change	0.41	0.72	1.10	1.20	3.24	2.98
RPI effect: +0.21%						
Revenues (£ million)	55	10	15	110		460
Uprating 10%						
Duty (p)	26.90	109.12	610.50	107.25	33.66	28.16
VAT (p)	20.68	48.25	181.25	29.22	8.69	7.88
Ad valorem (p)				51.30		
% Price change	2.11	3.73	5.66	6.20	6.57	6.03
RPI effect: +0.74%						
Revenues (£ million)	280	60	80	590		920
Uprating 15%						
Duty (p)	28.12	114.08	638.25	112.13	35.19	29.44
VAT (p)	20.89	49.12	186.11	30.08	8.96	8.10
Ad valorem (p)				52.79		
% Price change	3.17	5.60	8.49	9.30	9.85	9.05
RPI effect: +1.1%						
Revenues (£ million)	420	90	120	880		1390

Note: [1] Petrol duties are uprated by 3% in real terms, other duties by 1.94% (the December 1992 to September 1993 increase in the index).

Unleaded petrol now accounts for around half of the total petrol market (as measured by clearances from bonded warehouses) but the rate of increase has begun to level off. This suggests that the great bulk of those car owners who were able to convert their cars to run on unleaded and for whom it was economical, given their normal mileage, have already done so. Remaining increases in the use of unleaded petrol will depend on the rate at which the existing car stock is replaced by cars manufactured to run on unleaded. There is a case, therefore, for arguing that the differential in favour of unleaded petrol can now be allowed to decrease having largely achieved the aims for which it was designed. A reduced differential would still be sufficient to encourage

Figure 7.3
Unleaded Petrol: Share of Total Market and Duty Differential



manufacturers to continue to make cars which use unleaded petrol. The embryonic expansion of a domestic market for diesel cars means that the differential between DERV and leaded petrol should probably remain in place to encourage the use of this relatively green fuel.

An other area where there is opportunity to reform excise duties is in alcohol taxation. Table 7.8 showed that the real levels of duty on beer and wines have fallen over the years to around 90% of their 1984 values. Further, the tax per litre of pure alcohol contained in wines and beer implied by the current structure of alcohol taxes is considerably lower than that for spirits as shown in Table 7.10.

Table 7.10. Implied Tax Per Litre of Pure Alcohol

	(£s Per Litre of Alcohol)
Beer (3.7% alc)	10.45
Wine (12.5% alc)	10.58
Spirit (40% alc)	19.81

Alcohol taxes are often thought of as sin taxes designed to capture the social externality associated with drinking. If the relevant measure of sin is the alcoholic content of the drink, then there may be an argument for narrowing the tax per litre of alcohol gap between spirits and wines and beers. This would have the added benefit of lessening the current discrimination against a largely domestically produced good. The Chancellor could therefore either cut the duty on spirits or continue to freeze them and gradually increase beer and wine rates. Current EC agreements mean that if the Chancellor decides to increase beer and wine duties, he must keep the increases in line with each other. Of course the counter-argument which may go some of the way towards justifying the current structure of alcohol taxes, is that the undesirable social externality associated with drinking can be produced much more quickly by spirits than other forms of alcohol.

The main drawback of higher alcohol taxation in the UK is that it would further encourage cross-border shopping. The UK already has one of the highest sets of alcohol duties in the Community and it is perhaps in recognition of this that alcohol taxes were allowed to drift lower in the run-up to the completion of the Single Market. HM Customs & Excise estimate that the current loss of revenue due to cross-border shopping is around £250 million per year. Detailed data on the value and volume of cross-border shopping are no longer collected since the new duty-free rules came in, consequently it is hard to gauge whether higher alcohol duty rates would compensate for the concomitant increase in the volume of cross-border shopping which they would stimulate.

Value Added Tax

As ever, the Chancellor has two main options available to him if he decides to use VAT to raise revenues: he can either increase the rate of VAT or its scope. This section discusses each option in turn before discussing a third possibility involving the extension of exempt status to goods currently zero rated.

Increasing the VAT Rate

In 1991 the Chancellor announced an increase in the VAT rate from 15% to 17.5%; the revenue impact of this change was estimated at £5.5bn for 1992-93. Despite that increase the standard rate of VAT in the UK remains relatively modest compared to many other EC countries, as illustrated in Table 7.11.

Table 7.11. Standard VAT Rates in Other EC Countries

	Current Rate (%)
Denmark	25.0
Ireland	21.0
Belgium	19.5
Italy	19.0
France	18.6
Greece	18.0
Netherlands	17.5
UK	**17.5**
Portugal	16.0
Germany	15.0
Spain	15.0
Luxembourg	15.0

Source: HM Customs & Excise.

Treasury estimates suggest that putting 1 percentage point on VAT would raise around £1,700 million in 1994-95 and around £2,400 million per annum thereafter. Increases in the rate of VAT would, however, accentuate the relative price distortions already present in an indirect tax system which does not tax goods uniformly, as well as adding to inflation. The Chancellor's other main option would be to continue to widen the VAT base.

Widening the Scope of VAT

In the last budget the Chancellor decided to increase the scope of the VAT system rather than increasing the rate at which goods are taxed. By imposing VAT on domestic fuels the government made one of the most controversial Budget decisions for some time, but in the process hopes to raise considerable revenues. Table 7.12 below reports the estimated tax revenues forgone with the remaining zero-rated goods. The potential revenues which further widening of the VAT base would release are significant. If the government does decide to unlock them, then there are various arguments concerning economic and administrative efficiency which it could deploy in its favour.

Table 7.12. Zero-Rated Goods: Estimated Tax Revenues Forgone

	£ bn
Food	7.0
Construction of new homes	3.4
Passenger transport	2.3
Books, newspapers, etc.	1.0
Children's clothing	0.6
Water and sewerage services	0.5
Drugs and medicines on prescription	0.4

Source: HM Treasury, 1992.

The principal objection voiced against further widening is distributional. Zero-rated goods form a higher proportion of the spending of poorer households, mainly due to spending on food and domestic fuels. The extension of VAT to these goods would therefore hit the poorest members of society hardest. In principle, the revenues raised from extending the VAT base could be used to more than compensate those on low incomes, so the distributional argument relies on these revenues not being redistributed to the poor. In the case of VAT on domestic fuel, the promised compensation package has yet to be announced. Even so, automatic compensation in the form of indexation of benefits will cost around £750 million from 1995-96. Any additional largesse aimed at those worst hit will mean that over a quarter of the money raised will be redistributed.

The row over taxing domestic fuels has been both loud and public and it is difficult to see the government wishing to go through it all again by making further large changes to the VAT base in this Parliament. Nevertheless, the present Chancellor has gone on record as saying:

> *"I have always thought it anomalous to have such a narrow VAT base in this country and have frequently said so."* Christchurch, 16 July 1993

Political consideration may mean that charging VAT on food, children's clothes, housing, water and medicines are probably off the agenda at present. That leaves books and newspapers, and passenger transport, which would raise around £1bn and £2.3bn respectively. The publishers who are fighting the imposition of VAT on books and newspapers argue that such a tax would be a "tax on learning" and that in any case book sales would fall so much that the revenues raised would never reach the £1bn the Treasury expects. One option would be to bring forward legislation to end the Net Book Agreement (NBA) at the same time as announcing the imposition of VAT. The NBA is an example of retail price maintenance which survived the 1976 Restrictive Practices Act. It means that retailers cannot discount books and newspapers below the cover price. Abolition, advocated by some major independent retailers, would allow them to discount books and, it is argued, the consequent price falls would offset the impact of VAT. It would also reduce the tax yield. Putting VAT on passenger transport would raise around £2.3bn. Whether the government would be prepared to take such a step in the run-up to rail privatisation and London bus deregulation is questionable. There is already widespread concern over British Rail's proposals for an average fare increase of 6% next year.

One alternative to imposing standard rate VAT is to make use of a reduced VAT rate band. This is relatively popular in the rest of Europe where the coverage of zero-rating is minimal. Domestic fuels, for example, are taxed at a reduced rate in Ireland (12.5%), Italy (9%), Luxembourg (6%) and Portugal (5%).

The EC VAT agreements currently in force are those reached at the ECOFIN Council meeting on 24 June 1991. Briefly, the principal elements of the agreement are:

- Member States must apply a standard rate of not less than 15%.
- Member States may apply one or two reduced rates of not less than 5% to a limited list of goods and services.
- Member States which applied taxes at a zero rate or any rate lower than the 5% minimum on certain goods and services at 1 January 1991 can continue to do so.

The agreement gives the government considerable opportunity to alter the UK's current VAT structure if it wishes. It could halt the imposition of VAT on fuel at 8%, it could even reduce it to 5% as part of a more general widening of the tax base. Table 7.13 below illustrates the revenue and price effects of extending the VAT base to all currently zero-rated goods at the standard rate, and at a reduced rate of 5%.

Table 7.13. Extending the VAT Base: Revenues and Price Effects

	Net Additional Revenues from the Consumer Sector (£ bn)	Increase in Consumer Prices (%)
Standard rate (17.5%) (excluding housing)	10.7	3.7
Reduced rate (5%) (excluding housing)	3.1	1.1

Nevertheless, the passions which surround zero-rating would make the extension of even a reduced rate band unpopular.

Exempting Zero-Rated Goods from VAT

One further suggestion is that the Chancellor could remove all currently zero-rated items from the VAT system and still raise revenues. Although this appears paradoxical at first sight it is entirely feasible, at least in principle.

Goods which are zero-rated are entirely untaxed because their producers are able to claim back the VAT they pay on inputs. The producers of exempt goods, however, cannot claim back the VAT they pay during the production process. The final price of exempt goods therefore contains an element of VAT, the magnitude of which depends on the company's cost structure. If currently zero-rated goods became exempt from VAT their producers would immediately become liable for VAT on inputs.

The consensus view among economists is that the intermediate taxation imposed by exempt status is undesirable. The imposition of taxes on producer goods does not reduce the incidence on the consumer (the burden may be passed on in full through increased prices); furthermore, it will actually increase the tax burden by encouraging producers to make different and economically less efficient choices of inputs. It is argued that this piece of economic sleight-of-hand would be considerably less visible and politically damaging than widening the VAT base.

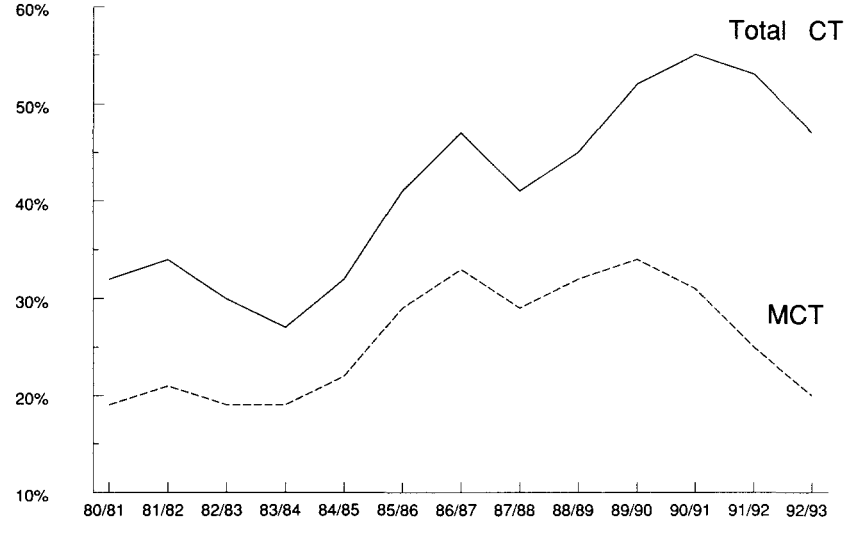
In practice, however, the room for manoeuvre on this issue is severely limited by the EC's indirect tax harmonisation rules. Lists of exempt and zero-rated products were finalised after prolonged negotiations at the 1991 ECOFIN meeting. Any changes would require the Commission to grant specific derogations to the UK. It is very unlikely that the EC would wish to re-open negotiations, which would undoubtedly be protracted, now that broad agreement has finally been reached.

7.3 Taxes on Companies

Corporation Tax revenues have dipped sharply with the onset of recession from a high of £21.5bn in 1989-90 to an official forecast of £14.6bn for the current fiscal year. While lower profits in the economy will always mean less tax revenue, there has been some concern that the tax paid for a given level of profits is also falling. The previous Chancellor, Norman Lamont, publicly expressed concern that the 1984 Corporation Tax reforms had been in some way too generous. This fuelled speculation that revenues would not recover with an end to the recession, and that the government might take action to increase the share of tax paid by the corporate sector.

Figure 7.4 gives an indication of Corporation Tax liabilities relative to company profits. The percentages do not necessarily show the proportion of profits actually devoted to tax because of differences between National Accounts and accounting measures of profits. But they do act as a useful index of revenues relative to profits. This index has certainly dropped, from a peak of over 50% in 1990-91, to around 47% in 1992-93. This is not a dramatic decline, and tax remains higher relative to profits than in the early 1980s. There is certainly no indication that revenues will not recover with profits.

Figure 7.4
Corporation Tax as a Share of Profits
1980-1993



Note: The above figure shows total Corporation Tax (CT) and Mainstream Corporation Tax (MCT) liabilities as a proportion of taxable profits, for the fiscal years 1980-81 to 1992-93. Total CT liabilities are estimated by summing each year's ACT payments with the following year's MCT payments, since MCT is payable after a 9-month lag. Taxable profits are estimated from National Accounts data, using domestic gross trading profits plus rent and other income, net of interest payments and depreciation. The gap between total and mainstream CT shows the relationship between ACT and estimated taxable profits.

Source: Inland Revenue Statistics, National Accounts data.

Much of the decline in revenue is simply a reflection of falling profits. Since dividends have fallen much less rapidly than profits, Advance Corporation Tax (ACT) revenues have remained bouyant, thus creating a dramatic fall in mainstream tax receipts from £14bn in 1989-90 to an expected £7bn in the current fiscal year. Although this represents a genuine fall in the tax raised from business, since just under half of ACT raised is returned to exempt investors as tax credits, it is a conventional part of the business cycle, and should be reversed as profits rise.

Part of the fall in the proportion of profits paid in tax was a predictable, and predicted,[2] long-run effect of the 1984 reforms. The other part can reasonably be explained by a combination of cyclical effects and the tax cuts made over the past few years. These include a two percentage point cut in the rate of tax from 35% in 1989-90 to 33% in 1991-92; the raising of the limits for "small" companies relief, which applies to all companies with low profits regardless of their size; and the extension of the carry-back period for trading losses from one to three years. While some of these measures had low expected revenue costs when introduced, the proportionate cost would be expected to rise as profits fall and more companies slide into loss.

Revenue considerations aside, there are number of issues that have attracted attention in the run-up to the November Budget, which we consider below. In particular, further changes in the taxation of dividends, aimed at solving the problem of surplus ACT, seem likely; there has been some concern over the use of stock dividends as a tax-saving device; the perennial issue of increasing capital allowances to promote investment is with us yet again; and finally we look at specific tax measures to promote research and development.

Taxation of Dividends

The material that follows on the taxation of dividends is fairly detailed; we have therefore provided a summary to open this section. The more comprehensive coverage should be of particular interest to those directly concerned with the taxation of companies; those not so concerned may wish to skip from the end of the summary to the discussion of capital allowances, which begins on page 85.

Summary

1. Companies pay Advance Corporation Tax (ACT) on all dividends, which they can generally credit against the tax due on their profits. If dividends exceed UK profits, or if they are paid out of foreign earnings or reserves, the company may be unable to claim full credit. In these cases, the ACT acts as an extra tax on dividends, known as *surplus ACT*.
2. Critics argue that surplus ACT is an extra tax that creates a bias against overseas investment, encourages companies to move research and administrative centres abroad, and encourages wasteful merger and avoidance activity.
3. The changes to dividend taxation announced in the March Budget (including a cut in the ACT rate from 25% to 20%) were introduced as easing the surplus ACT

2 See, for example, Devereux (1987) "On the growth of corporation tax revenues", *Fiscal Studies*, vol.8 no.2.

problem. Their true aim, however, was to raise revenue. They will increase net receipts by around £1bn a year from 1995-96 onwards and have little effect on the surplus ACT problem.

4. The real thrust of the new approach to surplus ACT lay in the Consultative Document. This was issued in March and contained two proposals to help solve the problem. The Foreign Income Dividend (FID) scheme would allow companies to pay special dividends out of foreign income without the risk of incurring surplus ACT. The International Headquarter Companies (IHC) scheme will allow international holding companies to pass foreign earnings to overseas parents without paying ACT.
5. The government is committed to introduce an IHC scheme in the January Finance Bill. There is no commitment to introduce FIDs, but it seems likely that versions of both schemes will be included in the Budget.
6. The FID scheme is a substantial step forwards, but is not a complete solution. Pension funds will prefer ordinary dividends (on which they get a tax refund) to FIDs, and they will still earn more on profits derived from the UK than on those derived overseas. Companies paying FIDs will pay less tax, but their exempt shareholders will get lower tax credits.
7. Eliminating the surplus ACT problem requires an overhaul of the tax system. One option is to abolish the tax refund on ordinary dividends paid to pension funds. This would raise around £3bn per year in terms of current revenues. However attractive, this change would hit pension fund returns, and may be considered too drastic for the current Budget.
8. Finally, some companies have been issuing enhanced stock dividends, instead of cash dividends, to reduce surplus ACT and improve cash-flow. These schemes lower current tax revenues, but generally raise revenue over the long term. Stock issues are not cash distributions, and there are strong arguments why the government should not act against these schemes.

The March Budget

In the Spring Budget the Chancellor announced various changes to the taxation of dividends. These included:

- a reduction in the rate of Advance Corporation Tax (ACT) from 25% to 22.5% in 1993-94 with a further reduction in the rate to 20% in 1994-95;
- a reduction in the tax credit to shareholders from 25% to 20%;
- a reduction in the basic rate of tax on dividends from 25% to 20%;
- further restrictions on the ability of companies to set ACT against past profits following a change in ownership.

The principal effect of these changes was to raise revenue, rather than tackle the problem of surplus ACT. The proposals in the Consultative Document did, however, attempt to tackle the problem. In his speech, the Chancellor committed himself to legislating on the International Headquarter Companies (IHC) scheme in the January

1994 Finance Bill. It also seems likely that legislation on a revised form of the proposed Foreign Income Dividend (FID) scheme will be introduced. While they will be welcomed by industry, these proposals do not fully solve the surplus ACT problem.

Surplus ACT

When a company pays out a dividend it has to pay ACT. As the name implies this is a tax paid *in advance* of the company's main Corporation Tax payment. ACT is payable 14 days after the dividends are distributed, whereas Corporation Tax is payable nine months after the company's year end. This represents a substantial difference in the timing of the two payments. If dividends are paid out quarterly there can be up to 18 months' difference. Table 7.14 below illustrates how surplus ACT works.

Table 7.14. Corporation Tax and ACT

	(A) No Foreign Earnings	(B) All Foreign Earnings
Gross profit	100.00	100.00
Foreign Corporation Tax paid	0.00	33.00
UK MCT paid	16.25	0.00
UK ACT paid	16.75	13.40
(Surplus ACT)	*0.00*	*13.40*

Note: The tax rates used in this example are those in force from April 1994 in the UK: ACT at 20%; UK Corporation Tax at 33%; Foreign Corporation Tax at 33%.

Company A makes £100 of gross profits. At the end of the year it decides to pay out the maximum amount it can in dividends, but first it has to take account of its tax liabilities. It will be liable for £33 in Corporation Tax in nine months. That means it can pay out a dividend of £67. It has to pay ACT on these dividends immediately. The amount it has to pay (using 1994-95 tax rates) is 20/80ths of the *net* dividend. This comes to £16.75. Nine months later, when it comes time to pay its Corporation Tax bill, the Inland Revenue allows it to offset the amount it has already paid in ACT against its Corporation Tax liability. The company then ends up paying £33 - £16.75 = £16.25 in Mainstream Corporation Tax (MCT), and it has no surplus ACT (because all the ACT was offset).

Company B also makes £100 of gross profits, but these have all been earned in a foreign subsidiary. It also pays out the maximum dividend. However, company B has already paid tax (or will be liable to pay tax) in the foreign country (for simplicity's sake we assume at 33%). The Inland Revenue accepts that the profits have already been taxed and does not levy any further Corporation Tax. That means company B has £67 available for distribution. However, it has to pay ACT out of this. The difference is

that company B will not be able to offset its ACT against its Corporation Tax liability, since it does not have a Corporation Tax liability in the UK. This means that the ACT payment has to come out of the £67. Therefore company B pays £13.40 to the Inland Revenue (20% of £67, the *gross* dividend) and pays £53.60 out in dividends. The company cannot reclaim the £13.40, the amount of surplus ACT.

Table 7.15 describes the position for the shareholder. All shareholders receive a dividend of £67 from company A. The tax exempt shareholder can reclaim a tax credit at the basic rate of income tax of £16.75, giving a net return (after tax) of £83.75. The basic rate taxpayer does not get a tax refund (since they are liable for tax on dividends). The higher rate taxpayer has to pay additional income tax of £16.75, so gets a net return of £50.25.

Company B pays a dividend of £53.60. Tax exempt shareholders get £13.40 back on their ACT credit, giving a net return of £67. The basic rate taxpayer gets nothing more or less, and the higher rate taxpayer pays an additional income tax giving a net return of £40.20. The return from company B is lower than from company A because it has paid more tax, and has less to distribute as a dividend.

Table 7.15. Return to Shareholder

	(A) No Foreign Earnings	(B) All Foreign Earnings
Exempt shareholder		
Income tax paid	-16.75	-13.40
Dividend received	67.00	53.60
Net return	83.75	67.00
Basic-rate shareholder		
Dividend received	67.00	53.60
Net return	67.00	53.60
Higher-rate shareholder		
Income tax paid	16.75	13.40
Dividend received	67.00	53.60
Net return	50.25	40.20

Note: The tax rates used in this example are: ACT at 20%; tax credit to shareholders at 20%; basic rate of income tax at 20%; higher rate of income tax at 40%.

From this discussion it should be clear that, from the shareholder's point of view, ACT is really a prepayment of income tax. Tax exempt shareholders (such as pension funds) generally get the tax back while taxpayers can set it against their income tax bill. In essence it is no different from the prepayment of basic-rate income tax on deposit interest that a bank collects and pays on behalf of its customers.

Companies are liable to pay Corporation Tax at 33% on the whole of their taxable profits. If the profits are retained, the story ends there, but if the profits have been paid out to shareholders as a dividend, and the company has paid ACT on them, the Inland Revenue accepts that tax has been paid on them, and lets that count towards the tax on profits.

Surplus ACT arises where a company is not liable to pay enough UK tax on its profits to be able to offset its full ACT payment. The company then is not able to set the ACT that it has paid against the Mainstream Corporation Tax that it owes, and ends up paying both lots of tax. There are two fundamentally different reasons why companies find themselves in a surplus ACT position - one of which is permanent, the other temporary.

Companies with a *permanent* surplus ACT problem are those that pay dividends out of foreign earnings which have already borne tax overseas. Companies can find themselves with a *temporary* surplus ACT problem for a number of reasons, including: when they pay dividends out of reserves; when there is a timing difference between the earning of profits and the payment of dividends; because there are timing differences between accounting profits and profits for tax purposes. Many companies currently fall into this category because taxable profits have fallen but they have been reluctant to cut dividends correspondingly. Temporary surplus ACT does not present such a severe problem, because the ACT paid will be reclaimed when profits recover sufficiently.

Permanent surplus ACT causes more severe problems in practice. These include:

- reduced earnings per share because profits are essentially taxed twice, once abroad and once in the UK;
- bias against overseas investment since the additional layer of taxation on foreign profits will distort the company's decision-making and discourage overseas investment even when it is relatively profitable;
- encouragement to shift cost-centres so that UK taxable profits are increased, thereby reducing the build-up of surplus ACT;
- encouragement of mergers and take-overs for tax reasons to reduce the surplus of ACT;
- deterrence of international holding companies from locating in the UK because profits that are channelled through the UK will be liable for ACT.

The official estimates in the spring Budget were that the stock of outstanding surplus ACT is around £5bn and rising at a rate of £1bn a year. Much of this, however, is temporary and will be reclaimed in the future.

The Consultative Document, issued at the time of the spring Budget, outlined two basic proposals to help with the surplus ACT problem: (i) the Foreign Income Dividend scheme and (ii) the International Headquarter Companies scheme. The first addresses the problem for UK companies, while the second is concerned with making the UK a more attractive location for foreign multinationals.

The Foreign Income Dividend Scheme

The principles that underlie the proposed Foreign Income Dividend (FID) scheme appear refreshingly simple and straightforward. The scheme takes the principle that surplus ACT is primarily a problem of foreign profits, and treats foreign profits differently. Under the scheme, companies can, if they choose, declare dividends paid out of foreign source profits to be a FID. Although they would continue to pay ACT on these dividends, they would subsequently be able to reclaim any surplus ACT. These dividends would then be treated as having borne basic-rate tax when received by shareholders, but exempt shareholders (mainly pension funds) would not get an income tax rebate. For a tax-paying shareholder, the FID scheme solves the surplus ACT problem. However, it does nothing to change the position of tax exempt shareholders (e.g. pension funds). A tax-paying shareholder will get the same net return on an investment regardless of whether the company earns its profits here or overseas; a pension fund's return will remain lower for foreign earnings.

Official estimates are that the FID scheme will have a revenue cost of some £200 million.

Table 7.16 shows net returns to shareholders and UK tax revenues under the current system and the proposed FID scheme, for our simplified example where a gross profit of £100 is passed through to shareholders. Companies A and B are the same as in the earlier example shown in Tables 7.14 and 7.15. Company C is the same as company B except that it pays a Foreign Income Dividend. We repeat the earlier analysis for the purposes of comparison.

Company C also earns its profits abroad, but is able to pay a FID. The company therefore pays no ACT (strictly it pays and reclaims the ACT), and therefore can pay out the full dividend of £67. The tax exempt shareholder gets no credit in this case, since no ACT has been paid, so receives the same net return as the basic rate taxpayer. The higher rate taxpayer receives £50.25 net return.

The tax-paying shareholders are clearly better off with company C than with company B, and they are indifferent between companies C and A. The tax exempt shareholder will prefer company A to either B or C. While the net return to the tax exempt shareholder is the same for companies B and C, they will most likely prefer B, since with B they receive the tax credit directly.

The FID solution solves the surplus ACT problem for tax-paying shareholders, but not for tax exempt ones. Tax exempt shareholders still face a lower rate of return on profits earned overseas than those earned in the UK.

Pension funds will have an incentive to encourage companies to minimise the level of FIDs relative to ordinary dividends by reducing the proportion of foreign earnings. For exempt investors, the FID scheme simply shifts the current problems of surplus ACT from the company level to the shareholder level.

Table 7.16. Returns and Revenues

	(A) No Foreign Earnings	(B) All Foreign Earnings (ACT)	(C) All Foreign Earnings (FID)
Gross profit	100.00	100.00	100.00
Foreign Corporation tax	0.00	33.00	33.00
MCT	16.25	0.00	0.00
UK ACT	16.75	13.40	0.00[3]
(Surplus ACT)	0.00	13.40	0.00
Exempt shareholder			
Net return	83.75	67.00	67.00
UK revenue	16.25	0.00	0.00
Basic-rate shareholder			
Net return	67.00	53.60	67.00
UK revenue	33.00	13.40	0.00
Higher-rate shareholder			
Net return	50.25	40.20	50.25
UK revenue	49.75	26.80	16.75

Note: The tax rates used in this example are: ACT at 20%; tax credit to shareholders at 20%; basic rate of tax at 20%; UK Corporation Tax at 33%; Foreign Corporation Tax at 33%.

Without proper safeguards, FIDs would be paid to taxpayers, and ordinary dividends to tax exempt shareholders. This is called *streaming* and is an issue of particular concern. The problem with streaming, when you look through the company to the overall tax position, is that it effectively moves us back to a system where surplus ACT is always refunded, where the incentive problems are eliminated, but the exchequer ends up paying out net revenue.[4]

Despite problems and shortcomings, the foreign income dividend scheme would be a welcome step forwards, and seems likely to be introduced at Budget time.

3 The company actually has to pay ACT of £16.75 when the dividends are distributed, and then gets a refund of the same amount at the time that Corporation Tax would be due.

4 For a more detailed discussion of the Foreign Income Dividend scheme see Freeman and Griffith (1993) *Surplus ACT - A Solution in Sight?*, IFS Commentary No.38.

International Headquarter Companies

The Chancellor gave a commitment in his spring Budget speech to introduce legislation in the January 1994 Finance Bill, covering a scheme aimed at International Headquarter Companies (IHC). Under the proposed scheme IHCs that fulfil certain criteria (intended to target international holding companies) would be able to pay FIDs without any ACT liability. The IHC scheme differs from the FID scheme in this important respect - ordinary FIDs are liable to ACT but get a refund at the time Corporation Tax is due, FIDs paid under the IHC scheme will not be liable to ACT at all.

Under the current system a foreign company that chooses to locate its European headquarters in the UK has to pay ACT on all dividends that are channelled through the UK. This is true even when the profits neither arose here, nor were paid out here. This makes the UK an unattractive place to locate a headquarter company, especially compared to more favourable regimes such as those in the Netherlands, Belgium or Luxembourg. To the extent that we benefit from companies locating here (e.g. through increased employment, services purchased, etc.) it seems unwise to have a tax system that deters them from doing so. This is particularly true in the financial sector where companies are relatively mobile, and where the UK has several other advantages.

The IHC scheme should move some way towards putting the UK on a competitive par with other European countries. However, some practical difficulties remain, particularly concerning the question of what constitutes an IHC.

Towards the End of ACT?

The changes to the taxation of dividends in the March Budget indicated a more radical solution to the surplus ACT problem, and one that would raise substantial revenue. Each cut in the ACT rate slows the build-up of surplus ACT. Each cut in the credit rate narrows the difference between a FID and a normal dividend, and brings more net tax revenue. There must be a temptation to cut the credit further this year.

The government could take one of two basic routes in this direction. They could continue to cut the ACT rate, the rate of credit, and the rate of income tax on dividends. Or they could phase out the refund of tax credits to pension funds, leaving the ACT system as a prepayment of income tax. The end result would be similar, timing differences apart.[5]

If the credit were completely removed, the resulting system would have substantial theoretical attractions. It would be very simple, in that most investments could be taxed once at a single rate, with no subsequent credits or repayments. It would give equal treatment of dividends and retentions for most shareholders, ending the current bias in favour of high payout ratios. And it would eliminate the differences between FIDs and normal dividends, paving the way for a complete solution to the surplus ACT problem. Perhaps most important, given the current fiscal position, is that it would raise some £3bn in terms of current revenues.[6]

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5 Higher-rate shareholders would be left in a different position unless, under the former scheme, the higher-rate of tax on dividends were lowered to reflect the lower rate of credit.

6 This revenue figure is calculated assuming either: (a) the tax credit to tax exempt shareholders is cut entirely, or (b) all tax credits are cut and the basic and higher rates of income tax on dividends are lowered correspondingly.

On the downside, it would marginally increase the current bias away from equity investment, and towards debt finance. For pension funds, it would mean a substantial fall in the net after-tax return on shares. The immediate problem for the government is that any reduction in the credit rate will be taken by the Stock Market to mean a future cut to zero. The resulting fall in the Stock Market could be substantial - some estimates are as high as 10-15%. But these cuts were introduced as serious potential revenue raisers in March, when the credit was lowered from 25% to 20%. The risk of further cuts should already to some extent have been capitalised into share prices, lowering the likely impact of any changes made in November.

It seems unlikely that the government would risk jeopardising the fragile recovery in confidence at the present time. A cut in the credit rate is an outside prospect for this Budget, but should be an issue to watch in future years.

Taxation of Stock Dividends

Stock dividends are currently in the tax-policy spotlight. Several large public companies have recently offered stock dividend schemes described as "enhanced scrip dividends". Concern has been expressed that this practice is eroding the tax base. It is not clear, however, that any action is required.

Stock dividends are extra shares issued to existing shareholders in place of cash dividends. Companies often offer stock dividends as an optional alternative to cash, but most shareholders prefer cash. The "enhanced" schemes currently on offer typically combine a very low cash alternative with a guarantee from a third party to buy the shares at a certain price with low (or no) broking fee. The effect is a strong disincentive to take cash; most shareholders opt to take stock.

Because stock dividends are called "dividends" and investors are sometimes offered a realistic cash alternative, there is confusion as to the relationship between stock and cash dividends, and their appropriate tax treatment.

Stock dividends are fundamentally different from conventional dividends. Conventional dividends are a cash distribution from the company to the shareholder. Stock dividends are simply the issue of new shares, increasing the number of shares with a claim on the company's assets, and diluting the value of each. No actual cash moves from company to shareholder.[7]

If the company pays a stock dividend in place of a cash distribution, this is basically no different from simply lowering its cash distribution. In both cases the company has higher retained earnings. In both cases shareholders can only obtain cash by selling part of their shareholdings (whether old stock or new "stock dividends"). This is true even if the issue includes an "enhancement" in the form of a guaranteed price and easy terms from a favoured broker. Stock dividends simply *are* retained earnings, packaged together with a split of the stock into smaller units. So when we look at the tax treatment of stock dividends, we should first compare it with the tax treatment of straightforward retained earnings.

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7 To the extent that these schemes actually do divert cash from companies with surplus ACT to the shareholder, this is clearly an avoidance mechanism which requires remedial action. For example, this could be done by offering shareholders guaranteed inflated prices through a third party, and then compensating the third party through a fee. But the number of stock dividends, and the fee, would have to be so substantial to compensate for cash, that it is hard to see how this could be done on any great scale (legally).

But why do companies want lower cash distributions? Companies are probably seeking to lower cash distributions to improve their cash-flow position and because of the high tax costs of distribution for companies with surplus ACT.

If these stock dividend schemes are essentially just a cut in the payout, why do companies bother? Why not simply cut the payout and let shareholders sell if they need the cash? It may be that these schemes are a "market-friendly" way to do just that. They could be seen as a cut in the cash dividend together with an invitation to shareholders to liquidate a precise proportion of their holdings.[8] Structured in this particular way, as an open invitation, management may be able to avoid some of the negative market signals that would be associated with a straightforward sale of existing stock.

What effect does this have on tax revenues? A cut in the level of cash distributions lowers the level of ACT received this year. But there is an offsetting rise in income tax, because exempt shareholders, like pension funds, claim a refund of basic rate tax on every dividend received. If dividends fall, the net current revenue loss is only around half of the fall in ACT receipts.[9]

The long-run revenue effect depends on the company's position. If the company has a permanent surplus ACT problem, there may be a net long-run revenue loss. If the company has no surplus ACT, or only a temporary problem, there is a net long-term revenue *gain*. Since ACT can be set off against Mainstream Corporation Tax, £1 less ACT this year eventually means £1 more mainstream tax in future years. But the fall in the tax credit to pension funds is never balanced out. So paying stock dividends must increase revenue in the long term.

What action is required? An ideal tax system would treat cash distributions and retained earnings equally. The current system does not treat them equally, and this difference is the root of the confusion over the proper treatment of stock dividends. The best solution would be to overhaul the tax system to remove this flaw.

In the absence of such major reform, stock dividends should be treated as what they are: retained earnings combined with a stock split. In fact this is not quite how they are treated, and there may be some justification for a review of the current tax treatment. But the differences are not significant in terms of revenue.

What is clear is that there is little need to require companies to pay ACT on stock dividends as if they were cash distributions or to levy income tax on the value of the stock dividend without credit for basic-rate tax. If companies lower payout rates in response to the economic situation and the high tax costs, this is an understandable response, and the Inland Revenue has no cause for complaint. It would be inappropriate and damaging for the government to force companies to keep high payout rates, simply in order to maintain high tax revenues in the short run.

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8 The company is even offering to meet the shareholder's broking costs in many schemes.

9 If dividends simply fall, the government also loses the top-up of additional income tax due from higher-rate shareholders. If the fall is replaced by stock dividends of equal value, there is no net current revenue loss; higher-rate investors must pay the difference between the basic and higher rates of tax, just as with cash dividends. There are also future implications for capital gains tax revenues, but these are unlikely to be significant.

If the government chose to treat stock dividends as they currently treat cash distributions, levying ACT but giving a refundable tax credit to investors, this could lead to a substantial long-run revenue loss. Retained earnings are currently taxed more heavily than distributions, taking account of the refund of dividend tax credits to pension funds, so treating retentions as distributions must lose revenue overall. If refundable credits were paid on stock dividends, companies who do not have surplus ACT would come under pressure to issue stock dividends covering their entire (taxable) retained earnings. This would pass valuable additional tax credits to their exempt shareholders and could cost the Exchequer dearly.

What are the prospects for change? The pressure for change should decline. If the Foreign Income Dividend scheme is adopted - as seems likely - this should attract companies with high foreign earnings and permanent surplus ACT. FIDs have the same tax treatment as stock dividends, but are genuine cash distributions. If these companies are paying stock dividends *only* to avoid surplus ACT, they should clearly prefer to pay FIDs.

If stock dividends are being paid by companies wishing to increase retained earnings, or those with a temporary surplus ACT problem, it is not clear that there are any real revenue concerns. In both cases, the payment of stock dividends will raise net revenue in the long term, as credits to pension funds fall and higher mainstream tax payments offset lower ACT payments.

While current revenue concerns remain paramount, there will inevitably be pressure to levy ACT or full income tax on stock dividends. There are, however, strong arguments against either course of action. As profits rise with the expected recovery, the pressure for short-sighted changes of this kind should subside.

Capital Allowances

The 1992 Autumn Statement contained a novel change to the allowances against Corporation Tax that companies can claim in relation to investment in fixed capital. Prior to this change, investment in plant and machinery attracted a writing down allowance calculated as 25 per cent per annum on a declining balance basis, whilst investment in industrial buildings attracted an allowance of 4 per cent per annum on a straight line basis. Thus spending £100 on plant and machinery gave a series of allowances of £25 in year 1, £18.75 in year 2, £14.06 in year 3, and so on; whilst spending £100 on industrial buildings gave a series of allowances of £4 per year for 25 years.

In the Autumn Statement these capital allowances were raised, but it was announced that this increase applied only to investment made between November 1992 and October 1993. Investment in plant and machinery during this limited period attracted an allowance of 40 per cent in the first year, returning to 25 per cent per annum on a declining balance basis in later years. Thus spending £100 on plant and machinery gives allowances of £40 in year 1, £15 in year 2, £13.75 in year 3, and so on. Investment in industrial buildings during this period attracted an allowance of 20 per cent in the first year, returning to 4 per cent on a straight line basis in later years. Spending £100 on industrial buildings therefore gives allowances of £20 in year 1, and then £4 per year for the next 20 years.

This front loading of the capital allowances increases their value to firms. Compared to the previous rules, we can think of the change as an interest-free loan from the government to the company. But if no change is announced in this year's Budget, capital allowances will revert to their previous lower rates for investment made after 31 October 1993.

This increase in capital allowances was novel in at least two respects. It was the first substantial change in the operation of capital allowances to be announced since Nigel Lawson's reform of Corporation Tax in 1984. Moreover, apart from the transitional arrangements that were announced in the 1984 Budget to cover the period 1984-86, it was the first time that a change to capital allowances had been introduced for an explicitly limited period.

The thinking behind this time-limited increase in capital allowances is that it gives firms a considerable incentive to bring investment spending forward into the period before 31 October 1993. The problem with such measures is that the return to the previous regime of allowances may be awkward. Not surprisingly, the CBI have called for the more generous capital allowances to be extended for a further period. They suggest that the temporary increase in capital allowances announced in the last year's Autumn Statement has not so far been successful in stimulating company investment.

It is really too soon to judge whether this temporary increase in capital allowances has been effective. We would expect the biggest impact to occur in the third quarter of 1993, for which investment data are not yet available. In any case it seems unlikely that an extension of the higher allowances for a further period would be more successful. The measure works by inducing firms to shift investment forward in anticipation of less generous allowances if they delay. But having extended the period of higher allowances once, this threat of less generous allowances in the future would lack credibility, and the incentive to bring investment forward would be correspondingly weaker.

A further reason for not extending the period of higher capital allowances is that the extension would cost the Exchequer revenue in a year when limiting the size of the government's deficit is likely to be the overriding priority.

The UK Corporation Tax deters some business investment that would otherwise be profitable. Bond, Denny and Devereux (1993)[10] estimate that the cost of capital to firms is raised by about the same amount as if firms faced interest rates that were 1-2 percentage points higher than the actually prevailing rates. The main reason is not that capital allowances are too low, but because the majority of investment spending - financed by retained earnings - receives no allowance for the cost of finance; in contrast to the minority of investment financed by borrowing, for which interest payments can be deducted against tax.

Raising capital allowances permanently would be an expensive and poorly targeted way of dealing with this tax bias against investment. Raising capital allowances temporarily has other drawbacks. Planning business investment should ideally take place against a background of simple and well-understood tax rules, that are not changed every year.

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10 'Capital allowances and the impact of Corporation Tax on investment in the UK', *Fiscal Studies*, vol.14, no.2, May 1993.

Research & Development Tax Credits

The government has signalled an increased emphasis on innovation through the publication of *Realising Our Potential*, the first White Paper on science policy for 30 years. Ministers have also shown concern over Britain's deteriorating Research and Development (R&D) performance relative to other industrialised countries (real R&D expenditure fell by 7% in 1991). One policy to alleviate this decline might be to make the tax treatment of R&D more generous. The current position already treats R&D more favourably than other forms of investment: most R&D spending can be written off against taxable income immediately, unlike fixed capital investment which is depreciated according to the capital allowances described above. Nevertheless one can argue that the present treatment is no better than neutral compared to a no-tax benchmark, and that there should be a further allowance or tax credit actively to promote R&D.

Compared with other forms of support, like research grants, tax credits have the advantage that companies themselves decide how the money is best spent. They would also be relatively simple to administer through the existing tax system.

There are, however, major problems with this policy option. First, it is not clear to what extent an R&D subsidy would bring forth additional spending, rather than merely benefiting R&D which would have been done in any case. Most systems try to give credit only on incremental spending above an historically determined base. But this is inevitably ad hoc and monitoring is costly. Furthermore, there is a danger that companies would seek simply to relabel investment as research in order to take advantage of tax breaks, though this problem is less severe since the accounting rules related to disclosure were tightened in 1989 (SSAP 13).[11] Early evidence summarised in an Inland Revenue survey (1987) suggested that only small benefits were likely from a tax credit: for every £1 spent in tax subsidy we could expect only £0.50 more in private R&D. More recent evidence on the US tax credit starting in 1981 has suggested that this may have been an underestimate. It is now thought the £1 subsidy could generate up to £2 in additional R&D spend.[12] Neither should the knock-on effects to other firms be forgotten in the social calculations.

Secondly, there is the question of whether the policy would be temporary or permanent. If temporary, then it may mean that investment planned tomorrow is simply brought forward to today. As a point of principle, stability in the tax system is desirable to reduce the inevitable uncertainty surrounding any investment, particularly R&D.

The final, and probably decisive, problem is Exchequer cost. According to Hall (1992) the US R&D tax credit was costing about $1bn (1982 prices) a year in forgone tax revenue during the 1980s. This was equivalent to the entire budget of the National Science Foundation. Even if we believed the more optimistic estimates of the sensitivity of R&D to its tax price, it is highly unlikely that the government would countenance such a huge spending increase at present. Whatever the merits of policies to boost our R&D capacity, so expensive a policy option is probably ruled out at present.

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11 *Accounting for Research and Development*, Institute of Chartered Accountants in England and Wales, January 1989.

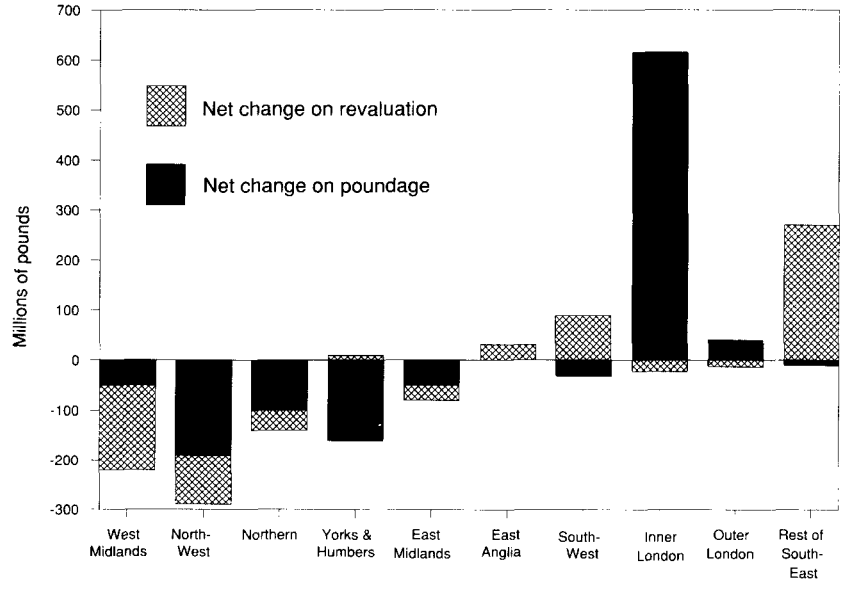
12 Hall (1992) "R&D Tax Policy During the 1980s: Success or Failure?", *Tax Policy and the Economy*, 7, gives the most optimistic case for the efficacy of the US tax credit.

National Non-Domestic Rates

The national non-domestic rating system (NNDR) was introduced throughout England and Wales in April 1990. It is a centrally determined uniform tax rate applied to non-domestic properties rental values (known as rateable values). The NNDR replaced a similar local tax, thus removing the power of local authorities to set tax rates. The revenue collected from the NNDR is hypothecated to local authority spending, and distributed to authorities on a per capita basis. Since its introduction the uniform rate has been increased in line with the RPI and legislation holds that increases cannot be above the RPI in any year. A uniform rate was not introduced in Scotland, instead the prevailing relativities in 1989-90 have been fixed with increases being determined centrally and as in England and Wales increases have been in line with the RPI.

Revaluations of non-domestic properties in England and Wales took place in 1988 and were introduced with the NNDR in 1990. So the bills sent out in 1990 were affected by the introduction of the uniform business rate (UBR) and the relative shift in property valuations. Overall the redistributive nature of the revaluation and the introduction of the uniform rate have meant a reduction in the tax burden faced by businesses in the North and Midlands with a corresponding increase for those in the South and East Anglia, relative to the local rating system. Figure 7.5 highlights the redistribution of the local businesses rates burden in 1990, distinguishing between the effect from revaluation and the uniform rate on the change in rate bills. In general, if we omit Inner London the major factor influencing the change in rate bills was the revaluation, not the change in rate poundages. Of course, this was to be expected, given that there had been a number of years of sharp rises in property values in the South prior to the revaluation.

Figure 7.5
Change in Rate Bills as a Result of the 1990 Reforms



Transitional arrangements were provided to cushion the increases in rate bills and dampen the gains. Increases in the amount payable were limited as follows:

- for properties below £500 rateable value, other than advertising rights, there is no limit, and these properties pay their full new rate bill immediately;

- for other properties below £15,000 rateable value in London, or £10,000 elsewhere the increase in rate is limited to 15% in real terms (for composition property, i.e. property which is partly non-domestic, partly domestic; the increase in rate bills is limited to 10% in real terms from 1991-92);

- for all other properties the increase is limited to 20% in real terms.

The rules for dampening gains were as follows:

- for properties below £500 rateable value, other than advertising rights, there is no limit, and these properties pay their full new rate bill for 1990-91 immediately;
- for properties below £15,000 rateable value in London and £10,000 elsewhere, the reduction in rate is limited to 15.5% in real terms (18% in real terms from 1991-92);
- for all other properties the reduction is limited to 20% in real terms (13% in real terms from 1991-92).

At the time of its introduction the scheme was expected to have fully worked through by 1995. However, in 1992 the Chancellor announced amendments to the transitional arrangements which were to cost the government £1.25bn over the following three years. Bills were frozen in real terms for those businesses facing increases as a result of the 1990 reforms. Gainers who were expecting to wait until 1995 before seeing the full reductions in their bills were informed that all remaining gains would be realised in 1993. In the 1993 Budget those facing higher bills once again found their bills frozen in real terms.

It cannot be ruled out that the Chancellor will decide to freeze again this year. This would make a lot of sense given that there is likely to be a substantial shift in the NNDR tax burden in April 1995 as an entirely new set of valuations (based on 1993 values) are introduced. Those that are likely to gain from the relative shifts in the NNDR tax burden in 1995 will tend to be businesses in the South - yet it is precisely these businesses that are likely to face substantial increases if the freeze is lifted. It may make more sense to leave things as they are - that is freeze bills in real terms for those facing higher bills this year - rather than allowing large increases this year followed by substantial reductions in 1995. This is particularly so if the aim of transitional arrangements is to smooth changes in rate bills.

7.4 Taxation and the Environment

Taxation for environmental purposes was referred to a number of times in the March 1993 Budget. It was provided as a reason for imposing VAT on domestic fuels and was mentioned in connection with the commitment to increase the burden of taxation on motor fuels by 3% per year in real terms over successive years. It is likely that this aspect of taxation will feature highly in the next Budget too, as there are a number of

areas where the government pledged to introduce more environmental market mechanisms in its 1990 White Paper, *This Common Inheritance*, but as yet, has not done so.

Motoring Taxation

Motoring taxation is one area that seems likely to see some changes in the November Budget. The present structure of motoring taxation does not adequately reflect the high social costs involved in road use, such as congestion and pollution.

Motoring taxes can be divided into two categories - taxes on *ownership* and taxes on *use*. Under the former category, vehicle users pay Vehicle Excise Duty (VED) which is levied at £125 for cars, light vehicles and taxis and at varying levels for commercial vehicles depending upon their weight. The graduated scale of charges for commercial vehicles reflects that the amount of road damage caused by vehicles is in part related to their axle weight. Since the majority of commercial vehicles are heavier than private ones, there are good reasons for levying higher rates of VED upon them. One option open to the Chancellor would be extending this principle to the taxation of private vehicles, so VED for cars could vary according to vehicle characteristics such as engine size or weight.

Taxes on vehicle use tend to take the form of fuel taxes. Petrol and diesel, in common with many other goods, are subject to the standard rate of VAT at 17.5%, but in addition to this they are subject to fuel duties. In the 1992 Autumn Statement, the Chancellor announced that the revenue lost from abolishing car tax[13] was to be replaced by real increases in VED and petrol duties. Treasury estimates suggest that the lost revenue should be exactly recouped by the 10% increase in excise duties levied on motoring fuels that was announced in the March 1993 Budget, a move which is predicted to raise £750 million. However, given that the Chancellor also announced at the last Budget the intention to increase fuel duties by at least 3% a year in real terms over a longer period as part of a strategy to reduce CO_2 emissions to their 1990 levels by the year 2000, it is certain that fuel duties will increase by at least 3% in real terms and possibly more.

As well as altering the absolute levels of fuel duties, the Chancellor also has the option of continuing a policy pursued in previous Budgets which has been concerned with changing the relative rates of duties to encourage vehicle users to use less environmentally damaging unleaded rather than leaded petrol. The policy implications of this are considered more fully in Section 7.2.

The distinction between taxes on ownership and those on use is an important one. For environmental reasons, economic theory would suggest that it would be more appropriate to have a structure of taxes that relied more heavily on taxes on use rather than ownership, simply because many of the social costs of road transport depend upon the degree to which vehicles are used rather than the stock of vehicles. This would suggest that taxing fuels is a better way of addressing such environmental problems as pollution, although taxes on ownership can also play a role in this to an extent through the levying of lower ownership taxes on smaller cars.

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13 Car tax used to be levied at a rate of 10% on the wholesale value of cars.

Road Pricing

One problem with the existing structure of motoring taxes is that it cannot adequately be targeted towards the main social cost involved in vehicle use which is congestion. The current system of road taxes cannot distinguish between a road user who makes a journey in a rural, uncongested area and one who uses the roads in a busy, urban area. If both types of journey required the same amount of fuel, both vehicle users would end up paying the same amount of tax, even though the first type of journey is less socially costly than the second.

The Department of Transport predicts that total traffic will increase by between 18 and 30% by the year 2000, suggesting that unless policy measures are taken, the costs of congestion are going to rise. One response of the government has been to expand its road building programme - expenditure on roads for the year 1994-95 is planned to be £2,780 million in cash terms, some 70% higher than the level of road expenditure in 1989-90. An alternative way of tackling the problem of congestion is through a system of road pricing, which could be introduced to complement the existing pattern of taxation. Given that road space is a scarce commodity, it would seem sensible to ration its use by price. Any system of charges could be applied uniformly across the whole road network, or perhaps more appropriately, could be limited to certain stretches of road. One drawback of road pricing is that it will have distributional implications, the exact nature of which will depend upon whether charges are levied upon use of inter-urban or urban routes.

There are a number of schemes that could be introduced which would capture congestion costs to a greater degree than the present system. The best way of charging road users according to where and when they were driving would be through the introduction of electronic direct charges. These could be operated by installing an electronic tag into all vehicles. As a vehicle approached a charging point, the tag could trigger an overhead beacon which registered that the vehicle had passed through that point. At the moment, although the technology is available, the Department of Transport[14] believes that electronic direct charging is too costly to operate, although it is a possible option for the future. Furthermore, an electronic direct charging mechanism could run into some opposition on the grounds that it might endanger personal privacy.

Alternatively, until electronic charges were viable, the government could look to either tolls or road permits as a means of introducing user charges for roads. Tolls have been used extensively elsewhere in Europe and have the advantage that they are fairly flexible, and it is easy to operate a different scale of charges according to the type of vehicle that is being used and at the time of day the journey is being made. They also require no special arrangements for occasional users of roads. Their main disadvantage is that they require land for location of the toll barriers, are only suitable for roads with few junctions and, perhaps most importantly, they can cause substantial delays at the point of payment.

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14 See *Paying For Better Motorways* (Department of Transport, 1993).

A second charging mechanism that would lead to a greater degree of charging at the point of use would be some form of road permit which could take the form of a non-transferable permit displayed on vehicle windscreens, or alternatively could be incorporated into the VED tax disc. The cost could be related to the size and type of vehicle and temporary passes could be issued for foreign or occasional users. The main advantage of road permits is that they would be relatively easy to introduce and they would, unlike tolls, cause few delays. Their main drawback is that they do not encourage road users to weigh up the costs and benefits of making an extra road journey once they have paid the cost of the permit and so they are not the most appropriate form of congestion charge, although they would be a good way of raising revenue.

One problem that is common to all types of road pricing initiatives is that if the implementation of a scheme were not widespread, then delays might arise if traffic were to be diverted onto roads not covered by the charging system. Recent research by the Department of Transport suggests that although diversion costs may be relatively high for tolls, they will be considerably lower for a permit scheme since once a road user has paid for the permit, there is no incentive to travel on a road not covered by the scheme.

The widespread use of road pricing would raise a number of administrative and practical problems. Firstly, there is the question as to what would be the appropriate level of charges. Economic theory would suggest that it would be more efficient to have a system of charges that varied according to where and when a journey was being made, so there would be a wide range of tariffs for different roads. On purely administrative grounds such a varying set of charges would be more costly to operate than other types of tariff. Secondly, it would be desirable for road users to have full information on the range of costs that they face, thus enabling them to weigh up the full costs and benefits of making a particular journey. Obviously this would be more difficult if there were a wide variety of tariff levels.

Table 7.17. Gross Annual Revenue from Road Pricing of Motorways

Electronic Charge per Mile	Permit Charge	Annual Revenue
0.5p per mile for cars and light goods vehicles and 1.5p per mile for HGVs and other vehicles	£25 per year for cars and a range of up to £250 per year for HGVs	£250 million
1p per mile for cars and 3p per mile for HGVs	£50 per year for cars and a range of up to £500 per year for HGVs	£500 million
1.5p per mile for cars and 4.5p per mile for HGVs	£75 per year for cars and a range of up to £750 per year for HGVs	£700 million

Source: Department of Transport, *Paying For Better Motorways* 1993.

The introduction of road charging could have substantial public finance implications for both the funding and provision of roads. Department of Transport estimates for a system of road pricing introduced solely for users of motorways, showed options raising revenue of between £250 million and £700 million (see Table 7.17), depending upon the relative charges for different types of journeys and vehicles. The Department of Transport figures are only a broad estimate and in practice the revenue raising capacity of road charges might be much higher. Revenues would also be likely to vary according to the range of roads that came under the scheme (for example, it may be that some trunk roads could also be included) and depending upon the extent of road users' responses to the charges. The introduction of road charging could also have some potentially interesting implications for the private financing and provision of roads which we consider in Section 8.6.

Road pricing is on the government's agenda. Urban congestion charges are being considered, and in May of this year the Department of Transport released a Green Paper, "Paying For Better Motorways" which considered a number of schemes which would lead to a greater degree of direct charging for motorways and main trunk roads at the point of use. The consultation paper concluded that in the medium term, a permits scheme was the most viable way of charging for motorways. Given the current interest in road pricing within government circles, it is quite possible that the Chancellor may announce initiatives that open up the way for some scheme of charges to be introduced.

Landfill Levies

In 1989, 140 million tonnes of household, industrial and commercial waste were produced across the UK. Of this approximately 90% was disposed of in landfill sites and the rest was either incinerated or recycled. Although the waste management sector has recently been subject to increased regulation on both a national and a European level, the government has also made clear its intention to introduce price-based instruments in this sector in the form of landfill levies.

On environmental grounds, it is possible to identify two possible consequences of the introduction of landfill levies. Firstly, as with any environmental tax, the levying of landfill charges would be one way of ensuring that operators were taking account of the social costs of their activities. One effect of depositing waste on landfill sites is that it can lead to the emission of methane gas which contributes to global warming; decomposing waste can also enter water courses, leading to contamination of drinking water supplies. At the moment, landfill site operators have no incentive to take into account the costs of clearing up these environmental hazards. Economic theory would suggest, however, that the most efficient allocation of resources will occur only if the polluting firm is held responsible for these costs. The imposition of a tax is one way of doing this.

The other main advantage of implementing landfill levies for environmental reasons is that the correct structure of taxation can create incentives for firms to alter their production decisions. The impact of a landfill levy is to alter the relative costs of different methods of waste processing, and if the levy of the tax is the appropriate size then it can encourage firms and households to opt for waste minimisation or recycling if the costs of doing so are lower. This is desirable as both of these options lead to lower costs being imposed upon society.

A system of landfill levies applicable to all waste that is landfilled and paid by licensed landfill site operators could take one of a number of structures. On purely environmental grounds, the most appropriate type of levy would be one that varied according to the type of substance that was being deposited and also according to where the landfill site was. So, for example, it would be desirable to levy higher taxes in areas where the soil was more porous, since this type of tax structure would reflect the greater risk of water contamination.

The main disadvantage of a variable set of charges is that it will be both complicated and costly to administer. Other options include charges that are based on the volume or weight of waste being deposited at a site or, alternatively, simple ad valorem charges which are paid in addition to the charge levied upon customers by the licensed landfill site operator. Both of these charging options could be introduced relatively easily.

The effects of introducing a system of landfill levies are numerous. It is difficult to estimate precisely the extent to which the volume of waste deposited on landfill sites might fall in response to a levy, but a recent study commissioned by the Department of Environment[15] suggests that, at least in the short run, demand will be relatively unresponsive. In the longer run, it is likely that there will be a greater fall in demand. Their results suggest that, after a lag of around five or ten years in urban areas where the costs of landfill are relatively high, only about 56% of waste would be disposed of in landfill sites if a tax of £10 per tonne (representing a tax rate of approximately 50% of the landfill charge exclusive of the tax) were to be introduced. In terms of the incentive to move to alternative forms of waste disposal, the same report suggests that over time there will be a greater move towards incineration rather than the less environmentally damaging recycling.

Given that in 1989 approximately 130 million tonnes of waste ended up in landfill sites, the revenue implications of introducing this type of tax are considerable, particularly since there is likely to be little reduction in demand, at least initially. A charge of £5 per tonne would raise approximately £650 million per year. In principle, there is no reason why the revenues from the tax should be hypothecated, although it might make their introduction slightly more acceptable if the revenues that were raised by the levy were devoted to improving the environment. Alternatively, given that local authorities were responsible for disposing of some 17 million tonnes of waste in 1989 in England and Wales alone, and that the burden of the tax would fall upon the Council Tax payer, the revenues from the levy could be used to finance tax reductions elsewhere.

15 *Landfill Costs and Prices: Correcting Possible Market Distortions* (HMSO, 1993).

8 Issues in Spending

8.1 Public Spending

The introduction of a November Budget means that certain spending decisions previously announced in the Autumn Statement will be announced in the Budget on 30 November. In particular, the Chancellor will announce the estimated spending outturn for the current financial year and will allocate the remaining £4bn contingency reserve between departments. The reserve represents spending that has been set aside for unforeseen contingencies. It is often presented as additional expenditure but as it has been planned for, this is not the case in aggregate. However, allocation of this reserve will provide additional money to certain government departments. For 1994-95, the Chancellor will announce provisional allocations of the "New Control Total" between departments (the aggregate amount was agreed by Cabinet in July) and will also provisionally allocate £3bn of the contingency reserve for 1994-95. He will also confirm or change previous spending plans for the financial years to 1995-96 and announce new spending plans for an extra financial year, 1996-97.

As the 1994 Budget will be the first to incorporate spending announcements, so the *1994 Green Budget* is the first to include a chapter specifically related to spending decisions the government will face. In this chapter we begin by examining the trends in aggregate government expenditure. This analyses the main areas of spending, the trends from 1979 to the present and the future spending plans that are already announced.

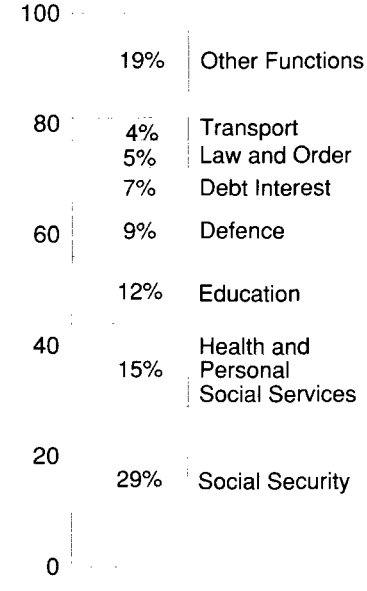
After considering aggregate government spending, we turn to the major spending departments, Social Security, Heath, Education, Defence and Transport. Though specific announcements relating to individual government departments will not be made by the Chancellor, the direction of government spending policy is much better understood with a detailed understanding of current government spending practices and future policies. Hence we examine the detailed spending plans for each department, possible cost reductions that are policy dependent and areas of new or additional spending.

General government expenditure (GGE) stood at £268.7bn, 44.75% of GDP in 1992-93. This is the most recent year of published spending outturn data. For this financial year, 1993-94, GGE is planned to rise to £286bn, a real increase of 3.8%. GGE represents total expenditure by all levels of government and is split into two broad categories, the new control total, which reflects underlying spending and other spending which includes cyclical social security, central government debt interest and accounting adjustments. This year, the real increase in GGE comprises a 2.4% rise in the new control total and a 12.4% increase in other spending due in the main to increased government debt interest payments.

Perhaps a more intuitive breakdown of GGE than the control total and other spending is one categorised by broad areas of government expenditure. Figure 8.1 shows the percentage of GGE spent by government on the major functions in 1992-93. It is immediately apparent that over half annual government expenditure is accounted for

by the three big spending items, social security, health and education. If these are combined with defence expenditure, law and order, transport and debt interest, the rest of the central and local government functions account for only 19% of GGE.

Figure 8.1
General Government Expenditure by Function



Source : Statistical Supplement to the 1992 Autumn Statement.

Another breakdown of GGE can be made by amount spent by each government department. This is shown in Table 8.1. It shows that the name of the department often does not highlight the actual amount of money spent in areas which it controls. The most obvious example of this is education spending, which is largely funded through grants to Local Authorities paid by the Department of the Environment. Hence, Figure 8.1 gives the best indication of the distribution of government spending.

Table 8.1. General Government Expenditure by Department

Department	Spending as a Percentage of GGE
Department of Social Security	23
Department of the Environment	15
Department of Health	10
Ministry of Defence	9
Scotland	5
Department for Education	3
Wales	2
Northern Ireland	2
Home Office	2
Other departments	15
Debt interest	7
Cyclical social security	5
Accounting adjustments	2

Source : Statistical Supplement to the 1992 Autumn Statement.

Between 1979-80 and 1992-93, GGE increased on average by 1.6% a year in real terms. Over the corresponding period in the economic cycle under Mrs Thatcher (1981-82 to 1986-87), the government managed to limit real public expenditure growth to 2% per year. Though growth in real public expenditure fluctuated from year to year over the whole period, it was negative only at the end of the unsustainable boom in 1988-89 when unemployment was falling rapidly. Public spending as a proportion of GDP has also varied considerably. Table 8.2 shows the proportion of GGE to GDP over the lifetime of this government. The variation was more often caused by trends in GDP growth than real changes in spending levels. For example, in the mid to late 1980s, real levels of government spending were fairly constant, while the proportion of spending in GDP fell from 47% to 39.25%.

Table 8.2 General Government Expenditure (Excluding Privatisation Proceeds) as a Percentage of GDP

Year	Percent of GDP
1979-80	44.00
1980-81	46.50
1981-82	47.25
1982-83	47.50
1983-84	46.50
1984-85	47.00
1985-86	45.00
1986-87	44.00
1987-88	41.75
1988-89	39.25
1989-90	39.25
1990-91	40.25
1991-92	42.00
1992-93	44.75

Source : Statistical Supplement to the 1992 Autumn Statement.

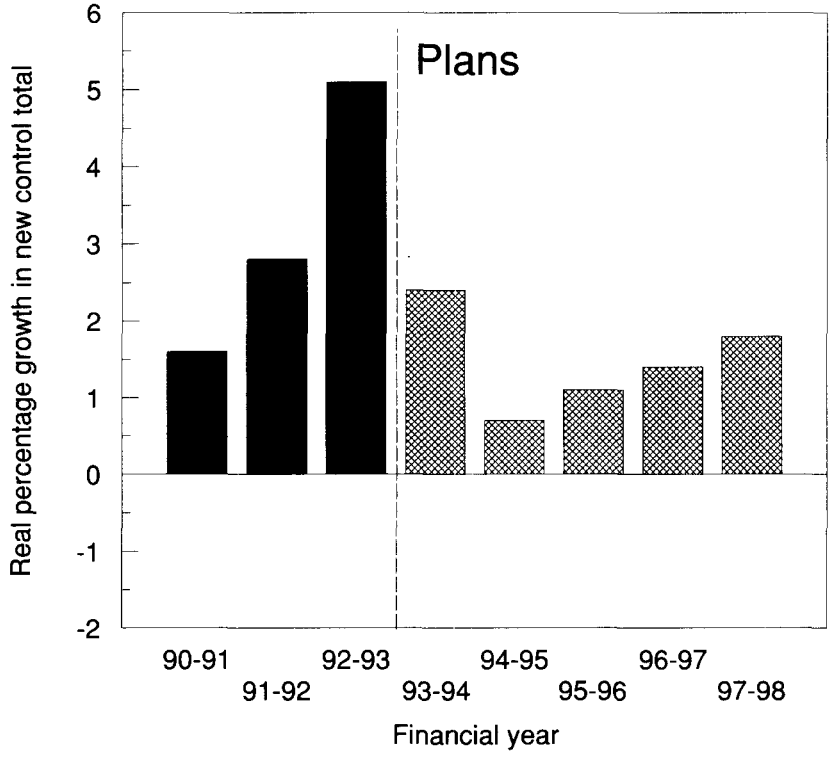
For future years, government publishes detailed spending plans three years ahead. These plans currently imply much lower real growth in the new control total (underlying spending) and GGE than over the last few years. However, spending is clearly planned to increase in real terms, despite the frequent claims to the contrary by Treasury ministers. This is shown in Figure 8.2 which compiles recent and planned growth in the new control total. Even if real spending is planned to increase, Figure 8.2 suggests that current plans aim not only for tighter control over public expenditure than in the early to mid-1980s, but also a dramatic reduction in real expenditure growth compared to the last few years.

As part of the government's commitment to achieving spending levels in 1994-95 no higher than those shown in Figure 8.2, the Chancellor announced in mid-September further curbs on public sector pay in addition to the blanket 1.5% limit on pay increases for 1993-94. For 1994-95 there will be no formal limit on pay settlements but the Chancellor announced,

"it will be necessary throughout the public sector to recognise that growth in pay bills will not be possible at this stage of the economic recovery".

This can only mean that increases in pay must be offset by reductions in staffing levels and the rule will apply for all public sector workers, even those whose pay is determined by pay review bodies. As such a firm rule as that above would not be flexible enough to cover areas in which the government's role is expanding or contracting, there were exemptions from the rule *"where there are significant changes in activity above that which can reasonably be accommodated by improvements in productivity"*. This exemption could provide avenues for pay negotiation, so it remains to be seen whether the pay bill freeze will materialise or whether significant groups of public sector

Figure 8.2
Real Increases in New Control Total : Actual and Planned (Government Inflation Estimates)

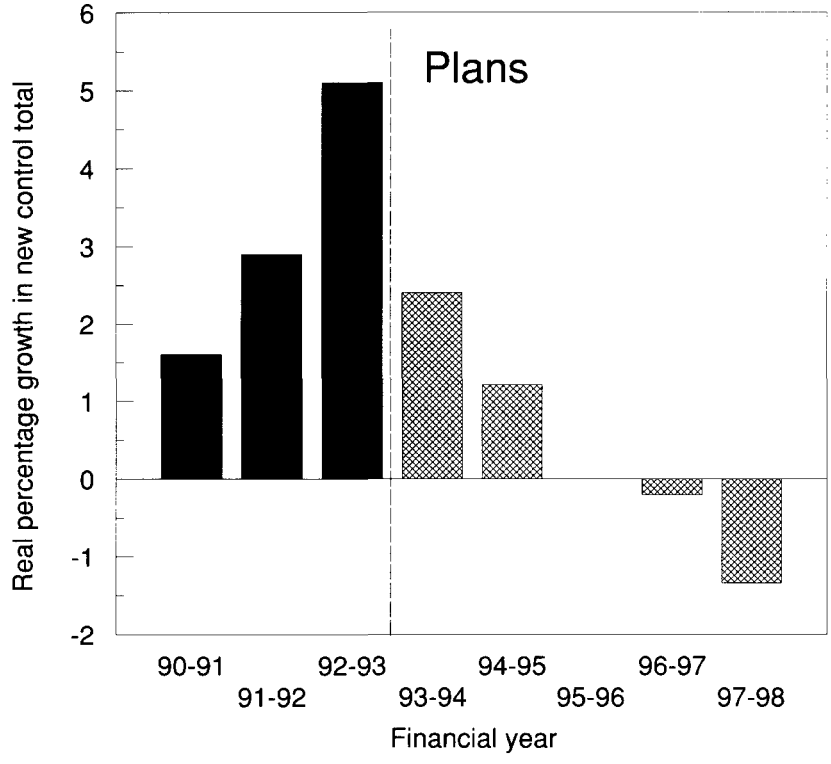


employees will be able to increase their pay, given that public sector productivity is notoriously difficult to measure. In any case, this measure is an attempt to hit the 1994-95 new control total and not to spend less than that currently planned.

On balance, we expect the expenditure plans shown in Figure 8.2 to be exceeded after 1994-95, as they suggest lower real growth than in any other comparable period. A second and independent reason for this expectation is that the inflation assumption contained in the plans is lower than our forecast for inflation. Since spending plans are set in nominal terms, if inflation is higher, the growth of real public expenditure will be even lower than that shown in Figure 8.2. Using our estimate of the GDP deflator and the government's nominal expenditure plans, real changes in public expenditure are as shown in Figure 8.3. This suggests zero growth and cuts in real expenditure from 1995-96.

As it is highly unlikely that real public spending will fall, and past experience suggests it will average at around 2% growth per annum, our central assumption, as described in Chapter 6 and Appendix 1 for the path of government expenditure, is that there will be 2% real increase in underlying spending per year from 1995-96. This is capped at a rate of 6% in nominal terms (i.e. 2% greater than the government's target range for inflation).

Figure 8.3
Real Increases in New Control Total : Actual and Planned (our Inflation Estimates)



Given this view of the prospects for public spending, it seems likely that the bulk of any net fiscal tightening will come, in the short term at least, from tax increases. Simply to come close to meeting their overall spending targets, the government will need to make cuts in the plans for some areas to accommodate higher than planned spending in other areas. So, while there may well be cuts in individual programmes, we judge that any significant cuts in the planned total of government spending would require radical reform of the role of government. Such reform may well come in the medium term, but is unlikely to provide savings of any size within the lifetime of this Parliament.

8.2 Social Security

The Programme in 1993-94

The Department of Social Security is by far the biggest spending department. Spending by the DSS in 1993-94 is planned to be £79.8bn, or more than a quarter of all government spending. In addition, local authorities will spend around £4.7bn on social security benefits financed by the DSS (principally rent rebates largely financed by the Department of Environment). Table 8.3 shows how the DSS planned to spend its Budget in 1993-94.

Table 8.3. Department of Social Security Spending 1993-94

		Cost (£ bn)
National Insurance benefits		
Retirement Pension	28.4	
Invalidity Benefit	6.7	
Unemployment Benefit	1.9	
Widows Benefits	1.0	
Other NI Benefits	1.5	
Total National Insurance benefits		**39.5**
Income related benefits		
Income Support	16.5	
Rent Rebates / Allowances[1]	3.8	
Council Tax Benefit	1.5	
Family Credit	1.0	
Social Fund / Independent Living Fund	0.3	
Total income-related benefits		**23.1**
Other benefits		
Child / One-Parent Benefit	6.3	
Disability Living Allowance	2.2	
Attendance Allowance	1.6	
War Pensions	1.0	
Other	1.8	
Total other benefits		**12.9**
Administration		**4.2**
Total Department of Social Security		**79.8**

Notes: 1. Excludes £4bn in rent rebates paid by local authorities.
2. Column totals may not sum exactly due to rounding.

Source: Social Security Departmental Report (1993).

The categorisation given in Table 8.3 subdivides benefits according to the basis on which they are received. The first and largest group is the contributory National Insurance benefits. These are payable to those who are elderly, sick, disabled, widowed or unemployed and have made the appropriate level of National Insurance contributions. Within this category, by far the most significant is the state retirement pension which accounts for more than one third of all benefit spending, and is received by roughly 10 million individuals. Also important is Invalidity Benefit, received by around 1.6 million people.

The next category is the income-related or "means-tested" benefits. The major benefit here is Income Support received by 5.7 million claimants. The main beneficiaries are the unemployed, lone parents and pensioners whose other income falls below certain minimum levels. Means-tested help with rents and local taxes is another major item, although as noted earlier part of this expenditure counts as local authority rather than DSS spending.

The final category of benefits is those which are based neither on contributions nor on low incomes per se, but on satisfying a certain contingency such as having children or being disabled. The most significant of these in cost terms are Child Benefit, received by more than 7 million families, and the benefits for severely disabled people, Attendance Allowance and Disability Living Allowance. These latter benefits are received by 800,000 and one million people respectively.

For the purposes of public expenditure planning a rather different classification of benefits is used. This attempts to separate out those benefits where expenditure might be expected to vary with the economic cycle. These benefits are then excluded from the "control total". Table 8.4 shows total benefit spending according to this breakdown.

Table 8.4. DSS Spending and the Control Total

	Cost (£ billion)
Within the control total	
National Insurance benefits except Unemployment Benefit	37.6
Income-related benefits except Income Support to non-pensioners	10.2
All other benefits	12.9
Administrative costs	4.2
Total DSS spending within the control total	**65.0**
Outside the control total ("cyclical social security")	
Unemployment Benefit	1.9
Income Support to non-pensioners	12.9
Total DSS spending outside the control total	**14.7**
Total DSS spending	**79.8**

Note: Column totals may not sum exactly due to rounding.

Source: Social Security Departmental Report (1993).

The estimates provided in Tables 8.3 and 8.4 were published in February 1993 and were based on the assumption that unemployment would average 2.8 million during 1993-94. An average unemployment figure 100,000 higher than this would add £0.35bn to benefits spending. Most of this would fall under the heading of "cyclical social security" and so would not affect the government's ability to hit its control total. However, the additional expenditure on rent allowances plus any indirect effect of higher unemployment on other benefits such as Invalidity Benefit would affect DSS spending within the control total.

Prospects for 1994-95

Following the usual convention in the planning of public expenditure, DSS plans for 1994-95 (and 1995-96) are based on the same unemployment assumption as for 1993-94, namely an average of 2.8 million. They also assume that non-means- tested benefits will be uprated by 2% in April 1994 and means-tested benefits by 3.75%. On the basis of these assumptions, expenditure by broad group of benefit for 1994-95 is shown in Table 8.5. Figures for 1993-94 are repeated for comparative purposes.

Table 8.5. DSS Expenditure in 1993-94 and 1994-95 by Broad Group of Benefit

	1993-94	1994-95
National Insurance benefits	39.5	40.3
Income-related benefits	23.1	24.9
Other benefits	12.9	13.5
Administration	4.2	4.2
Total Department of Social Security	**79.8**	**82.9**
Of which:		
Within the control total	65.0	67.2
"Cyclical social security"	14.7	15.8

Note: Column totals may not sum exactly due to rounding.

Source: Social Security Departmental Report (1993).

Table 8.5 immediately presents a paradox: how can "cyclical social security" spending be forecast to rise by more than 7% when unemployment is assumed to be the same in both years? The resolution to this apparent paradox lies in the fact that the term "cyclical social security" includes all Income Support paid to non-pensioners, and not just that paid to the registered unemployed. The rise in this case is assumed to come mainly from a continued growth in the number of lone parents and disabled people receiving Income Support.

The rise in DSS spending within the control total comes mainly from Invalidity Benefit (+£600 million), Rent Allowances (+£600 million), Disability Living Allowance (+£200 million) and Attendance Allowance (+£200 million).

Two main factors will determine how far actual spending in 1994-95 matches the plans set out in Table 8.5. These factors are the accuracy of the underlying economic assumptions and the extent of any discretionary policy changes. We consider each in turn.

(a) Economic Assumptions for 1994-95

On inflation the outturn was slightly lower than was originally assumed. Non-means-tested benefits are usually uprated by the increase in the all-items RPI in the year to the preceding September, namely 1.8%. This is 0.2% lower than was assumed and saves around £60 million. Since the RPI excluding housing (used to uprate means-tested benefits) undershot by a similar margin this would save around £75 million, producing a total saving of £135 milllion. Roughly half of this amount would fall within the control total.

For each 100,000 by which the outturn unemployment figure deviates from 2.8 million, total benefit spending will vary by around £0.35bn in 1994-95. On current projections of economic growth, the unemployment assumption seems unlikely to be far wrong.

(b) Discretionary Policy Changes

The spending plans set out in Table 8.5 were made on the basis of policy at the time of the Autumn Statement in 1992. The main policy issues to arise since then are on the one hand possible benefit increases to compensate low-income households for VAT on fuel, and on the other possible benefit cuts to restrain the overall growth of benefit spending. We consider each in turn.

Compensation for VAT on Fuel

VAT will be charged on domestic fuel and power at a rate of 8% from April 1994 and 17.5% from April 1995. All households on benefit will automatically receive a measure of compensation for this increase via the normal process of benefit uprating. The April 1994 VAT increase will affect the RPI figure for September 1994 and hence the level of benefit uprating in April 1995. Similarly, the April 1995 VAT increase will feed through into higher benefit levels in April 1996.

However, at the time of announcing the VAT increase the then Chancellor also implied that there would be extra help for those on low incomes:

"... I recognise that [VAT on fuel] will cause particular problems for those on low incomes. My Right Honourable Friend, the Secretary of State for Social Security will take this into account when the income-related benefits are uprated next year." (Norman Lamont, Budget Speech, March 1993)

The case for additional assistance for low-income households rests on two main foundations. First, that automatic compensation through the benefit system will be too slow in coming. Whilst higher fuel bills will start arriving in mid-1994, higher benefits will not start until April 1995. Secondly, that the automatic compensation will generally be inadequate when it arrives. This is because low-income households are known to spend a higher proportion of their income on fuel than other households. Thus compensation based on average consumption levels (via the RPI) will not fully compensate poorer households.

An announcement about the extent of any additional compensation will be made around the time of the November Budget. At the time of writing the package had still not been finalised but seems likely to involve extra increases in benefits for April 1994 over and above those implied by the normal process of indexation. Particular emphasis is likely to be given to recipients of income-related benefits and to the elderly. One plausible package, which brings forward the automatic compensation due in April 1995 to April 1994 would add around one third of a billion pounds to benefit spending in 1994-95.[1]

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1 See Crawford, Smith and Webb, *VAT on Domestic Energy*, IFS Commentary no.39, September 1993, for a more detailed discussion of the issues surrounding the imposition of VAT on domestic fuel.

Possible Spending Cuts

In selecting areas of benefit spending for cuts in 1994-95 the Secretary of State is likely to avoid those which are subject to manifesto commitments or where spending is clearly going to those most in need. The former consideration suggests that cuts in Child Benefit and the State Retirement Pension are unlikely, whilst the latter suggests that rates of the main means- tested benefits are likely to be fully uprated (quite apart from any additional measures relating to the imposition of VAT on fuel).

Remaining targets therefore include Invalidity Benefit (IVB), Unemployment Benefit (UB), Housing Benefit to those not on Income Support, and a further tightening up on "fraudulent" claims.

IVB is a prime target for a number of reasons. In the first place the number of recipients has more than doubled since the start of the 1980s and it seems unlikely that this reflects a significant deterioration in the health of nation. Secondly, the amount spent on IVB is substantial - over £6.7bn in 1993-94. Thirdly, IVB is paid regardless of the other income of a claimant and so the total income of better-off IVB recipients can be significantly higher than that of other benefit receipients.

There are a number of ways in which IVB might be cut back. One would be to make it subject to income tax. Strictly speaking this would produce a rise in revenue rather than a cut in spending, but it would nonetheless be welcomed by the Treasury. Taxing Invalidity Benefit (and also the non-contributory Severe Disablement Allowance) would raise around £500 million per year but it is likely that such a change could not be implemented until April 1995 at the earliest. If, however, taxation were applied only to new claims (to avoid sudden and substantial losses amongst some existing claimants) then the revenue yield in the first year would be negligible.

A related way of cutting IVB which has been floated would be to end entitlement at 65 for men and 60 for women rather than 70 and 65 as at present. Whilst IVB recipients reaching the maximum age are simply transferred onto a Retirement Pension of the same value, the significance of lowering the maximum age is that Retirement Pension is taxable whereas IVB is not. It seems unlikely however that the government would effectively tax current IVB recipients over pension age but not those under pension age.

A third way of cutting IVB would be to follow the example of Unemployment Benefit and partially withdraw benefit from those with significant private pension income. At present UB claimants lose benefit on a pound-for-pound basis where they have private pension income in excess of £35 per week. A similar rule for IVB recipients under pension age would save around £700 million.

Yet another way to cut spending would be to abolish the Invalidity Allowance component of IVB. This is an addition to the basic Invalidity Pension whose amount varies according to the age at which the claim began. Those who were younger when they fell ill receive higher levels of Invalidity Allowance, with the maximum amount being £11.95 per week in 1993-94. Abolishing this element of IVB would save around £300 million after allowing for offsetting rises in expenditure on means-tested benefits.

NI Unemployment Benefit (UB) is a second possible target, partly because of its significant cost (almost £2bn in 1993-94) and also because it is paid regardless of whether other family members are in paid employment. In this sense it may be viewed by the government as being poorly targeted.

The most obvious cut would be to reduce the maximum duration on UB from its present twelve months to six months, a measure which would raise around £200 million. For UB recipients also on Income Support the reform would have no effect because their Income Support would simply rise to compensate. The main losers would be the unemployed wives of working men, who currently receive UB irrespective of their husband's income.

A third possible target is Housing Benefit (HB), where total DSS spending exceeds £4bn. It seems unlikely that the government would pay less than the full rent of someone also receiving Income Support, but cuts are possible for HB recipients with incomes above Income Support levels.

At present, an individual with after-tax income at Income Support levels would typically have his/her rent paid in full. Above this level assistance is withdrawn at a rate of 65 pence in the pound. The simplest way of cutting spending would be to increase this benefit "taper", perhaps to 80 pence in the pound. This would raise around £300 million. The principal drawbacks of this approach are first that this makes low-paid work even less worthwhile for those with high rents, and second that the main losers are likely to be pensioners who may already be losing from the effects of VAT on fuel.

A final group of cost-cutting measures would be an increased clamp-down on benefit fraud. DSS estimates suggest that as much as £1bn will be saved in 1993-94 from anti-fraud measures, split roughly evenly between benefits administered by central and by local government. Further measures may be announced on this front in November, possibly including stricter medical checks on claimants for Invalidity Benefit. This seems especially likely given the recent flood of DSS-sponsored reports on IVB.[2]

Table 8.6 provides a summary list of some possible measures to cut benefits together with estimates of the likely amounts raised.

2 See, for example, "GPs and IVB - A Quantitative Study of the Rôle of GPs in the Award of Invalidity Benefit", DSS, 1993.

Table 8.6. Estimated Cost Saving from Selected Social Security Measures

Measure	Saving (£ m p.a.)
Child Benefit	
Taxation in hands of mother	500
Invalidity Benefit	
Taxation of existing recipients	500
Ending eligibility at 65 / 60	100
Reduction for recipients of private pensions	700
Abolition of Invalidity Allowance	300
Unemployment Benefit	
Ending entitlement after six months	200
Housing Benefit	
Increase in "taper" to 80%	300

Source: Estimates based on IFS Tax and Benefit Model.

Table 8.6 identifies a number of ways in which the government could cut several hundred million pounds from the social security bill for 1994-95. Even these cuts are however relatively modest when seen in the context of a total benefit budget in excess of £80,000 m pounds. In the next section we examine whether there is a need for more radical pruning of the social security budget over the longer term.

Longer Term Issues

1993-94 to 1999-2000

It has been difficult to escape the impression during the summer months that there is a crisis in social security spending. Not only is the existing budget huge, but it is likely to go on growing in real terms and press reports have suggested that this places government finances in even greater jeopardy. The inspiration for much of this coverage has been a government document, "The Growth of Social Security", published in July 1993 and providing estimates of benefit spending to the end of the decade. How far does this document justify the conclusion that benefit spending is out of control and in need of major cutbacks?

To begin with it is worth setting out the key conclusion of the document - that with economic growth at 2.5% per year and a fall of a quarter in unemployment, social security spending in 1999/2000 will account for 12.4% of GDP compared with 12.3% in 1992-93. In other words, on this central assumption benefit spending will rise no faster than our ability to finance it.

Clearly if unemployment remains at its present level and growth is sluggish, then the situation will deteriorate, but on the other hand more rapid growth than the 2.5% assumed would actually cut the share of benefit spending in national income. With reasonable economic performance therefore, social security spending is unlikely to drive the public finances into meltdown.

It is however true that if the growth in social security spending could be curtailed then this would free up resources for spending on other desirable projects, for cutting government borrowing or for lowering tax rates. Given the Conservatives' stated objective of lower taxation it is likely that they will not be satisfied merely with holding social security at its present share of national income, but will try to cut that share. So where might the government look for cuts?

The DSS study identifies three major benefit areas likely to contribute most to the upward pressure on social security spending to the end of the decade. These are Invalidity Benefit, Housing Benefit and Income Support to lone parents. If long-term spending pressures are to be eased then these areas are most likely to be the subject of close scrutiny.

The reasons for the growth in IVB are imperfectly understood, and the forecasts to the end of the decade are, in the words of the DSS, "based largely on the assumption of the continuation of existing trends" (op. cit. p.17). Even if this year's Budget sees no significant changes, it is difficult to see the growth in IVB expenditure being allowed to continue unchecked in the coming years.

In the case of Housing Benefit, the situation is not what it at first sight appears. The main reason for the projected rise in HB expenditure is rising rent levels. These in turn have been caused largely by cuts in Department of Environment subsidy to local authorities and to housing associations and to a lesser extent by deregulation of the private rental market. In other words, much of the increased expenditure by the DSS is a direct consequence of cuts in expenditure by the DoE. It would seem perverse to penalise low-income renters for this redistribution between government departments by reducing the Housing Benefit of those not on Income Support. Nonetheless, further cuts in this area cannot be ruled out.

For the final group, lone parents on Income Support, steps are already in hand to curtail the growth in expenditure. The Child Support Agency is charged with increasing the flow of maintenance payments from "absent parents" (usually fathers) in respect of their natural children. Where a lone parent is on Income Support, every pound in maintenance received produces a one pound saving in benefit expenditure. In 1993-94 the CSA has as one of its performance indicators the target of saving more than £500 million from benefit spending on this group. However, the projected increase in expenditure already takes account of the planned activities of the CSA.

Perhaps the most likely step in this area would be for the government to announce additional funding for the Child Support Agency. At present the Agency covers its running costs more than four times over in terms of benefit savings alone. A further increase in activity, whilst perhaps subject to diminishing returns, would probably still produce net expenditure savings for the DSS.

Beyond 1999

Having dwelt at length on planned benefit expenditure to the end of the decade it is worth reflecting briefly on the prospects for spending into the next century. Under normal circumstances such matters would be well beyond the political horizon but where social security benefits, and in particular pensions, are concerned, decisions may have to be taken now which will have major implications for the public finances in the decades to come.

Two main decisions have still to be taken on pensions. The first is at what age people should be entitled to receive state pensions. A government discussion paper published in 1991 offered a range of suggestions for equalisation, but the most likely options seem to be equalisation at 63, producing a small expenditure saving, or at 65, producing savings of around £3bn per year. Any change would inevitably have to be phased in, but a decision to level up to 65 would at least reduce the upward pressure on spending caused by the rapid growth in the number of pensioners expected between 2010 and 2030.

The second key issue is the future of the basic state pension. It could be argued that there is no problem here. According to projections by the Government Actuary, if the state pension continues to be linked to increases in the RPI then the rates of National Insurance contributions required by 2030 will be vitually unchanged. However, if this were the case then the state pension would be worth only around 8% of male average earnings and would thus be effectively valueless to the vast majority of pensioners. In other words, the funding problem is only being "solved" by a steady erosion in the value of the benefit.

One option would be to restore the link between pensions and average earnings, broken in 1980. However, not only would this require an increase of 7 percentage points in National Insurance rates by 2030, but this would still leave the pension at only 15% of male average earnings compared with a peak of 20% in 1997-78.

An alternative approach, and one more likely to be favoured by the government, is to encourage individuals to "contract out" of the basic state pension in rather the same way that many presently opt out of the state earnings-related pension. In principle this could produce major expenditure savings at just the point where demographic pressures are at their peak.

The main problem with going down this route is that today's working age population will not willingly surrender now their rights to a state pension on retirement. Rather, they will require some form of financial inducement as was provided to those who took out personal pensions following the 1988 reforms. This in turn could be very costly at precisely the point where the government is aiming to close a gap in its finances.

There is no easy answer to the pensions problem. On present policies the basic state pension will simply wither and die by the time today's school leavers reach retirement age. On the other hand, the state cannot provide a worthwhile flat-rate pension for 15 million pensioners without major tax increases. The November Budget of 1993 will not be the last to face difficult decisions on social security spending.

8.3 Health

Spending Plans in 1993-94

With expenditure just under £30bn in the current financial year, the Department of Health accounts for around 10% of all general government expenditure. The Department of Health is responsible for health and personal social services in England only, with the Scottish, Welsh and Northern Irish offices each responsible for services

in their own parts of the United Kingdom. In 1993-94 total NHS spending in Scotland, Wales and Northern Ireland (and hence not included in the Department of Health budget) came to around £6.9bn.

Table 8.7 shows the principal components of planned spending within the Department of Health in 1993-94.

The largest single item in the Department of Health budget is hospitals and community health services (HCHS). More than two thirds of this total budget are spent on pay. When total spending is classified by function, the principal categories of expenditure are acute services (around 45%), spending on elderly people (13%) and on those with mental illness (12%).[3]

A small but rapidly growing component of HCHS current spending is cash-limited general medical services. This includes contributions to the cost of GP staff, improvements to GP premises, computerisation and costs associated with the management of practice funds by GP fundholders. The 1993 Departmental Report indicates that £689 million were allocated for these purposes in 1992-93, a real increase of around 150% since 1987-88.

Each year, HCHS capital spending involves up to 100 major projects with most costing between £1m and 5m pounds, but some costing in excess of £15m pounds. Capital receipts from sales of land etc. typically raise £100-£200 million.

3 Breakdown relates to gross expenditure in 1990-91 which is the latest year for which figures are available.

Table 8.7. Department of Health Spending Plans in 1993-94

	Cost (£ bn)	
Department of Health services		
NHS Hospitals, Community Health (HCHS)		
Current expenditure		
Gross	21.2	
Charges and receipts	-0.5	
Net		20.8
Capital expenditure		
Gross	1.2	
Charges and receipts	-0.2	
Net		1.0
NHS Trusts (net)		0.2
NHS family health services (not cash-limited)		
Gross	6.8	
Charges and receipts	-0.7	
Net		6.1
Misc. services and administration (net)		1.0
Total Department of Health Services		29.0
Other services		
Grants to local authorities	0.6	
Personal social services	0.1	
Credit approvals	0.1	
Total other services		0.8
Total Department of Health		29.8

Note: Column totals may not sum exactly due to rounding.

Source: Department of Health Departmental Report (1993).

Gross spending on non cash-limited Family Health Services (FHS) came to £6.8bn in 1993-94 with around half of this total paying for pharmaceutical services. More than three quarters of the bill for pharmaceutical services is for drugs. The remaining half of the FHS budget goes almost entirely on medical and dental services.

Table 8.7 also indicates that current spending on health services is partly offset by around £1.2bn in charges and receipts. In 1992-93 income from charges etc. covered around 4% of gross spending, up from 2.2% in 1978-79. This is mainly due to increases

in charges levied on private patients. Whilst prescription charges also increased significantly in real terms over the period, there was a rise in the proportion of free prescriptions which restricted the growth in revenue from this source.[4]

The principal expenditure item within the "other services" category is Department of Health grants to local authorities for personal social services. The principal item here is a Community Care grant. This arises mainly from a phased transfer of the financial cost of Community Care from the Department of Social Security to local authorities. The grant also covers other extensions to local authority responsibilities in this area as well as help for the severely disabled following the end of the Independent Living Fund.

Separate from this Department of Health grant, local authorities also operate a wide range of social services financed mainly from the Revenue Support Grant. In 1992-93 local expenditure on personal social services amounted to £5.0bn.

Health Spending in 1994-95 and Beyond

The 1992 Conservative manifesto contained the following pledge on health spending:

"We will, year by year, increase the level of real resources committed to the NHS. Savings made through greater efficiency will be ploughed back into the Service" (p.28)

Consistent with this pledge, Department of Health spending plans show a rise of around 1% per year above inflation to the end of the planning period (1995-96). However, as Figure 8.4 shows, this represents a significant deceleration in the rate of growth in health service spending.

This figure is based on government inflation assumption, which are lower than we expect to be achieved. If inflation is higher, the real growth will be even lower.

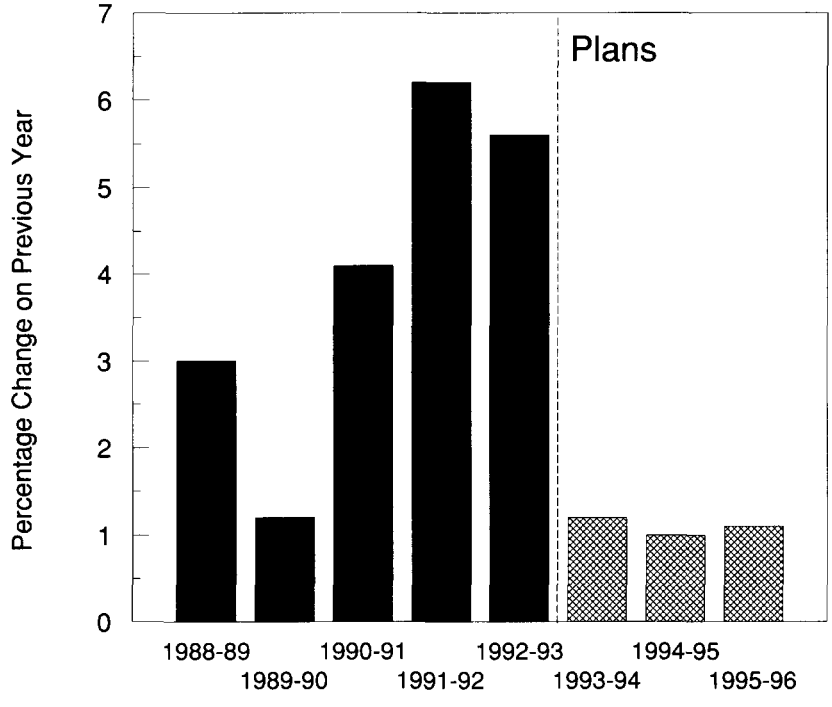
Figure 8.4 shows the year-on-year real increase in actual and planned central government spending on health services for the period 1988-89 to 1995-96. The apparent sharp drop in the growth rate of health spending is slightly misleading and arises in part from the nature of government accounting. Each year the government sets aside a "contingency reserve" for unforeseen eventualities. During the course of the year the money is allocated to particular programmes, and health is often one of the beneficiaries.

In 1992-93 the Department of Health received more than £400 million from the contingency reserve compared with plans, in this case to finance extra demands for family health services and the costs of pay awards determined by review bodies. Given that the contingency reserve available for 1993-94 stands at £4bn and that for 1994-95 at £7bn, it is likely that the outturn growth in health spending will be faster than implied by the plans in Figure 8.4.

Even allowing for the effects of allocating the contingency reserve, the real increases in health spending over the next few years are likely to be significantly lower than those which were seen in the early 1990s. However, whilst the government will be seeking to constrain the growth in spending there are a number of upward pressures on the health budget which will make this objective more difficult. These include the

4 Policy options on prescription charges are discussed later in this section.

Figure 8.4
Real Spending by Central Government on Health Services in England
Year-on-Year Changes



Source: Department of Health Departmental Report (1993).

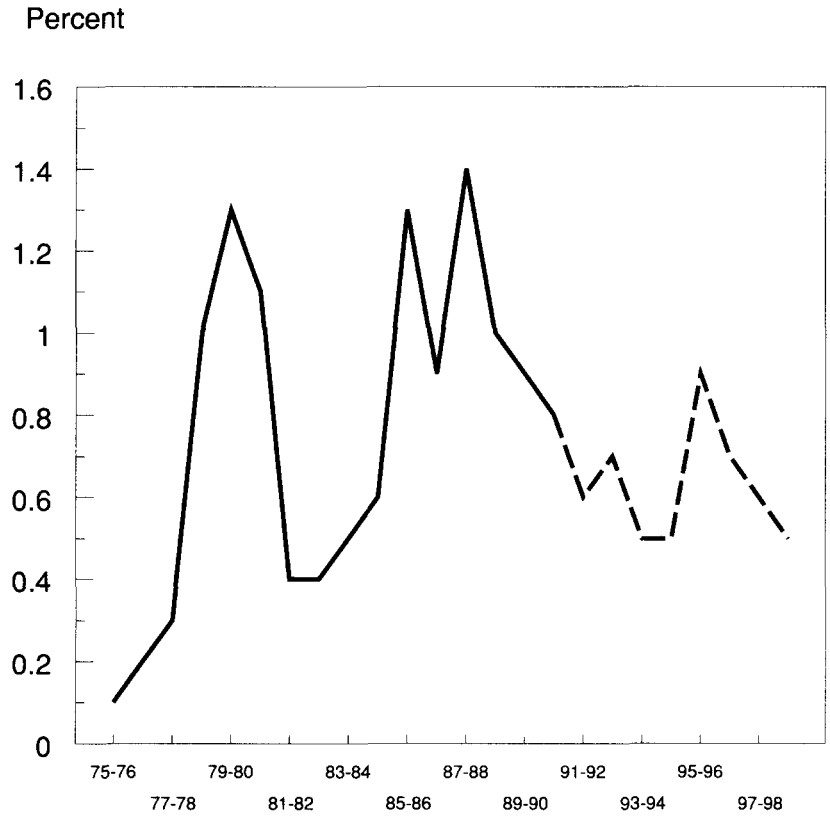
costs associated with medical advance, the costs of government priorities in health (such as screening and immunisation programmes) and the additional costs imposed by the changing demographic structure of the population. Giving evidence to the House of Commons Social Services Committee in 1985, the then Health Minister Barney Hayhoe said:[5]

".. I think that demography in the coming year will be demanding about 1 per cent, probably about 0.5 per cent for service priorities.. and about 0.5 per cent for medical progress." (p.152)

The additional costs arising from growing numbers of very elderly people and also from variations in the birth rate obviously fluctuate from year to year. Figure 8.5 shows government estimates of the impact of this factor on hospital and community health spending for the period 1975-76 to 1998-99.

5 Fourth Report from the Social Services Committee, 1985-86 Session, *Volume II: Minutes of Evidence and Appendices*, 387-II.

Figure 8.5
Esimated Growth in Demand for HCHS from Demographic Changes
(increase over previous year)



Source: Department of Health Departmental Report (1993).

At present, demographic pressures are relatively limited, with extra spending of around 0.5% required in 1994-95 to maintain the same level of service per patient as in 1993-94. Added to the estimated costs of technological progress and of financing priority areas this suggests that real growth of around 1.5% would be needed almost to "stand still".

To be set against the upward pressures on spending are the potential cost savings available from improved efficiency within the health service. According to the 1993 Departmental Report, the efficiency of spending on Hospitals and Community Health Services (the largest single area of spending) has increased by 20% between 1978-79 and 1990-91, or an average annual rate of around 1.5%. This is based on a comparison between changes in activity levels and changes in expenditure. It was further estimated that gains of around 2% were to be expected between 1991-92 and 1992-93. If this trend were to continue then this would almost exactly offset the upwards pressure from higher cost technology, new government priorities and demographic change.

Nonetheless, there is likely to be a continued pressure within government to contain the cost of inputs, since for any given total budget with given staffing levels, lower salary costs mean more patients can be treated. A large part of the burden is likely to fall on health service employees if the planned pay freeze comes into effect. Given that pay is likely to account for around 70% of planned departmental spending of £31.2bn in 1994-95, around £200 million will be saved for each percentage point by which wages are cut relative to planned increases.

The Department has also attempted to make savings in another large area of input costs, namely drugs. An agreement with the pharmaceutical industry which takes effect from 1 October 1993 will reduce drugs prices across the board by 2.5%. Given a drugs bill in excess of £2.5bn this measure could save more than £60 million in a full year.

Options for Easing the Pressure on Funding

Prescription Charges

In 1991-92 more than 400 million prescriptions were issued, an increase of more than a quarter since 1978-79. Whilst some upward trend might have been expected because of demographic pressures, the Departmental Report notes that the reasons for an increase on this scale "are imperfectly understood" (p.50).

A number of steps have been taken to attempt to mitigate both the growth in the number of prescriptions being issued and the net effect on health service costs. The most obvious has been the sharp increase in the prescription charge, up more than threefold in real terms since 1979 and now standing at £4.25 per prescription. Secondly, GPs have each been given an "Indicative Prescribing Amount" designed not to act as a formal ceiling but to enable Regional Health Authorities to put pressure on GPs with high prescribing costs. Thirdly, the drugs bill of a GP fundholder falls within the total practice budget and so GPs needing funds for other areas have an incentive to economise on prescription costs. Fourthly, as mentioned earlier, the Department of Health has negotiated with drug companies to restrain the cost of drugs. Finally, GPs may no longer prescribe drugs within categories on a "Specified List" where the Department believes that equally effective alternatives are available at a lower cost.

Notwithstanding these various measures, the drugs bill remains a major item of health service expenditure. In the face of severe financial constraints, one possible response to this would be to increase revenue from prescription charges. At present a wide range of individuals are exempt from charges including pensioners, children and those receiving Income Support or Family Credit. The result of these exemptions is that four in five of all prescriptions issued is free of charge.

One of the largest single exempt groups, and also a group to which relatively large numbers of prescriptions are issued each year, is those over pension age. The 10.5 million individuals in the UK over pension age receive an average of 18 prescriptions each year free of charge. As an indication of the scope for revenue raising from this group, if free prescriptions were abolished for all but the 1.5 million pensioners on

Income Support, and if prescription usage amongst other pensioners did not subsequently decline, then at £4.25 per prescription more than £650 million could be raised.[6]

Clearly the political obstacles to imposing prescription charges on pensioners on top of other recent revenue raising measures (notably the imposition of VAT fuel) would be considerable. Nonetheless, a move towards more limited exemptions and / or further real increases in charges cannot be ruled out.[7]

Private Capital

The attitude of the Treasury to the use of private sector finance in public sector projects has in the past generally been hostile. Such finance (sometimes labelled rather pejoratively "unconventional finance") has been subject to strict "Treasury Rules" which have acted to severely limit private sector financial involvement of this sort.

In the context of the NHS, there were at the time of the last Autumn Statement limited examples of the use of private finance. These included provision of long-stay accommodation for patients and the leasing of offices and some medical equipment. However, with the Autumn Statement came measures designed to bring about a significant expansion of private sector involvement in the provision of NHS services. The main changes of relevance to the NHS affected three types of private sector involvement: financially free-standing projects, joint ventures and leasing schemes. We describe each in turn. These descriptions are based on a set of instructions from the Director of Finance of the NHS Management Executive sent to various regional and district NHS finance directors.[8]

(i) Financially free-standing projects - this term refers to projects where the private sector takes the lead in providing a service which is funded principally from charges on private users, but where some public sector use may be made of the service. In the past, where such projects have required government approval, there has been a requirement that a comparison be made with a theoretical scheme on the same scale funded wholly by the NHS, to see if the expenditure is cost-effective. Now, provided that the private sector has assumed the risk of the project, it is simply assumed that "market disciplines" will have helped to ensure that the provision is being made in a cost-effective way and a simpler "value-for-money" test is now applied.

(ii) Joint ventures - in a change of policy, the government is now to "actively encourage" the private sector to join with it in joint ventures. Key features of such ventures are that any government equity stake must be a minority one and that partners for joint ventures be selected by open competition. Again, as with all of these new ventures, the burden of risk should fall primarily on the private sector.

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6 If prescription usage did decline then the net savings would be even greater, since even the £4.25 charge covers only slightly more than half of the true cost of prescriptions.

7 A recent report from the Institute for Economic Affairs entitled "Medicard: A Better Way to Pay for Medicines?" by David Green and David Lucas, presents a number of worked out schemes for increasing the revenue from prescription charges.

8 See "The Use of Private Capital in the NHS", FDL (93)03, NHS Managment Executive.

(iii) Leasing - hitherto there have been strict limits on long-term leasing arrangements. In particular, the whole *capital* value of a lease has been included against a department's *current* expenditure, thus making such arrangements very unattractive. Now, provided that the private sector bears the majority of the risk, only the public sector's current contribution to the total cost will be included within the departmental spending total. The public sector will however be required to ensure that leasing is a more cost-effective option than outright purchase, even allowing for the fact that the private sector's cost of capital is likely to exceed that of the public sector.

The key features of these schemes are that they involve a transfer of risk to the private sector and that they involve competition between alternative private sector providers. The point here is that simply transferring provision of services from public to private sector whilst giving the private sector no penalties for poor performance is unlikely to improve cost-effectiveness. Indeed, given the private sector's higher cost of capital, the reverse might well be true. If, however, a market discipline can be introduced via the use of private sector provision (and also management) then a greater level of service can potentially be provided for a given level of public sector funding.

It is the government's intention that health care provision via these sorts of joint schemes will produce "additional resources for health care". In other words, despite the relatively tight public expenditure constraints, it may be possible via such mechanisms to obtain a greater level of NHS output. It remains to be seen in the coming years whether the rules have been relaxed sufficiently to produce significant increases in the efficiency of NHS provision via increased private sector participation.

8.4 Education Spending

According to the government's expenditure plans direct education spending by the Department for Education, the Welsh Office, Scottish Office and Northern Ireland Office totalled £9.1bn in 1992-93. Further, a large share[9] of the £16.7bn allocated by the Department for the Environment to local authorities in the form of a lump-sum non-specific grant called the Revenue Support Grant is spent on education. Of the £7.2bn spent by the Department for Education, £3.8bn is central government's own expenditure on education and £3.4bn is support to local education authorities. Table 8.8 shows that local authorities' gross spending, i.e. including elements from central government, was over £26.6bn in 1992-93. Taking into account central transfers etc. total general government expenditure on education was close to £32bn in 1992-93.

Table 8.8 looks at the decomposition of government expenditure on education in 1992-93 and also sets out the published expenditure plans until 1995-96. It can be seen that the Department for Education's own expenditure includes spending primarily on schools and higher and further education. The Department's expenditure on schools is set to grow substantially over the next few years. The main reason for this is the substantial increase in the number of grant-maintained schools that are to be financed centrally. Schools spending by the Department will increase by over 25% per year over the next three years. The plans also take into account the transferring of further education and sixth form colleges from local authority control on 1 April 1993 to the

9 Approximately 40%.

centrally funded Further Education Funding Council (FEFC). The higher education figures also reflect that since April 1 1993 there are now separate funding councils in England, Wales and Scotland. Figures from 1993-94 onwards therefore exclude higher education institutions in Scotland and Wales.

Table 8.8 indicates the DFE's projections of future education spending but only by the Department. There are currently no projections made for local authority expenditure. The lack of projections makes it hard to pursue a sensible debate about the level of education spending, and does seem a little strange given the government's general involvement in determining the local authorities grant levels and in setting the capping criteria for local spending.

Central government grants to local authorities include resources for introducing the national curriculum and fees and maintenance grants for students in higher education. Both central government's own expenditure and grants to local authorities form part of the control total but local authority expenditure outside of central government support is not included.

Local authority education spending is primarily on what is now called Local Management of Schools (LMS), that is those schools that have not opted out to become grant-maintained but now have devolved budgets. Although there has been significant policy change in the funding and management of schools the relatively long-standing model of local authorities determining their overall budget levels and the allocation of funds to the services they provide still remains.

Other government departments also provide funding for local authorities to provide education. It is difficult to isolate what proportion of the Department of the Environment's general lump-sum Revenue Support Grant (RSG) allocation to local authorities can be regarded as support for education. Considering the formulas that determine the Revenue Support Grant allocation a figure of close to 40% would be difficult to argue with. This would mean that DoE support for education through the Revenue Support Grant was approximately £7bn in 1992-93. To allocate the Rate Support Grant to local authorities requires the DoE to determine so-called Standard Spending Assessments (SSAs) which indicate the resources required by each local authority to provide a standard level of service in the sphere of education. Although local authorities are not expected to spend at their relevant SSAs they will find that their Revenue Support Grant is sensitive to them.[10]

Schools

The Education Reform Act (1988) has had a significant impact on the funding, management and provision of education in schools. The principal aim of the reforms has been to set out a new institutional framework which has as its paramount aim the "raising of standards". Key features of the 1988 Act such as the National Curriculum, tests for 7, 11 and 14 year-olds, publishing of test and examination results are now well known. The government has also stressed its desire to make schools more "efficient" and to widen the choice of schools available to parents. It has attempted to do this through a number of measures such as:

10 Revenue Support Grant is allocated by the Department of the Environment.

Table 8.8 General Government Expenditure on Education

£ millions	92-93	93-94	94-95	95-96
Central government's own expenditure (England)				
Schools	352	437	570	719
Higher and further education	3261	5638	5947	6204
Administration etc.	216	200	204	202
Ofsted	-	56	98	123
Central government support to local authorities (England)	3372	3192	3296	3248
Wales	152	3945		
Scotland	727	1236	1292	1338
N. Ireland	1035	1071	11133	1187
Total Central Government Education Spending	9114	122245	12540	13022
Local authority expenditure (England)				
Schools	15145			
Higher and further education	2247			
Miscellaneous etc.	4282			
Capital spending	902			
Wales	1290			
Scotland	2759			
Total Local Authority Spending on Education	26625			

Source: Department for Education Departmental Report 1993.

* delegation of school budgets
* encourage more grant-maintained schools
* open enrolment

It has been suggested that the combination of these policies introduces into the education system a "quasi-market" approach to the allocation of resources. In brief the quasi-market works through a school's funding being linked by formula to the number of pupils it attracts.

Delegation of School Budgets to Local Authority Controlled Schools

Under Local Management of Schools (LMS), schools that have decided to remain under the control of the local authority have a large part of the school's management and funding delegated to them. The delegation to schools of budgets and management has been phased in since 1990. In 1990-91 14% of schools had delegated budgets, this rose to 40% in 1991-92 and nearly 70% in 1992-93. By April 1994 it is assumed that

all schools will have control over their budgets. As we stated earlier the local authority still remains free to determine its overall education budget level. However, as of April 1993 fully delegated local authorities are now obliged to pass down to their schools a minimum of 85% of their education spending. This definition of spending is called the Potential School Budget (PSB) and is net of capital expenditures, interest payments on debt, grants from higher levels of government including the EC and other smaller items. The share of the Potential Schools Budget that is delegated to locally managed schools is called the Aggregated Schools Budget (ASB) which is allocated to schools through the Local Management of Schools formula.

The principle behind the LMS formula is that it should not only reflect the number of pupils in a school but also their ages. The formula weights are greater for pupils in their first three years of school and older pupils, with the highest weightings for 16 year-olds and older.

It is important to note that although the governing bodies of schools now have substantial autonomy over the management of school finances, the local education authority will still carry out central accounting tasks, and more importantly deal with issues relating to teachers' pay and contracts of employment. This is one of the key features that distinguishes locally managed schools from grant-maintained (GM) schools.

Grant-Maintained Schools

Schools that "opt out" for grant maintained status are self-governing schools autonomous of the local authority. The Education Reform Act (1988) ensures that their funding is received directly from the Department for Education. The more recent 1992 White Paper "Choice and Diversity: A New Framework for Schools" and the subsequent Education Bill aim to increase substantially the rate at which schools become grant-maintained over the next few years. Table 8.9 indicates the number of grant-maintained schools already incorporated and the projected numbers for 1993 and 1994.

Table 8.9. Number of Grant-Maintained Schools (England)

	Primary	Secondary	Total
1989	0	18	18
1990	0	44	44
1991	5	97	102
1992	53	225	278
Jan 1993	75	262	337
Projections			
1993			500
1994			1500

Source: Table 9 Department for Education Departmental Report February 1993 (Cm 2210).

Although grant-maintained schools receive funding directly from the DFE the amount they receive is based on what the schools' allocation would have been under the formula funding of the local management of schools scheme, i.e. the portion of the Aggregate Schools Budget. In addition, grant-maintained schools are entitled to a share of the money the local education authority keeps for central funding. In most cases authorities have to add 15% to the grant-maintained schools budget. Grant-maintained schools also receive from the DFE an Annual Maintenance Grant which the DFE recoups directly from the local education authority. The DFE also supplies direct to grant-maintained schools specific grants to deal with transition, and the introduction of the National Curriculum.

With respect to capital expenditure grant-maintained schools are eligible for 100% grants from the DFE. The DFE states that the current "priority areas" for grant-maintained schools include the capital expenditure already committed from previous years, large-scale repairs, health and safety work and capital projects to support the introduction of the National Curriculum. The DFE acknowledges that their plans for capital spending on schools favour the grant-maintained sector rather than schools in the control of the local education authority. The DFE states that the relatively more generous capital grants reflect the commitment of ministers to the success of the grant-maintained sector.

Although grant-maintained schools clearly gain significant advantages from opting out through greater capital grants they also see a number of other advantages which arise from greater financial flexibility. In particular grant-maintained schools may regard it as advantageous that they can negotiate with teachers over employment contracts and also buy previously local authority provided central services from other sources.

Associated with the expansion of grant-maintained schools the government intends to provide an agency - the Funding Agency for Schools (FAS) - which will oversee the developing grant-maintained sector. Initially the FAS will be dealing with the funding of grant-maintained schools, however, as the numbers of grant-maintained schools increase in a local authority the responsibilities of the FAS will also increase.

Choice and Open Enrolment

The 1988 Education Act gives parents the right to apply for entry for their children to any school of their choice. Clearly, this does not mean that parents can choose which school they actually send their child to as the most popular schools are likely to become over-subscribed very quickly. In fact, local education authorities are in a similar position to the situation they faced before the 1988 Act which is that they can still refuse admission to schools if fulfilling parents' preferences meant that the "provision of efficient education or the efficient use of resources" would be prejudiced. However, the government feels that more open enrolment will be ensured if schools raised their admission limits to reflect their physical capacity. A DFE survey indicates that in 1991 there were nearly 1.5 million surplus places in English schools - this compares with the total number of children in schools in 1990 being 7.1 million.

Under the 1988 Act schools must now set admission limits which reflect the numbers of children that could be at the school if it were working close to full capacity. Admission limits must be greater or equal to their pre-determined "standard number". A schools "standard number" is based on the highest admissions level the school has

achieved since the 1979-80 academic year. It is now the case that if a school is below its standard number it cannot refuse to accept a child. The DFE report that their research shows that it was possible that close to a third of secondary schools raised their limits in the first year of implementation of the new rules on admission limits (DFE, 1993).

Higher Education

In higher education there have also been substantial changes. The Further and Higher Education Act (1992) saw the disbanding of the Universities Funding Council (UFC) and the Polytechnic and Colleges Funding Council (PCFC) from April 1993. The 1992 Act has removed the distinction between polytechnics and universities and placed the responsibilities for teaching and research funding for all higher and further education institutions under the umbrella of the Higher Education Funding Council for England - separate arrangements exist in Scotland and Wales.

Since the early 1980s the number of students in higher education has increased rapidly. Student numbers in England have increased by nearly 50% since 1987 - increasing the age participation index[11] from 14.6% to 28.3%. However, the government will be freezing the age participation index over the next three years although the total number of home students will continue to increase until 1994-95 and then slightly drop off in 1995-96. Nevertheless, the government states that it aims to increase the age participation index to 30% by the year 2000.

In addition to wishing to increase the proportion of students in higher education, the government has made arrangements for student support which are a combination of means-tested mandatory awards and a government backed loan scheme. Since academic year 1991-92 mandatory awards have been frozen in cash terms. To enable students to maintain their standard of living they have had access to government loans. Loans are made available through the Student Loans Company Ltd to all students eligible to apply.

Students receive preferential rates on their loans. In 1991-92 £139 million worth of loans were made to 261,000 students - approximately 40% of eligible students. For that year the Student Loans Company Ltd collected £3.1 million in repayments. By the end of 1992 the percentage of borrowers in default was nearly 6%. At present student loans in England and Wales cost the government about £220 million, just over 18% of expenditure on student support. By 1995-96 expenditure on loans is likely to have increased to £334 million net of principal payments, almost 25% of student support.

Current Issues

A number of important issues that relate to education funding are likely to develop over the next few years. Allocation of resources whether by formulae to distribute local authority funds or the direct payment of central government funds is certain to come under particular scrutiny.

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11 The age participation index is defined as the number of home student entrants to higher education as a % of the average number of 18 and 19 year-olds.

In education, the use of formulae to distribute local authority funds to schools is widespread. In addition, central government funds are distributed direct to grant maintained schools. The allocation of funding is increasingly being determined by a "quasi-market" process in which resources follow the decentralised decisions of "customers" of the service. The long-term implications of this process are of considerable importance for efficient decisions about education provision - does it accelerate or impede the efficient adjustment of the number of school places to the number of schoolchildren. Linked to this question of dynamic adjustment, there are also important unresolved issues about the targeting of capital financing in this sector.

However, the most pressing funding issue facing the government is how it will pay for the expected further expansion in higher education. A number of alternatives have been suggested. At present the Committee of Vice Chancellors and Principals are discussing a range of options.

The key alternatives would appear to be the following:

* graduate tax
* payment of fees by students
* fees and loans
* vouchers

A graduate tax would involve adding additional percentage points onto an individual's marginal direct tax rate once they had graduated. Graduates would have the tax rate increment attached throughout the time they received taxable income. It would be possible to make the graduate tax contingent on a certain level of income being exceeded. Other suggestions include a multiple rate structure where rates increase with income. There are also issues of whether individuals who fail their course should be liable for the graduate tax. In examining the scheme, the government would have to develop an administrative structure between the higher education institutions and the Inland Revenue. It would also want to consider whether it is fair that some individuals would pay over their life-times significantly more than the cost of their higher education course. There may be a case for considering a graduate tax which was imposed for a limited period.

Payment of fees by students or extending the government loans scheme to cover fees is another alternative. A fees system would allow higher education institutions to price courses according to costs, i.e. doctors would pay more than sociologists, and degree courses would be more expensive than diplomas. The higher education institutions could administer the scheme, although the government might want to set upper limits on fees or make exemptions. An argument for loans with fees is that the government already has an operative loan scheme and could extend it.

With a voucher scheme students would receive vouchers from central government which pay partly or fully towards the costs of their place on a course. Students would be able to top up their vouchers and choose more expensive courses if they wished to. The voucher could relate to a time-period, say, three years on a university course or be allocated on annual basis where some portion of costs are paid.

Given the government's aim to extend the number of higher education places over the next few years it is likely one of these options or a combination of them will be introduced.

8.5 Defence

It is not that long ago that the Ministry of Defence published its report on recruitment which highlighted the military's fears that the MOD would find it difficult in the 1990s to recruit service personnel. It was feared that recruitment would become difficult as a result of downward demographic pressures - the so-called demographic trough. It is now well known that the report entitled "Manning and Recruitment in the Lean Years of the Nineties" (Marilyn) published in 1989 was quickly made out-of-date by the collapse of the Soviet Union and the bringing down of the Berlin Wall. These momentous events brought a significant shift in the strategic environment faced by the Western powers. Even in the face of hostilities in the Gulf involving British military personnel, the then Defence Secretary, Tom King, was pursuing a critical post-Cold War defence review entitled "Options for Change". This was to signal substantial cuts in military spending well into the 1990s. In fact after excluding provision for the costs of the Gulf conflict, the defence budget is expected to decline in real terms by close to 11% between 1990-91 and 1995-96.

The 1993-94 defence budget is likely to turn out to be about 15% lower in real terms than the previous peak of 1984-85. Table 8.10 indicates that in cash terms the defence budget will remain almost constant until 1995-96 - in real terms this implies a 7% cut from the current position. By 1995-96 defence spending as a proportion of GDP will have fallen from over 5% in 1984-85 to 3.2% in 1995-96.

Table 8.10 Cash Plans

	£ million								
	87-88 outturn	88-89 outturn	89-90 outturn	90-91 outturn	91-92 outturn	92-93 estimated outturn	93-94 plans	94-95 plans	95-96 plans
Defence Budget	18,921	19,221	20,777	22,295	24,550	23,800	23,522	23,750	23,220

Source: Departmental Report for the Ministry of Defence (1993).

Thus far no new plans have been announced which would indicate further cuts. However, given that public spending will remain tight over the next few years and that the reduction in threats from hostile forces is continuing, the likelihood of further cuts to planned spending is high.

Figure 8.6
Share of Military Expenditure in GDP

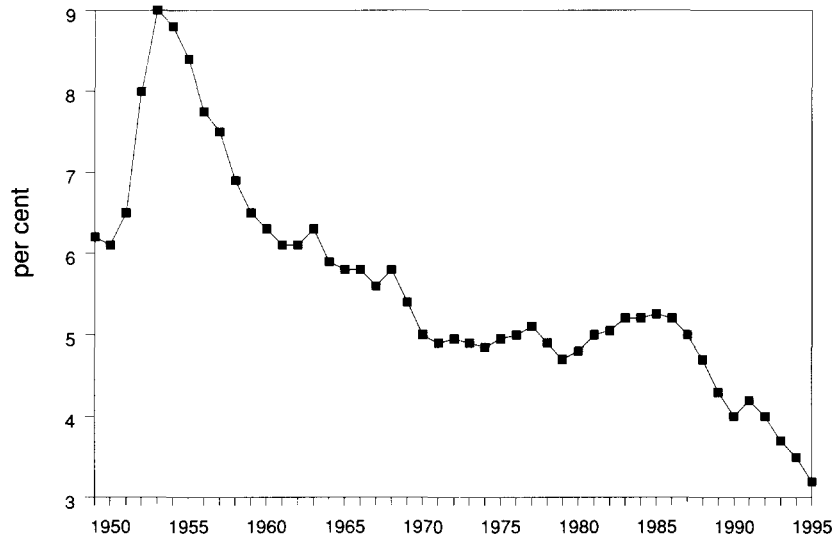
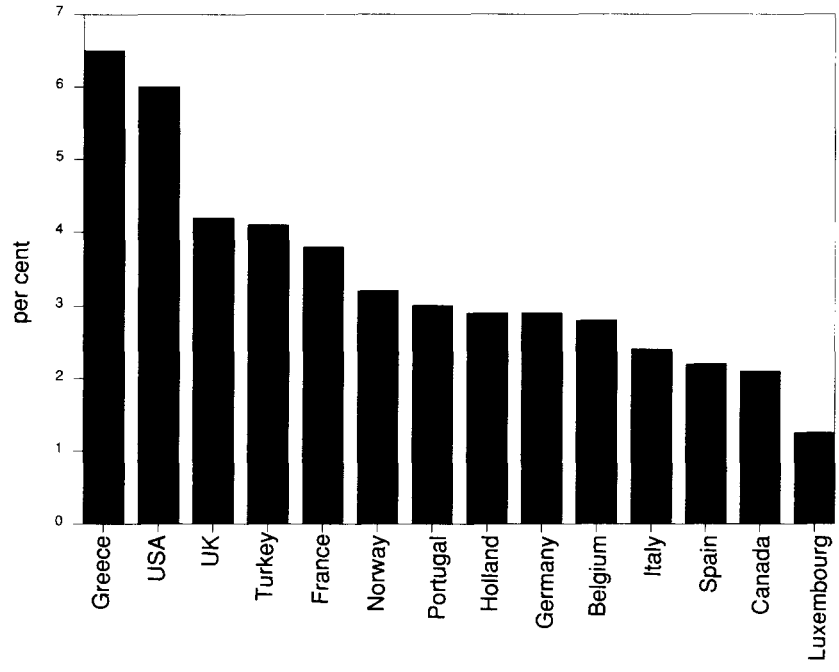


Figure 8.6 shows the historical trend of defence expenditure as a percentage of GDP over the post-war period. The main features are the demobilisation after the war, the rearmament for Korea, the slow decline through to 1979, and the initial build-up under Mrs Thatcher in the early 1980s who was implementing the previous Labour government's commitment to NATO for 3% growth in real military expenditure. This commitment ended in 1985 and since then, other than the blip brought about by the Iraqi invasion of Kuwait, the trend has been downward. Note that this decline was already in motion before the momentous events in Eastern Europe in the late 1980s. Figure 8.7 shows the UK's military spending as a share of GDP relative to its international competitors. The UK's imperial past and post-colonial commitments has meant that it has tended to spend a relatively higher share of its GDP on defence. The UK has also preferred to keep an independent nuclear deterrent and has sought more expensive volunteer service personnel rather than cheaper conscripts.

Figure 8.7
Defence Expenditure as a Percentage of GDP



How far can UK defence expenditure decline? Ridge and Smith (1991)[12] developed a framework for assessing medium-term budgetary implications for a range of scenarios. Taking as the most likely scenario that throughout the 1990s the UK would remain in some form of multilateral alliance and that the threat from the Eastern Bloc would diminish further, it was estimated that military spending as a share of GDP could fall to as low as 2% of GDP by the year 2000.

However, there are a number of respects in which achieving this projection may not be feasible. Firstly, even in a low-threat environment substantial cuts to military spending may not be possible. There are strong lobbies in the military and arms industries which have a considerable interest in limiting cuts in spending. Further growth in the economy may not be sufficient for the share to fall to 2% - already growth would have to average 3% to the year 2000.

Also there are thresholds below which a force is not viable. For example, a minimum number of nuclear submarines are required to ensure that there is at least one on station at all times. There are also indivisibilities which arise from minimum efficient scales of production. Proportional scaling down is likely to drive some elements below these minimum viable thresholds, so that the capability could not be met. For instance it is unlikely that such a low budget could support a flexible mobile rapid deployment force of a sufficient size to be militarily effective in the event of unexpected crisis like the invasion of Kuwait. If such crises are thought likely the UK may be willing to pay a

12 Ridge and Smith (1991) 'Military spending dynamics in a changing strategic environment', *Fiscal Studies*, vol.12, no.1, February.

premium to insure against such contingencies. But this insurance premium is likely to be expensive and there will be an incentive to share the cost with other European countries. This could be done through multinational forces, such as the existing Franco-German Brigade, or multinational role specialisation: the UK provides the navy, the Germans the armour, the French the rapid deployment force, etc.

Finally, the uncertainties in Eastern Europe and elsewhere are likely to put pressure on British Armed Forces - most probably through actions by the UN. These factors are likely to slow down the pace of spending cuts, but so long as the troubles appear transitional then the downward trend will surely continue. Military spending as an eventual 2% share of GDP is not out of the question. Spain, Denmark and Canada currently spend about 2% and the UK peace-time average before 1939 was between 2% and 2.5%. Certainly a 2% share seems feasible within an historical and international experience, although for it to be realised by the year 2000 a number of uncertainties in Eastern Europe and elsewhere would have to diminish significantly.

Table 8.11 indicates that the spending plans are likely to have an impact on personnel numbers and equipment.

Table 8.11. Actual and Projected Defence Budget

At 1991-92 prices £ m	79-80	84-85	90-91	91-92	92-93	93-94	94-95	95-96
Defence budget	21260	25950	23302	23015	22647	21957	21474	20433
Personnel costs	9062	9068	9408	9948	9450	9222	8800	8604
Other costs	3767	5005	4970	4839	4714	4172	4295	4087
Equipment	8432	11879	9448	9753	8667	8563	8379	7742
Less Gulf payments			524	1525				
Number of personnel (000)								
Armed forces	328.8	336.4	312.7	297.9	285	270	255	250
Civil servants	276.2	206.5	173.1	168.7	165	150	140	136
Share of defence as % of GDP	4.5	5.2	3.9	4.0	3.9	3.7	3.5	3.2
Equipment share as % defence budget	39.7	45.8	40.5	42.4	38.3	39.0	39.0	37.9

Source: Smith (1993) and Departmental Report by the Ministry of Defence (1993).

It is difficult to project what it is likely to happen to the equipment budget. The MOD does not publish plans for equipment expenditures - although it does for manpower. Total service personnel projections are set to fall in total numbers from nearly 285,000 in 1992-93 to 250,000 in 1995-96. By 1995-96 it is expected that there will be 136,000 civilians employed by the MOD giving a total MOD manpower of 386,000.

Smith (1993)[13] takes these manpower projections and assumes that if some of the recent real reductions in wages are compensated for by 1995-96 so that wages can be assumed to grow in line with the Treasury's forecasts of GDP then it is expected that the equipment budget could fall by 10% in real terms by 1995-96. This leaves equipment spending at about 65% of 1984-85 levels. With an equipment budget of around £8bn at current prices there is unlikely to be enough to pay for the commitments that are in the 1993 Statement on Defence Estimates.

8.6 Public Expenditure on Roads

There are approximately 170,000 miles of public road open to traffic in England. In 1989, the government published the White Paper "Roads For Prosperity" which gave details of a major expansion of the motorway and trunk road network. The paper listed plans for some 100 miles of new motorways in England, around 700 miles of new by-passes and 650 miles of motorway widening.

This expansion of the road building and maintenance programme will lead to an increase in spending on roads, as reflected in the Department of Transport's existing expenditure plans to 1995-96 (see Table 8.12). It is planned that the level of expenditure on roads in cash terms will increase every year until 1995-96. One question that this expansion in road building obviously raises is, how is this programme to be financed?

Table 8.12. Summary of Roads Expenditure, 1987-88 to 1995-96

Financial Year	Cash Plans £ m	As % of Transport Budget
1987-88 outturn	1212	47
1988-89 outturn	1206	44
1989-90 outturn	1614	46
1990-91 outturn	2149	46
1991-92 outturn	2294	43
1992-93 estimated outturn	2518	37
1993-94 plans	2708	43
1994-95 plans	2780	46
1995-96 plans	2693	46

Source: The Government's Expenditure Plans For Transport, 1993-94 to 1995-96.

13 Smith (1993) 'Defence Budget prospects', *Parliamentary Brief*, vol.2, no.2, August/September.

It appears that the government believes that the answer to this question at least partially lies with road pricing, a policy that is becoming increasingly popular within government circles. Road pricing, whether on a wide-scale basis or probably more likely in the medium term for the use of inter-urban routes, has long been seen as being desirable for economic efficiency reasons in that it creates the right incentives for road users only to undertake a journey when the costs (including those to society) of doing so are less than the benefits. Road pricing also has the potential to raise substantial amounts of revenue and it opens up the possibility of having greater private provision and funding of the road network. The prospect of a stream of revenues from road charges could possibly make the building and operation of certain new roads an attractive form of investment for the private sector.

Although roads have traditionally been perceived as being "public" goods, the private sector has always had a substantial role in their provision. The government has often contracted out route identification and design to private sector engineers as well as issuing contracts to construction companies for building and maintenance. Recently, however, the government has extended this involvement of the private sector to encompass road *finance* too. Under the New Roads and Street Works Act of 1991, it has been possible for the private sector to design, build and operate new roads or bridges in return for the right to charge tolls. The £100 million Queen Elizabeth II Bridge at Dartford was funded entirely by the private sector, and the Birmingham Northern Relief Road is planned to be the first tolled private motorway.

At the moment, the possibility of private sector involvement in the financing of and charging for roads is limited to newly built roads; the expansion of this policy to cover the existing road network would require legislative changes. However, given the rising costs of the road building programme, the extension of road pricing to the existing network, or at least to motorways and main trunk routes, might prove to be an attractive option. Under a road pricing scheme applicable to inter-urban routes, it is possible to envisage a type of franchising in operation whereby the private sector puts in a tender to operate and improve parts of the motorway network on a regional basis.

Before such a scheme could be implemented, a number of difficulties would have to be addressed, such as the implications for the planning of a nation-wide network of motorways and the problems that might be caused by a wide variety of tariffs in operation. However, the indications are that the government is moving towards such a system of motorway management. In the 1992 Autumn Statement, the Chancellor welcomed the greater involvement of joint ventures between the public and private sectors in road provision. It was announced that if charges for inter-urban routes were to be introduced in the light of the consultative Green Paper, "Paying For Better Motorways", then as an initial step the government would issue contracts to the private sector for the design, building and operation of roads. In return the contractors would receive payments from the government related to the use of these roads.

It is possible that the government believes that this may prove to be a suitable interim arrangement whilst road pricing schemes were still in their initial stages, since it would allow the private sector to have a greater involvement in the road building programme. It would also lead to a substantial redrawing of the boundaries between the public and private sector, thus reducing the burden on taxpayers of financing road construction.

Appendix 1: Forecasting the PSBR

This Appendix details the method used to estimate government revenues and spending for 1993-94 and 1994-95, and to forecast the public finances into the medium term under a number of economic scenarios. Before turning to the detailed forecasts, we consider briefly the impact of the move to a November Budget on the uncertainty of the estimates.

The Move to a November Budget

The shift in the time of the Budget from one to five months before the end of the fiscal year makes short-term projections more uncertain than ever. Table A.1 uses data from 1982-83 to 1992-93 to compare forecasts of the public sector borrowing requirement (PSBR) with the final outcome. The results are summarised as the average absolute difference between forecasts and outturn over the 10 years. The first column gives the Budget time prediction for the public sector deficit or surplus for the fiscal year beginning 13 months after the Budget: for example, the March 1992 prediction of the PSBR for 1993-94. The second column gives the forecast from the IFS *Green Budget* the following January, three months before the start of the fiscal year. The Budget forecast two months later, and the Autumn Statement estimate mid-way through the fiscal year are in the next two columns. The final two columns are the *Green Budget* and Financial Statement and Budget Report (FSBR) estimates as the fiscal year comes to an end.

Table A.1. Errors from Past PSBR Forecasts

	FSBR	IFS	FSBR	AS	IFS	FSBR
Lag (months)	*-13*	*-3*	*-1*	*+6*	*+9*	*+11*
Average absolute error in PSBR forecast (£bn)	8.9	6.1	5.0	2.6	1.6	0.7

Note: Lag in months from forecast data to beginning of relevant fiscal year. Data used from 1982-83 to 1992-93.

Source: HM Treasury, Financial Statement and Budget Report and Autumn Statement, various years for FSBR and AS forecasts; CSO Financial Statistics, for outturns; IFS, *Green Budget*, various years for IFS forecasts.

There is a monotonic decline in the average errors as time moves to the end of the forecast period and more data on spending and receipts become available.

The table provides some evidence of the likely effect of shifting the Budget timetable backwards. The data available for the government for the November Budget are probably similar in scope to those available to the IFS in January. The average forecast error for the current year (1993-94) is therefore likely to increase from £0.7bn to £1.6bn. More important for the framing of budgetary policy is the deficit for the following year (1994-95). Again the shift from the third column (FSBR) to the second column (IFS), approximately the shift in timing that will occur, increases forecast errors by around £1bn.

With the caveat of increased errors in predictions, we turn first to the public finances in the current year.

1.1 Fiscal Year 1993-94

This year is the fifth in succession to see a deterioration in the government's budgetary position, but for the first time in five years, the PSBR and the economy will not turn out markedly worse than expected at Budget time at the start of the year.

Table A.2 shows a selection of forecasts for the public finances for the current year. Government forecasts from the **FSBR** of March 1993 are reproduced in the first column. The second column uses the information already available on particular receipts to predict the outturn for the whole year. We have data to August for the main taxes, accounting for two-thirds of revenues, and data to June for other receipts. This **current receipts** method allows for the expected seasonal fluctuation in receipts. Estimates from the FSBR are used for some expenditures and revenues where monthly breakdowns are unavailable or the seasonal pattern is highly erratic.

Model 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, 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 come to a judgemental view, presenting 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.

$$\text{1993-94 forecast} = \frac{\text{April-August 1993 outturn}}{\text{April-August 1992 outturn}} \times \text{1992-93 outturn}$$

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 to the previous year. The timing of tax payments causes further problems, when taxes are collected in "lumps" at certain times of the year. Table A.3 gives the proportion of the total annual tax take received by this time last year. 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 two "lumps", in January and October. For other receipts, we use data to July, meaning the proportions collected are smaller (around one third), except in the case of capital gains tax where receipts are concentrated at the end of the calendar year.

These figures must be taken into account when considering the accuracy of the current receipts forecasts in Table A.2.

Table A.2. The Public Finances 1993-94

£bn	FSBR	Current Receipts	Modelled	IFS Forecast
Income tax	57.5	55.9	59.7	57.5
Corporation Tax	14.6	15.7	16.5	16.0
Petroleum Revenue Tax	0.6	0.0	0.6 FSBR	0.6
Capital Gains Tax	1.0	0.7	1.0 FSBR	1.0
Inheritance Tax	1.3	1.2	1.3 FSBR	1.3
Stamp Duties	1.7	1.9	1.7 FSBR	1.7
Total Inland Revenue	76.7	75.4	80.8	78.1
VAT	39.9	36.3	38.7	39.0
Petrol	12.7	12.4	12.9	12.6
Tobacco	6.6	7.4	6.5	6.7
Alcohol	5.1	4.9	5.1	5.3
Betting and gaming	1.1	1.1	1.1	1.1
Customs duties	1.9	2.1	1.9 FSBR	1.9
Agricultural levies	0.2	0.2	0.2 FSBR	0.2
Total Customs and Excise	67.5	64.4	66.5	66.8
Vehicle excise duties	3.7	3.7	3.6	3.7
Oil royalties	0.7	0.7 FSBR	0.7 FSBR	0.7
Rates	13.3	13.3 FSBR	13.6	13.3
Other taxes and royalties	4.6	4.6 FSBR	4.6 FSBR	4.6
Total taxes and royalties	166.5	161.9	169.7	167.2
National Insurance contributions	39.1	38.7	39.6	39.0
Council Tax	8.2	8.2 FSBR	8.2 FSBR	8.2
Interest and dividends	4.8	4.8 FSBR	4.8 FSBR	4.8
Gross trading surplus and rent	10.5	10.5 FSBR	10.5 FSBR	10.5
General government receipts	229.1	224.1	232.8	229.7
Central government expenditure	166.4	166.4 FSBR	166.4 FSBR	166.4
Central government support for LAs	58.4	58.4 FSBR	58.4 FSBR	58.4
Local authority self-financed	11.1	11.1 FSBR	11.1 FSBR	11.1
Public corporations	3.9	3.9 FSBR	3.9 FSBR	3.9
Reserve	4.0	4.0 FSBR	4.0 FSBR	4.0
New control total	243.8	243.8	243.8	243.8
Cyclical social security	15.1	15.1 FSBR	15.1 FSBR	15.1
Central government debt interest	19.4	19.4 FSBR	19.4 FSBR	19.4
Accounting adjustments	7.5	7.5 FSBR	7.5 FSBR	7.5
General government expenditure	285.8	285.8	285.8	285.8
Privatisation	-5.5	-5.5 FSBR	-5.5 FSBR	-5.5
General government borrowing requirement	51.2	56.2	47.5	51.1
Public corporations borrowing requirement	-1.0	-1.0 FSBR	-1.0 FSBR	-1.0
Public sector borrowing requirement	50.2	55.2	46.5	49.6

Table A.3. Proportion of Annual Revenues Received by August 1992-93

Revenue	Tax Received (%)
Income tax	42
Corporation Tax	28
Capital Gains Tax	12
Inheritance Tax	36
Stamp Duties	27
VAT	40
Other Customs and Excise	32
Vehicle excise duty	34
National Insurance contributions	40

Source: Monthly revenues from CSO, Financial Statistics.

Modelled Forecasts

The modelled forecasts use the following formula to link changes in economic aggregates with changes in tax revenues:

$$\text{Revenues 1993-94} = \text{revenues 1992-93} \times \left\{1 + \frac{\text{base 1993-94}}{\text{base 1992-93}} \times \text{elasticity}\right\}$$

The relevant bases for each tax are given in Table A.4. Nominal values form the base for taxes on incomes, profits and 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.4. Tax Bases and Elasticities for Model Forecasts

Tax	Base	Elasticity
Income tax	Nominal wage bill	1.60
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 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.

Table A.5 gives our working assumptions about the outturn for the macroeconomic aggregates which form the tax bases outlined above. Although our views of the *nominal* outturn for the economy are little different than in the *Green Budget* in January, we expect the price-volume mix to be more favourable, with higher real output and lower inflation. However, this does not affect the tax take significantly.

More recent economic data have not led us to expect the outturn for the economy to be very different to that envisaged in the FSBR. The government assumed real GDP growth of 2%. Inflation measured by the GDP deflator was assumed to be 2.75%, or a 3.75% rise in the retail prices index excluding mortgage interest payments.

The final column in Table A.5 shows the sensitivity of our modelled estimates. It shows the effect on government revenues of a 1% point change in the macroeconomic assumptions. For example, if wage growth is 4.3% rather than 3.3%, £1.3bn extra government revenue would be generated.

Table A.5. Macroeconomic Assumptions and Sensitivity Analysis

Percentage Growth	1993-94 (%)	1994-95 (%)	Sensitivity (£bn)
GDP	2.2	3.0	n/a
Average earnings	3.3	4.2	1.3
Consumer prices	3.4	3.7	0.9
Consumers' expenditure	1.8	1.8	0.9
Corporate profits (previous year)	9.5	20.0	0.2

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

Revenue predictions based on the elasticities in Table A.4 and the macroeconomic assumptions in Table A.5 are given in the third column of Table A.2, adjusted for the effect of the Budget on revenues.

PSBR Forecast for Fiscal 1993-94

After shrinking last year, **income tax** revenues are forecast to grow by a little over 1% this year, returning to their 1991-92 value. Income tax increases announced in the 1993 Budget bring in a net £1.5bn. An additional £0.7bn of revenue from freezing allowances and the higher rate threshold and an extra £0.2bn from changes to company car taxes were offset by the extension of the lower rate band, costing £0.3bn. The change to dividend taxation affects income tax revenue: an extra £0.9bn is brought in as a result of the reduction in the tax credit on dividends.

These revenue-raising measures and earnings growth of 3.3% point to a robust recovery in receipts even though the actual amount collected so far has fallen well behind the amount that could be expected. Our judgemental forecast lies between these two, at the level the government expected at Budget time.

Corporation Tax revenues have been the biggest recession victim in the public sector accounts. From £21.5bn in 1990-91, receipts fell to £15.8bn last year. The government forecast a further fall to £14.6bn this year. This change in part also reflects the government's cuts of Corporation Tax, including £0.2bn from the introduction of accelerated capital allowances in the 1992 Autumn Statement. The change to dividend taxation discussed above also involved a reduction in the rate of Advance Corporation Tax, a temporary cash flow loss of £1bn in 1993-94.

A robust recovery in profits offsets many of these changes, as is evident from our modelled figure. The current receipts figure is also much higher than the FSBR prediction but is a poor guide, for the reason discussed above that only a small portion of total revenues have so far been collected. Our modelled figure leads us to take a more optimistic view than the government of the likely outcome and we forecast £16bn Corporation Tax receipts in 1993-94.

Revenues from **VAT** are also coming in more slowly than expected, pointing to a full year take of £3bn less than the government forecast. Modelled estimates, based on growth in nominal spending of over 5% also point to a disappointing outturn. The 1993 Budget reduced VAT revenues for 1993-94 by £0.2bn through reduced penalties and giving relief for bad debt. Our judgemental forecast is for revenues of £39bn.

Other Customs and Excise duties are coming in much as expected, with the exception of tobacco. This figure reflects anomalously large receipts of tobacco duty in April. The modelled forecasts take account of the £0.8bn increase (beyond inflation) in excise duties at the Budget, and again point to very similar revenue outturns. Our judgemental forecasts are therefore very similar to the government's.

National Insurance contributions are also weak, with revenues thus far pointing to a £0.4bn shortfall. Our modelled forecasts are moderately above the government's, our judgemental forecast coincides.

On the **public expenditure** side of the accounts, there is no evidence to suggest any shortfall. So far, net departmental outlays are up 6.8% on last year's figure. The government was planning to increase control total, or underlying spending, by 5.6%. General government spending, including cyclical social security and debt interest was predicted to increase by 7.7%. We do not foresee pressure to increase spending beyond these targets, nor do we expect spending to fall much below them unless debt interest payments come in lower than expected because long-term interest rates have fallen. Our forecast uses the government's spending plans.

Our overall forecast is that the **PSBR** will be little different from the Budget forecast of £50bn. Revenues if anything are coming in *below* the government's Budget time forecast. We do not expect the economy to be significantly more robust in 1993-94 than the government's Budget prediction. Spending is highly unlikely to undershoot targets.

This forecast is more uncertain than usual, given the small amount of data we have available.

1.2 Fiscal Year 1994-95

The public finances in 1994-95 are again projected using a variety of IFS micro modelled elasticities from Table A.4 and our macroeconomic working assumptions, given in Table A.5.

We expect 1994-95 to show a robust recovery, with GDP up some 3.0%. Inflationary pressures will also be stronger, with the headline RPI rising from 2.0% this year to 3.7% next, near the top of the government's target range. Employment will begin to increase again for the first time since the beginning of the recession, and average earnings growth will pick up from 3.3% to 4.2%. The impact of this scenario on the public finances is given in Table A.6, which is the equivalent of Table 1.2 in the Budget *Red Book*.

The most significant element in reducing our estimate for the PSBR in 1994-95 over 1993-94 is a rapid recovery in revenues from direct taxes. We expect **income tax** and **National Insurance contributions** (NICs) revenue to grow by over 10%. The combination of stronger wage and employment growth and changes announced in the 1993 Budget will generate the additional revenue from these two sources. In particular income tax revenues will benefit in 1994-95 from the restriction of the Married Couple's Allowance (£0.9bn) and Mortgage Interest Relief (£0.8bn) to 20%, reformed relocation expenses (£0.2bn) and the abolition of new Business Expansion Schemes (£0.1bn). NIC revenues gain (£1.9bn) from the 1% increase in the employees Class 1 and the Class 4 rates.

Corporation Tax revenues are also predicted to recover robustly in 1994-95 with a 23.5% growth over this year's revenue. This extra revenue arises from a leap in forecast corporate profits in 1993-94.

Customs and Excise receipts benefit from a 2.2% increase in consumer expenditure and rising inflation from 1.7% to a predicted 3.7%. The extension of the **VAT** base to include domestic fuel adds a further £0.95bn to VAT receipts. Excise duties also show substantial increases in revenue resulting from increased duties on petrol and DERV by 3% more than inflation and increased beer duties as administrative changes introduced in 1993-94 work through the system.

We have assumed the government sticks to the 1992 Autumn Statement spending forecast which implies a 4% nominal increase in underlying spending and a 5.5% rise in General Government Expenditure (GGE). The higher rise in total spending is accounted for by significant increases in debt interest payments as the borrowing requirements since 1990 have added to the stock of debt.

With tax revenues rising at 9.8% and spending rising less quickly at 5.5%, the **PSBR** (on unchanged policies) is forecast to fall to £43.0bn in 1994-95. This is very similar to the estimate in the 1993 Budget.

Table A.6. The Public Finances 1993-94 and 1994-95

£bn	1993-94	1994-95
Income tax	57.5	64.6
Corporation Tax	16.0	19.8
Petroleum Revenue Tax	0.6	0.9
Capital Gains Tax	1.0	1.0
Inheritance Tax	1.3	1.4
Stamp Duties	1.7	1.7
Total Inland Revenue	78.1	89.3
VAT	39.0	42.3
Petrol	12.6	13.9
Tobacco	6.7	7.0
Alcohol	5.3	5.8
Betting and gaming	1.1	1.2
Customs duties	1.9	2.0
Agricultural levies	0.2	0.2
Total Customs and Excise	66.8	72.3
Vehicle excise duties	3.7	3.8
Oil royalties	0.7	0.7
Rates	13.3	13.9
Other taxes and royalties	4.6	4.8
Total taxes and royalties	167.2	184.9
National Insurance contributions	39.0	44.2
Council Tax	8.2	8.5
Interest and dividends	4.8	5.1
Gross trading surplus and rent	10.5	9.4
General government receipts	229.7	252.1
Central government expenditure	166.4	172.2
Central government support for LAs	58.4	61.5
Local authority self-financed	11.1	11.0
Public corporations	3.9	1.9
Reserve	4.0	7.0
New control total	243.8	253.6
Cyclical social security	15.1	16.0
Central government debt interest	19.4	23.5
Accounting adjustments	7.5	8.5
General government expenditure	285.8	301.6
Privatisation	-5.5	-5.5
General government borrowing requirement	50.6	44.0
Public corporations borrowing requirement	-1.0	-1.0
Public sector borrowing requirement	49.6	43.0

1.3 The Public Finances in the Medium-Term

The outlook for the PSBR in the short term is still weak, but with £10bn of tax increases already announced in the 1993 Budget and an economic recovery, will the government be able to bring the public finances back under control by the end of this parliament?

To answer this question, a view on the medium-term path of **macroeconomic variables** is needed. Table A.7 gives a summary of our macroeconomic working assumptions. We expect the recovery that started in this fiscal year to continue into the medium term. The growth rate is predicted to settle around 3%, which, though higher than the UK historic trend, reflects the degree of catching up to GDP trend levels that should be possible. Employment is forecast to lag the cycle by a year and cease falling in 1994-95. After this, employment will grow steadily into the medium term. Inflation is expected to rise to 3.7% in 1994-95 and is expected to continue around this level into the medium term.

Table A.7. Alternative Macroeconomic Working Assumptions

Percentage Growth		1993-94	1994-95	1995-96	1996-97	1997-98
GDP	Optimistic	2.7	3.5	3.5	3.5	3.5
	Baseline	2.2	3.0	3.0	3.0	3.0
	Pessimistic	1.5	1.5	1.8	1.8	1.8
RPI	Optimistic	2.3	3.8	4.3	5.0	6.0
	Baseline	2.0	3.7	3.7	4.5	5.0
	Pessimistic	1.7	2.5	2.3	2.0	1.5
Employment	Optimistic	0.0	1.5	1.8	1.8	1.8
	Baseline	-0.3	1.2	1.5	1.5	1.5
	Pessimistic	-0.6	0.0	0.0	0.0	0.0

Since medium-term macroeconomic projections of this sort are always hazardous, 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 1.8% into the medium term. Consequently, employment will not rise and inflation does not rise above 3% for the whole of the forecast period. In the optimistic scenario, growth is 0.5% higher in the medium term. This leads to faster employment growth but also faster earnings growth and inflation rising throughout the period, reaching 6% by 1997-98.

Using macroeconomic variables (a subset of which are shown in Table A.7) and the elasticities in Table A.2, we can 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 3% more than inflation in future budgets have also been taken into account. Otherwise, the structure of the tax system remains unchanged and no estimates have been included for possible further increases in tax revenues resulting from the 1994 Budget or future budgets.

The **spending side** is much more difficult to predict because government spending is determined more by government policy and historical spending patterns rather than macroeconomic variables. We present two general scenarios for the pattern of government spending, each with its own optimistic and pessimistic alternatives.

The first scenario assumes government will stick to the projections for nominal spending from the 1993 FSBR for the whole period of the forecast. These show a steady decline in the growth of government spending from 7% a year in 1993-94 to 4% by 1997-98. Using the government's forecast of the GDP deflator, these growth figures imply almost zero real growth in later years in the new control total (underlying spending) and low real growth elsewhere, mostly accounted for by increases in central government debt interest payments to finance many years of high borrowing. Our forecast for the GDP deflator, especially in the later years of the forecast period is significantly higher, so if the government stuck to these spending figures, they would imply a real cut in underlying spending. This level of planned increases in underlying spending is lower in the fiscal years from 1994-95 onward than at any time in the 1980s except in the unsustainable boom in the late 1980s and can be viewed as a lower bound scenario for the path of the PSBR.

Our second spending scenario is that this government achieves the same level of public expenditure control that was achieved by Mrs Thatcher in the 1980s. In the corresponding period of the economic cycle, 1981-82 to 1986-87, underlying spending on goods and services rose by 2% in real terms per year on average, even with Mrs Thatcher as Prime Minister and Sir Geoffrey Howe and Nigel Lawson as her Chancellors. Consequently, our second spending scenario assumes a real increase in new control total spending from 1995-96 onward of 2% a year. This spending increase is capped at 6% in nominal terms, so if the GDP deflator rises above the government's 4% inflation target range, we assume lower real increases in spending. This scenario represents more closely our expected PSBR outcome over the medium term.

Apart from general government receipts and general government expenditure, the government can also raise revenue from privatisation receipts. Under both scenarios, privatisation receipts will stand at £5.5bn in 1993-94 and 1994-95. After this, receipts will fall to an estimated £1bn a year for the rest of the forecast period. This is a result of the privatisation of British Rail and the planned privatisation of coal not generating substantial revenues.

The two scenarios generate two **PSBR projections** into the medium term. The baseline forecast under the first scenario is shown in Table A.8, which suggests that if the government stuck to its current spending plans, the PSBR would fall steadily in the medium term to £11bn (1.4% of GDP) by the end of the forecast period. This scenario is probably unattainable because it is based on inflation assumptions on the revenue side that exceed those of the government. Tax revenue is higher due to our higher inflation forecast, whilst real spending levels fall as they are based on existing government plans, which themselves use much lower inflation assumptions. Given the government can achieve this scenario, the implication is that government borrowing would be very much under control by the end of this Parliament. For comparison, our

Table A.8. The Public Finances in the Medium Term. Government Sticks to Present Spending Plans (despite higher inflation)

£bn	1993-94	1994-95	1995-96	1996-97	1997-98
Inland Revenue	78	89	103	116	131
Customs and Excise	67	72	78	83	88
Total taxes and royalties	167	185	206	225	246
General government receipts	230	252	278	302	329
Control total	244	254	263	274	284
General government spending[1]	286	302	316	330	343
Privatisation	-6	-6	-1	-1	-1
Public corporations borrowing	-1	-1	-1	-1	-1
PSBR	50	43	36	26	11

Notes: Figures may not sum exactly to the PSBR due to rounding.
[1] Excluding privatisation proceeds.

last medium term PSBR projection in the *Green Budget* (January 1993) showed a baseline forecast using the same scenario for the 1997-98 PSBR of £51bn, some 6.25% of GDP. This baseline PSBR projection has therefore fallen by a very considerable amount.

The revision comprises three features. Firstly, tax increases announced in the 1993 Budget raises tax revenue by £10bn by 1995-96 and by more in subsequent years. Secondly, our macroeconomic baseline projection is slightly more optimistic than it was in January. Employment is forecast to grow faster than previously, inflation and wage growth predictions are a little higher and corporate profits are forecast to grow at a significantly faster rate in 1994-95 and 1995-96. These, fairly minor, revisions to our macroeconomic scenario cause our PSBR projection to be £23bn lower by 1997-98. Thirdly, the headline difference between our forecasts is exaggerated because our estimate for the 1993-94 PSBR in the last *Green Budget* was £4bn higher than our current forecast. However, it is clear that the major revision we have made can only serve to highlight the sensitivity of medium-term PSBR projections to different macroeconomic conditions.

Table A.9 shows the medium-term PSBR projections on the basis of our second scenario, that the government matches the real spending growth of the early to mid-1980s. This also shows a steadily falling PSBR throughout the forecast period (at a much slower rate) to reach £30bn (3.6% of GDP) by the end of the forecast period.

As is clear from our revisions to the PSBR forecasts since the last *Green Budget*, government receipts estimates are very sensitive to growth projections and our forecasts are heavily dependent on these estimates. Table A.10 shows the effect of our optimistic and pessimistic alternatives in Table A.7 on the path of the PSBR. For the first scenario, we have only adjusted our PSBR government receipts forecast for different macroeconomic scenarios and spending is assumed to be invariant to different growth rates. In the second scenario, spending is assumed to vary positively with

Table A.9. The Public Finances in the Medium Term. Government Spending Growth at 1980s Levels from 1995-96

£bn	1993-94	1994-95	1995-96	1996-97	1997-98
Inland Revenue	78	89	103	116	131
Customs and Excise	67	72	78	83	88
Total taxes and royalties	167	185	206	225	246
General government receipts	230	252	278	302	329
Control total	244	254	268	286	307
General government spending[1]	286	302	321	341	361
Privatisation	-6	-6	-1	-1	-1
Public corporations borrowing	-1	-1	-1	-1	-1
PSBR	50	43	41	37	30

Notes: Figures may not sum exactly to the PSBR due to rounding.
[1] Excluding privatisation proceeds.

increased inflation but is capped at 6% annual nominal growth rates to reflect lower spending pressures from reduced debt interest payments and cyclical areas of government spending.

Under the first scenario, the optimistic case shows the PSBR declining very rapidly throughout the medium term and becomes a Public Sector Debt Repayment of 1.4% of money GDP by 1997-98. This would imply very large real public spending cuts, however. The pessimistic case shows government borrowing increasing to over £60bn in 1997-98, even including the tax increases already announced for the next two years. Using the second scenario, PSBR levels still fall but are generally higher throughout the forecast period. The optimistic alternative still has a PSBR by the end of the period, but it is a very manageable £8bn (0.9% of GDP). Under the pessimistic alternative the two different spending assumptions make very little difference.

Table A.10. The PSBR in the Medium Term: Sensitivity Analysis for Both Spending Scenarios

		1993-94	1994-95	1995-96	1996-97	1997-98
Scenario 1: Government sticks to its plans (despite higher inflation)						
PSBR	Optimistic	48	40	28	12	-12
(£bn)	Baseline	50	43	36	26	11
	Pessimistic	51	50	54	59	62
PSBR	Optimistic	7.9	5.9	3.9	1.5	-1.4
(% of GDP)	Baseline	7.9	6.5	5.1	3.4	1.4
	Pessimistic	8.0	7.8	8.1	8.5	8.7
Scenario 2: Government spending growth at 1980s levels						
PSBR	Optimistic	50	40	35	24	8
(£bn)	Baseline	50	43	41	37	30
	Pessimistic	51	50	56	60	62
PSBR	Optimistic	7.9	5.9	4.8	3.0	0.9
(% of GDP)	Baseline	7.9	6.5	5.8	4.9	3.6
	Pessimistic	8.0	7.8	8.3	8.6	8.7

Appendix 2: Tax Ready Reckoner

Table A.11. Direct Effects of Illustrative Changes in Taxation 1994-95

£m	Cost / Yield (non-indexed base) 1994-95	1995-96
Income tax		
Rates		
Change basic rate by 1p	1,600	1,900
Change lower rate by 1p[1]	320	210
Change higher rate by 1p	220	400
Allowances		
Change Personal Allowance by £100	460	590
Change Married Couple's Allowance by £100	140	180
Lower rate band		
Increase lower rate band width by 10%	240	300
Basic rate limit		
Change basic rate limit by 1%	50	70
Change basic rate limit by 10%		
increase (cost)	430	650
decrease (yield)	570	830
Allowances, bands and limits		
Change all main allowances, lower rate band and basic rate limit:		
increase / decrease by 1%	280	370
increase by 10% (cost)	2,700	3,550
decrease by 10% (yield)	2,900	3,950

(Cont)

Notes: The revenue effect is computed for changes to the 1994-95 tax system and relates to the first year (1994-95)and the full year (1995-96) effects.

[1] 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.

Table A.11. (cont) Direct Effects of Illustrative Changes in Taxation 1994-95

£m	Cost / Yield (non-indexed base)	
	1994-95	1995-96
Corporation Tax		
Change full rate by 1%	390	630
Change smaller companies' rate by 1%	70	110
Capital Gains Tax		
Increase annual exempt amount by £500 for individuals and £250 for trusts	-	6
Inheritance Tax		
Change inheritance tax rate by 1%	13	31
Increase inheritance tax threshold by £5,000	12	29
VAT[2]		
Change VAT rate by 1%	1,700	2,400
Extend VAT to (full year effect)		
Food	7,000	7,000
Construction of new homes	3,400	3,400
Passenger transport	2,300	2,300
Books, newspapers etc.	1,000	1,000
Children's clothing	600	600
Water and sewerage services	500	500
Prescriptions	400	400
Excise duties[2]		
Beer price up by 1p a pint	75	95
Wine up by 5p a bottle	20	25
Spirits up by 25p a bottle	35	35
Cigarettes up 5p per packet	190	230
Petrol up 1p a litre	315	345
DERV up 1p per litre	95	105
VED up £5	145	150

Notes: The revenue effect is computed for changes to the 1994-95 tax system and relates to the first year (1994-95)and the full year (1995-96) effects.

[2] Effects for 1993-94 and 1994-95.

Source: Inland Revenue Statistics 1993, Table 1.5.
Autumn Statement, 1992, Section 5.

Appendix 3: Debt Sustainability

The equation given in the text can be derived as follows. Any government deficit must be financed by the issue of bonds (and bills), or by the expansion of the monetary base. The deficit itself 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 the ratio of outstanding debt/GDP). The interest component will rise, relative to GDP, if the nominal interest rate is greater than the nominal growth in GDP. Removing inflation, this is equivalent to saying that the interest component will rise if the real rate of interest (r) exceeds the real rate of economic growth (y). In fact, the interest burden relative to GDP rises by (r - y)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 government surplus (f) or **avoided** by paying the interest out of monetary base expansion (m). Therefore:

$$f = (r - y)b - m \qquad (1)$$

We now need to add a relationship between money and inflation in order to calculate what this implies for "sustainable" inflation rates. We start with the basic quantity theory of money:

$$MV = PY \qquad (2)$$

where M is the monetary base, V is the velocity of circulation, P is the price level and Y is GDP. Differentiating with respect to time and dividing through by PY, we obtain:

$$\frac{M}{PY}\frac{dV}{dt} + \frac{V}{PY}\frac{dM}{dt} = \frac{P}{PY}\frac{dY}{dt} + \frac{Y}{PY}\frac{dP}{dt} \qquad (3)$$

We now define the growth rate of money relative to income (m) as $\frac{1}{PY}\frac{dM}{dt}$. This is substituted into the second term of (3). Note that the first term of (3) is equivalent to $\frac{1}{V}\frac{dV}{dt}$, which is the change in velocity (v). Note that the third term is the growth of GDP (y), while the fourth term is inflation (p). We therefore have:

$$v + mV = y + p \qquad (4)$$

$$\text{or } m = (y + p - v)/V \qquad (5)$$

Substituting (5) into (1), we get

$$f = (r - y)\, b - (y + p - v)/V \qquad (6)$$

If the velocity of circulation is constant, then v = 0 and (6) becomes the relationship quoted in the text.