

Tax Options for 1993

The Green Budget

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Contents

List of Tables
List of Figures
Preface

1	Budget Strategy in 1993	1
2	The Economic Forecast	9
	2.1 The World Economy	9
	2.2 The Domestic Economy	12
3	Macroeconomic Policy: Monetary and Exchange Rate Conditions	20
	3.1 Introduction	20
	3.2 Exchange Rate Policy	21
	3.3 Monetary Targets	26
	3.4 Conclusion	33
4	The Economy in the Medium Term	35
	4.1 Introduction	35
	4.2 The Policy Problem	35
	4.3 The Output Gap and Growth in Productive Potential	38
	4.4 The Balance of Payments Constraint	41
	4.5 The Inflation Constraint	46
5	Public Finances and Budgetary Policy	48
	5.1 Introduction	48
	5.2 The Public Finances in the Short Term	48
	5.3 The Public Finances in the Medium Term	51
	5.4 The PSBR and Debt Sustainability	53
	5.5. Budget Strategy for 1993	57
6	Private Finance in the Public Sector	59
	6.1 Current Spending	59
	6.2 Capital Projects	61
7	Issues in Taxation	66
	7.1 Indirect Taxes	67
	7.2 Direct Taxes on Individuals	80
	7.3 Taxes on Companies	93
	7.4 Taxation and the Environment: A Carbon Tax	108
	Appendix 1: Forecasting the PSBR	112
	Appendix 2: Tax Ready Reckoner	123

List of Tables

Table 2.1	Forecasts for the world economy	10
Table 2.2	Demand prospects	16
Table 2.3	Other key indicators	18
Table 3.1	How the underlying trade position worsened	22
Table 3.2	Assessing monetary conditions	32
Table 5.1	The public finances 1992-93 and 1993-94	50
Table 5.2	Sensitivity analysis	51
Table 5.3	Alternative macroeconomic working assumptions	51
Table 5.4	The public finances in the medium term	52
Table 5.5	The PSBR in the medium term: sensitivity analysis	53
Table 6.1	Private finance: hypothetical effect on the PSBR	65
Table 7.1	Standard VAT rates in European states	68
Table 7.2	Estimated yield forgone on zero-rated goods and services, 1991-92	69
Table 7.3	Main exempt expenditure categories	70
Table 7.4	Revenue and price effects of changing the VAT base	73
Table 7.5	Effect of extending the VAT base on household net incomes	74
Table 7.6	Effect of extending the VAT base on household net incomes (with offsetting measures)	74
Table 7.7	EC agreed excise duty rates and current UK equivalents	75
Table 7.8	Real value of excise duties	77
Table 7.9	Price effects of excise duty changes	78
Table 7.10	Gains/losses from raising the basic rate of tax compared with freezing allowances and thresholds	81
Table 7.11	Gains/losses from restricting allowances to the basic rate	82
Table 7.12	Gains/losses from expanding reduced rate band and freezing allowances	83
Table 7.13	NI fund as % of benefits expenditure	84
Table 7.14	Comparing a 1% rise in NI with a 1% rise in the basic rate of income tax	84
Table 7.15	Numbers above NI ceiling	85
Table 7.16	Raising revenue from personal direct tax: a summary	86
Table 7.17	ACT: revenue and returns under various schemes	103
Table 7.18	Household spending on domestic fuel and petrol	110

Appendix Tables

Table A.1	The public finances 1992-93	113
Table A.2	Tax bases and elasticities for model forecasts	114
Table A.3	Macroeconomic assumptions for model forecasts	115
Table A.4	Revenue effect of 1% change in assumptions for 1992-93 forecast	115
Table A.5	The public finances 1992-93 and 1993-94	118
Table A.6	Revenue effect of 1% change in assumptions for 1993-94 forecast	119
Table A.7	Alternative macroeconomic working assumptions	120
Table A.8	The public finances in the medium term	122
Table A.9	The PSBR in the medium term: sensitivity analysis	122
Table A.10	Direct effects of illustrative changes in taxation 1993-94	123

List of Figures

Figure 2.1	Continental Europe real short rates	11
Figure 2.2	Personal savings ratio	13
Figure 2.3	Ratio of house prices to average earnings	14
Figure 2.4	Output gap/retail price inflation	17
Figure 3.1	Deutschemark/sterling exchange rate	23
Figure 3.2	Real GDP growth	25
Figure 3.3	UK economic performance 1956-94	28
Figure 3.4	The GDP split	29
Figure 3.5	Monetary growth and house prices	31
Figure 4.1	The medium term policy problem	36
Figure 4.2	Output gap	39
Figure 4.3	Current account and the economic cycle	41
Figure 4.4	Non-oil import/export volume ratio assuming unchanged competitiveness	44
Figure 4.5	Non-oil import/export volume ratio assuming 3% UK GDP growth	44
Figure 4.6	Underlying inflation	47
Figure 5.1	The public sector borrowing requirement	53
Figure 5.2	UK & OECD general government borrowing requirements	54
Figure 5.3	UK & OECD net government debt ratios	54
Figure 5.4	PSBR and government debt ratios	56
Figure 7.1	Distribution of household expenditure by VAT category, 1990	70
Figure 7.2	Real petrol prices and duties, 1980-92	79
Figure 7.3	Distributional incidence of the use of carbon tax revenues	111

Preface

This will be the last Green Budget published in advance of a March Budget, because the March 1993 Budget will be the last March Budget. Beginning in December 1993 the UK is to have a new unified Budget which brings together in December the announcement of changes to taxation and public spending.

The move to a unified Budget has been greeted by some as an answer to the problems that lead us to publish the Green Budget. But the Green Budget exists to inform debate *before* decisions are finally made. The new unified Budget will imitate the current Budget in informing those interested in the debate over taxation only about decisions which have already been made, rather than options considered.

The need for full discussion of taxation and public spending issues is greater than ever given the state of the economy and of the public sector finances. Our view outlined in the 1993 Green Budget is that significant tax increases will be necessary over the lifetime of this parliament if the public finances are to be brought under control. Tax increases of the required size will change the mix and structure of our tax system; they will need to be framed as part of a medium-term package of planned tax reform, rather than as expedients to deal with each year's problems as they arise. Our aim in the Green Budget is to set out the economic and public finance background, and to outline some of the options open to government in reforming our tax system and closing the growing gap in the public finances.

1 Budget Strategy in 1993

The forthcoming Budget will not be an easy one for the Chancellor. He needs to:

- . stamp his personal authority on macroeconomic policy
- . address the problem of the public sector deficit
- . seek to help industry and promote supply-side reform, the vehicle on which sustainable recovery is riding.

The one act which could help meet these challenges would be to increase taxes on the personal sector very substantially - which would provide funds for establishing credibility, reducing the deficit and promoting supply-side reforms. *But that is not a route which is politically attractive, and it also threatens to undermine the consumer confidence which is a precondition to recovery.*

The main reason for the dramatic worsening of the public finances is that national income is 3% less in the current fiscal year than it was expected to be a year ago. This has led receipts to be some £14bn down, and spending (after privatisation) to be £4bn up. There were also tax cuts last year of £2bn. Essentially therefore, for the foreseeable future, on unchanged policies, the PSBR is some £20bn a year higher (3% of GDP) than it was expected to be a year ago.

This Green Budget focuses on the Chancellor's conflicting goals. We outline the macroeconomic background to the Budget; we look at the parlous state of Britain's public finances, which indicate that unless the government takes action, we are in danger of emulating the United States with entrenched high levels of government deficit; we look at the potential for raising taxes or bringing private finance into the public sector to counter the problem; and we look at some measures to help industry and develop Britain's ability to produce tradeable products competitively.

Macroeconomic Policy

It is four months since sterling left the ERM. That departure brought a sea change in British economic management. This time a year ago, policy was solely geared to maintaining sterling's deutschemark parity, which itself was seen as a means of committing the UK economy to an era of low inflation. There was little direct concern with short-term output or unemployment, and intermediate targets of economic policy - interest rates, domestic money supply - were all on automatic pilot, programmed to maintain sterling on a pre-set route.

Policy has now changed in all these respects. First, and most obvious, the exchange rate has become a rather less important variable. Second, instead of the 100% weight attached to the defeat of inflation, far more attention has been placed on the promotion of growth as a target. The government seems to have lost faith in the idea that the level of output is exclusively

Green Budget 1993

determined by "supply-side" factors such as the competitiveness of our industry, or the level of real wages, and has veered towards the view that Britain is stuck in a vicious circle of shrinking demand and shrinking output. Thirdly, the intermediate target variables, and the level of base rates, are back in manual control.

This change in policy - however uninvited - has altered the likely course of the economy over the next few years. What we could have expected in the ERM was lower inflation, lower output and a bigger trade deficit than we now face. The tight monetary policy necessary to support sterling would have suppressed consumer demand at home, and rendered British goods less attractive overseas. It would, however, have kept prices low. Indeed, for Britain to become competitive in world markets over the medium term, the traded goods sector would have had to have endured a period of lower than average inflation - a do-it-yourself devaluation - which would have made our goods progressively less expensive than foreign ones, thereby correcting the balance of payments. That lower inflation could only have been achieved by a policy of sustained austerity. A looser fiscal policy could have alleviated the effect of this austerity, but could not have removed the pain altogether.

Instead, we now have a more relaxed monetary policy with a lower exchange rate and interest rates. This will boost demand at home (by reducing the burden of debt on consumers) and make Britain more price-competitive abroad. Output, and probably inflation, will be higher.

Under this route, however, two risks emerge. The first is that the balance of payments will worsen, as it almost invariably does during a period of solid growth. The only way we know to prevent that happening is for UK competitiveness to improve; but if that occurs through further devaluation, the second risk increases: the re-emergence of inflation. The danger is that this becomes ingrained, undermining the increase in competitiveness produced by devaluation, and leaving us back where we started. Unless Britain makes itself more competitive either by letting devaluation take effect *without* this being undermined by higher wages, or by large reductions in costs without further devaluation, it faces a problem of trade deficit or inflation or both.

To manage Britain through these perilous waters, the Chancellor has two main macroeconomic policy tools: fiscal policy and monetary policy. His first option is to adopt a tight money policy and with it, probably a loose fiscal policy to alleviate the recession. This takes him closer to the route that he would probably have followed in the ERM. Alternatively, he could adopt a loose monetary policy - to make the UK more competitive internationally - and a tight fiscal policy, to reduce the inflation or balance of payments risk attached to this route. The logic of life outside the ERM, and some recent statements, makes this the probable macroeconomic choice.

Economic Prospects

Domestic demand is now rising. Although this is not the first time that "green shoots" have been observed, it nevertheless remains likely that the economy will begin to recover this year. The loosening of monetary policy just described, some recovery in companies' financial position, and a turnaround in the recent collapse of asset prices, will all promote growth. Inflation may or may not rise above the top end of the government's 1-4% target range - commentators disagree over the speed at which devaluation has an effect on prices. But the balance of payments will almost certainly worsen.

The main threat to this outcome is the recession in continental Europe, where German monetary influences - and the desire of authorities not to throw away the reputation built up around the ERM - is still forcing policy to be unsuitably tight for domestic purposes. A substantial portion of Britain's trade is with this bloc, and we could still suffer an unpleasant backwash from Europe's problems, despite having exited the ERM. Nevertheless, real GDP growth of around 1.5% seems likely this year.

The Public Finances

The public finances are in a substantially worse state than anyone expected a year ago. This is because GDP growth did not emerge, leaving the economy smaller than it was expected to be. We anticipate that the PSBR for the current fiscal year will be in line with the Autumn Statement prediction - some £38bn. Next year, even with modest growth, we expect it to reach £54bn. This is an abnormally high level for the budget deficit. While it is tolerable for an economy operating far below capacity, it is unsustainable over a long period.

In the medium term, assuming the economy begins to grow at a rate of 3% p.a., we still believe that the PSBR would be at about £50bn on unchanged policies at the end of 1997-98, or about 6.25% of GDP. If growth is faster, the PSBR could be substantially lower - but if growth is slower, the PSBR could be over £80bn by the end of 1997-98. Even £50bn is too high - not only is it inconsistent with obligations under the Maastricht Treaty, but it is also likely that the authorities would have problems financing such a large deficit if there was no prospect of it coming down.

The Public Finance Hole

The magnitude of the challenge facing the government over the medium term in bringing the PSBR under control depends on two things. The first is the assumption made about how far below natural output the economy will still be in 1997-98. Under the assumption that we are 3-4% below potential output today, then GDP growth at 3% p.a. would bring the economy back to full capacity by 1997-98, and the entire £50.6bn PSBR which we forecast for that year could be thought of as structural, not cyclical. If the economy is 6-7% below capacity today, there could still be spare capacity left in the economy after four years of 3% growth. About two-thirds of the PSBR in 1993-94 could then be called cyclical, leaving a

Green Budget 1993

"structural" deficit of £20bn, or 3% of GDP. But it would take a sustained period of 3% p.a. GDP growth lasting at least until the end of the decade to eliminate the "cyclical" element of the PSBR. The outstanding ratio of government debt to GDP would in the meantime rise to more than 70%.

Under the pessimistic scenario that the economy is constrained by the balance of payments problems to produce growth of 2% or less during the medium term, then the PSBR will stay at present levels, or even worsen. Since capacity is likely under these circumstances to be progressively scrapped, the whole of this deficit could eventually become "structural".

The second factor in determining the challenge facing the government is its ultimate target for the PSBR when the economy is back to normal. Most analysts believe that it is tolerable to run up high deficits during a recession. But this cannot hide the fact that there is also an underlying deficit. The question is, what level of deficit is tolerable when recession is out of the way?

The government has mentioned different targets, and it is not clear which is the prevalent one. We suggest that a suitable target would be one which maintained the ratio of total government debt to GDP at a constant level. This means that the PSBR can run at a positive level, because as the economy grows, the level of outstanding debt can rise in line with national income. On such a basis, we think a target PSBR of 3% of GDP is sustainable.

The implication of this is that under our central assumption, the government needs to raise taxes, or reduce expenditure, by 3% or 4% of GDP, some £20bn or more. Under the pessimistic scenario, with growth only at 1.5% for the next few years, the gap to be filled could be up to 8% of GDP, or £70bn. Only under the most optimistic scenario is there no hole in the public finances.

The bad news is that under most realistic views, the government faces a fiscal problem. Unless either GDP growth, or the responsiveness of tax receipts to economic growth, are much more favourable than we expect, it will need to close the gap between revenues and spending over the medium term by about £20bn.

Closing the Gap

The public finance hole is large, but it does not need to be filled immediately. The recession is clearly contributing to the deficit, and a PSBR at current levels is probably financeable for a while. Nevertheless, gilts buyers will need to see evidence that it is going to come down in the medium term. While March may not be the right time to tackle the medium-term problem, it is important that the government will have to start to tackle the PSBR by December.

One route to this end - discussed in Chapter 6 - is to find new and imaginative methods of attracting private sector funds into state projects. The idea of expanding private provision of capital projects - on the Eurotunnel model - is one to which the authorities are devoting much

attention. This can act as a means of creative accounting, redefining the PSBR, and in this it is constructive only in as far as the PSBR provides an inappropriate policy target. More positively, it can act as a method of bringing private sector management and competitive discipline into public sector projects, but whatever efficiency benefits ensue, they will not significantly help to reduce the deficit. But "private finance" can also be a method by which people are made to pay fees for services that had previously been financed through taxation. This kind of commercialisation does provide a method of reducing the deficit, and need not be confined to capital projects. Over the medium term, there could be a substantial shift in certain items, like road use, away from taxation and towards user fees. Further diminution of the relative value of the state pension, with an increasing share of personal pension provision, could net huge long-term savings. These options, however, could not be expected to provide short-term cash advantages for the Exchequer.

The other - more traditional - route to narrowing the revenue shortfall is to raise taxes. Chapter 7 provides a number of ideas for the Chancellor to consider. At the top of the list is an extension of the VAT base. The 17.5% gap between taxable items (like potato crisps) and zero-rated items (like taco crisps) is one of the biggest anomalies in the British tax system. However, such would be the distributional effects of the VAT change, Mr Lamont would probably have to give back a large proportion of what he raised in higher benefits or other tax cuts, to maintain living standards among the poor. Even if he did this, he could expect to raise up to £5bn in new revenues. In the longer term, he may look at applying a special tax on financial services - which cannot be included in the VAT system for administrative reasons - to offset their tax advantage from VAT exemption.

Income tax increases are not likely to be the government's first choice of policy. Nevertheless, they are likely to increase the tax through the backdoor by failing to increase some or all of the allowances by the rate of inflation. This means that in real terms, the tax take rises, even though the actual tax bill of any individual does not go up. If non-indexation was applied to all allowances and thresholds, it would raise some £970 million over the indexed base on which our PSBR calculations have been made.

A third area for potential revenue is to use environmental taxes. These can be justified by arguments relating to market failure; they are potential revenue raisers, and would attract acclaim from many outside the government's normal constituency. The EC carbon tax proposal on its own could take Britain a long way to plugging its public deficit. An area where increases are almost certain is taxes on motoring, which are set to rise by more than mere inflation would suggest, in order to compensate for the abolition of car tax last year.

The tax treatment of savings is an area ripe for reform. The most obvious source of potential revenue would be the abolition of mortgage tax relief, although unless this was phased in over a long period of time, it would be disruptive to the housing market and would very seriously affect some

low-income home owners. This is a reform which could only really be adopted slowly, and probably in conjunction with a cut in mortgage rates. If the Chancellor wishes to relax monetary policy and tighten fiscal policy as our macroeconomic analysis suggests, this is a route which could prove attractive.

Finally, it is worth just listing some of the areas where there is probably no serious money to be made. A luxury rate of VAT would contravene our European obligations, and would be economically indefensible. Higher taxes on pensions (for example, limiting pension contribution relief) would introduce anomalies into a surprisingly complicated area. The only source of funds there is the tax-free lump sum. Finally, a utilities tax could raise a small amount of money in the short term, but it would do so by undermining the regulatory regimes set in place over the last few years, by undermining incentives for efficiency, and without contributing significantly to the longer-term deficit problem which is the one which needs addressing.

Measures for Industry

Another goal of the Budget - one which both the Chancellor and Prime Minister have re-stated recently - is that of promoting industry and competitiveness. This is obviously a sensible enough goal in itself, but can also be seen as a step on the road to correcting the PSBR problem: increasing the productive potential of the UK economy could allow the economy to sustain high growth without hitting its natural constraints.

This route has to involve bolstering the competitiveness of industry, expanding investment in the nation's physical and human capital and adopting new measures to improve the functioning of markets. Unfortunately, whatever the long-term pay-off, such measures are expensive in the short term. We do not think the Chancellor will have the resources necessary to make a serious commitment in this area. Instead, he may choose to spend seed-corn funds - on promoting changes in private sector behaviour. He could, for example, look to the private sector to increase its training in an effort to kickstart employers towards national training targets.

He is unlikely to repeat last year's temporary increase in capital allowances. If he has money to spare this year, it is probably better spent on protecting the capital the nation already has, rather than persuading people to create more. Spare cash could protect illiquid firms by giving them a reduction in business rates payments.

Reform of the treatment of the unemployed might fall into this category of measures too. This may not be cheap, but could reduce the political cost of recession, and increase output. There seems to be some interest in workfare type schemes at the moment, and it is possible the first significant initiative of this type might be announced on Budget day.

Finally, reform of the system of contracts that govern the commercial property market is needed, and could be executed without substantial exchequer cost. If the Chancellor wanted to announce an initiative which was to help firms while failing to apply pressure to public spending, this would be an area ripe for his attention.

Other Budget Measures

There are several other areas where structural changes to the tax system may occur. We discuss changes to the taxation of the self-employed (pp. 88-90), benefits-in-kind (pp. 90 - 92) and the system of Advance Corporation Tax (pp. 93 - 102).

Budget Strategy

The Chancellor has two Budgets in 1993, and it is worth outlining the options that face him for the two of them taken together.

His first is to do nothing. If he believed his own election rhetoric, he might persuade himself that the economy will grow itself out of PSBR problems; and that tax increases are unnecessary. Under this option, his only action will be to adopt some structural reforms of the system, and to index the main allowances. He might raise some money in some quarters - such as excise duties or even VAT - to spend it in others. If all went well, if the economy grew at 3% for a decade, this would transpire to have been the right course. The downside is that this might leave the country seriously short of funds in three years' time with a public finance crisis. This risks taking Britain down the Italian road.

The second option - which certainly has a more prudent ring to it - is to raise taxes now. He could envisage cutting them later in the unlikely event that they turned out to be too high. Under this route, he would probably still wait until December to make significant in-roads into the deficit. He has plenty of choice of what to do. He could raise VAT, introduce new carbon taxes, increase National Insurance or abolish mortgage relief. In truth, he would probably need to be willing to do more than just one of these. He would also probably need to phase these measures in.

A third route would be to set in action now a series of moves to redefine the public sector. He could commercialise the provision of pensions (with no corresponding cut in taxes or NI); charge for roads; reduce subsidies to public transport, even investigate privatising unemployment benefits. This would provide revenue, but only in the medium term. It is also consistent with the general philosophy of the government.

Under any of these routes, the Chancellor will probably try to be seen to be helping industry and promoting training, albeit committing quite small sums to doing so.

Most likely is that the Chancellor will combine a degree of PSBR optimism, with some increase in taxes and modest commercialisation of

Green Budget 1993

one or two areas of public provision. It remains to be seen whether this will be sufficient to allow Britain to avoid a financing crisis in the next few years.

2 The Economic Forecast

2.1 The World Economy

1992 was the third year in succession to see a marked divergence in economic performance among the major developed economies. OECD real GDP growth strengthened from 0.8% in 1991 to around 1.5% last year, mainly reflecting a resumption in economic growth in the US and Canada and an easing in the pace of decline in the UK. Elsewhere in the OECD, Japan and Germany recorded a further slowdown in growth; the latter contributed to continued weakness in the rest of Europe.

Prospects for 1993 are also diverse. The consensus view is for OECD growth to strengthen to just under 2% in 1993 but this masks a continuing divergence in rates of economic growth among OECD countries. Fears about the possibility of a triple dip recession in the US, which were widespread last autumn, have clearly diminished. US real GDP rose at an annualised rate of almost 4% in the third quarter of 1992 and a number of important economic indicators suggest that growth continued at a healthy rate in the final months of last year. The key question is whether this degree of improvement is merely a temporary shoot on an essentially stable trend growth path of 2-2.5%.

There are a number of reasons for believing that it is, and indeed consensus estimates are for the US economy to expand by around 2.5% this year. To finance the latest surge in spending, consumers have dipped heavily into savings. If growth is to stay strong, either the savings ratio will need to fall further from an already low level, or employment growth will need to accelerate from its current 1%. But there is little evidence to suggest that employers are about to step up their hiring plans. There is also a risk of a weakening in US exports. Exports have been the biggest driving factor behind US GDP growth in recent years, with volume growth averaging almost 10% a year since 1986. But with 40% of US exports going to Europe and Japan, where demand is sluggish or in many cases decelerating, and with the US dollar recovering, there is little prospect of a positive contribution to US GDP growth from net trade. Finally, the improved tone of US economic statistics has reduced the already small possibility of sizeable fiscal stimulus, and it seems to have put further monetary accommodation on hold for the time being as well.

The risks surrounding consensus forecasts for the US seem fairly balanced. On the upside, given the very low level of real interest rates, it is possible to envisage a scenario in which the recent stronger trend in activity is maintained, especially if the Presidential election outcome results in a long-lasting boost to confidence. On the downside, there is still the possibility that households and companies will seek to take further steps to improve their balance sheets which could lead to a further prolonged period of sluggish growth.

Table 2.1. Forecasts for the World Economy

% Change from Previous Year	1991	1992	1993	1994
OECD real GDP				
HMT	0.8	1.5	1.8	-
OECD	0.8	1.5	1.9	2.9
Goldman Sachs	0.4	1.6	2.0	2.6
OECD consumer prices				
HMT	3.5	3.0	2.5	-
OECD	4.7	3.5	3.2	2.8
Goldman Sachs	4.2	3.0	2.8	3.4
UK export markets				
HMT	4.0	4.3	5.0	-
OECD	5.0	4.3	4.4	6.0

Notes: Goldman Sachs and HM Treasury 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.

Sources: HMT - HM Treasury, Autumn Statement, November 1992.
 OECD - Economic Outlook, December 1992.
 Goldman Sachs - UK Economics Analyst, January/February 1993.

The US has not been alone in experiencing a balance sheet adjustment by the private sector. This has been an important factor behind the current cyclical downturn in several other OECD countries, notably Japan, the UK, Australia and most of the Scandinavian bloc. Asset prices, particularly for real estate but also for equities in the case of Japan, have fallen significantly from their peaks in many countries. This has led to a widespread perception that debt levels are excessive in relation not only to the underlying assets but also to incomes as economic conditions have deteriorated. As a result the private sector has cut back its spending on consumption and investment in a bid to reduce debt burdens. A common mistake made by forecasters has been to underestimate the depressing impact of these balance sheet adjustments on economic activity.

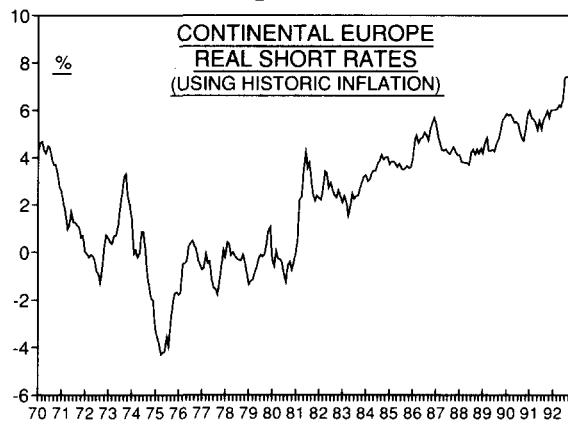
In response to these problems, policy-makers in many of these countries have now engineered a substantial easing in short-term interest rates, thereby helping to lessen the debt-servicing burden. This has been most evident in the US where short-term rates have fallen to around 3% restoring confidence and spending. In Japan, there has also been a substantial monetary easing. The authorities have cut the discount rate five times since 1 July 1991 from 6% to 3.25%, but as yet there has been no visible effect on bank lending activity or corporate borrowing demand. The Japanese economy remains in a downtrend characterised by production cutbacks and decelerating consumer spending due to sluggish growth in real personal disposable income. Housing investment and government spending are likely to be the sole areas of strength in 1993 and

The Economic Forecast

there seems a genuine risk, given the recent experience of other highly indebted economies, that Japanese growth forecasts of 2-2.5% this year remain too optimistic.

With exports to Europe accounting for over 60% of Britain's overseas trade, perhaps the greatest external concern for the UK's economic prospects is the continuing slowdown in European economic activity. This stems from the very tight monetary stance in Europe which, as Figure 2.1 shows, has taken European real short-term interest rates to unprecedentedly high levels for this stage of the economic cycle. Such a tight policy is clearly impacting German economic activity; industrial production in the three months to November was down 3.3% on a year earlier; manufacturing orders were down 8.5% over the same period while unemployment has risen rapidly over the past year. The latter is likely to lead to an easing in domestic inflationary pressures during 1993 which in time should allow scope for a substantial easing in German interest rates. But this will come too late to have a significant beneficial impact on German economic activity in 1993. Consensus forecasts are for output to stagnate in western Germany this year but again the risks of an even weaker outturn seem to be high and rising.

Figure 2.1



The problems for the rest of Europe are twofold. Most obviously, Germany is a very important market for all European exporters. Second, in many EC countries real interest rates are even higher than in Germany. This is because many EC countries have managed to reduce inflation, in some cases significantly, below that prevailing in Germany. But because of the anchor role of Germany within the ERM, it has not been possible for these countries to reduce nominal interest rates below their German counterparts; hence real interest rates have risen, diminishing growth prospects to an even greater extent in the rest of Europe.

In essence this has been the root cause of much of the recent turbulence within the ERM. Currencies such as the French franc have come under pressure not because of any problem with competitiveness but because real interest rates are too high. However, the only way interest rates can be reduced significantly is either if German rates are cut or if currencies are allowed to float against the D-Mark. Until now the Bundesbank has been willing to cut rates only very slowly, if at all, making the latter outcome appear to the market increasingly likely. It was the decision to float sterling which enabled the UK government to cut base rates to 7% between September and November. Had Britain simply devalued, with German rates at 8.75% in early 1993, UK base rates would have been at least two percentage points higher than they currently are.

Ultimately, the survival of the ERM in its current form probably depends on the speed with which German inflation starts to improve. In the absence of an early improvement, German interest rates could prove intolerably high for too long for many of the remaining members of the ERM, making the present structure of exchange rates untenable.

2.2 The Domestic Economy

What Went Wrong in 1992?

Economic forecasters did not have a distinguished year in 1992. At this time last year, the consensus view was that output would pick up steadily during 1992 to give GDP growth of about 1.5%. In the event it seems likely that real GDP will turn out to be around 0.7% lower than it was in 1991.

Two major errors were made by forecasters last year: first, exports grew by 1% less than expected while imports were up by almost 1% more, giving an estimated current account deficit of around £11bn last year, instead of the expected £9bn.

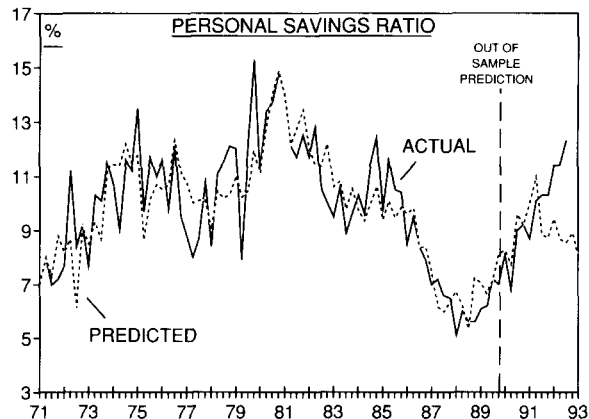
Secondly, the consensus view was that consumer spending would rise by 1.5% in 1992. In fact, it now appears that consumer spending declined slightly further last year. The culprit was a further unexpected rise in the savings ratio from 9.9% in 1991 to over 11.5% last year.

Last year we reported the results of research by Goldman Sachs which attempted to explain movements in the savings ratio by looking at movements in personal sector wealth (housing and financial) relative to income, real interest rates, inflation and the change in unemployment. This work suggested that the cyclical forces in the economy were becoming more conducive to a decline in the personal savings ratio.

Goldman Sachs have updated this work and find that this crucial relationship seems to have broken down in the last year. Figure 2.2 shows the results of estimating their equation up to the end of 1989 and using the estimated equation to "predict" the out of sample change in the savings ratio since then. It is clear from the graph that the equation is reasonably

successful in tracking the upward movement in the savings ratio up to the middle of 1991, but thereafter the equation suggests that the savings ratio should have fallen rather than continued upwards.

Figure 2.2



Why should this relationship have broken down? One obvious explanation could be that the equation does not adequately capture recent developments in the housing market. House prices peaked in the middle of 1989 and have fallen nationally by around 10%, with the fall being particularly marked during the course of 1992. In South East England and East Anglia, the fall in house prices from their peak has been of the order of 25%. This is a quite unprecedented drop and may have had several important implications for savings behaviour.

First, and probably most importantly, although house prices have declined there has been no corresponding drop in the debt underlying these assets which has remained fixed in nominal terms. It is estimated that over one million home owners now have mortgages which are larger than the value of the underlying asset. As in other countries, this decline in net worth has probably been a key factor tending to increase the savings ratio, since households have been prepared to forgo consumption in an attempt to replenish their diminishing net worth and reduce their negative equity. First-time buyers and, of course, people who are moving up the housing ladder benefit from a drop in house prices. But their gain appears to have had little impact on bolstering demand.

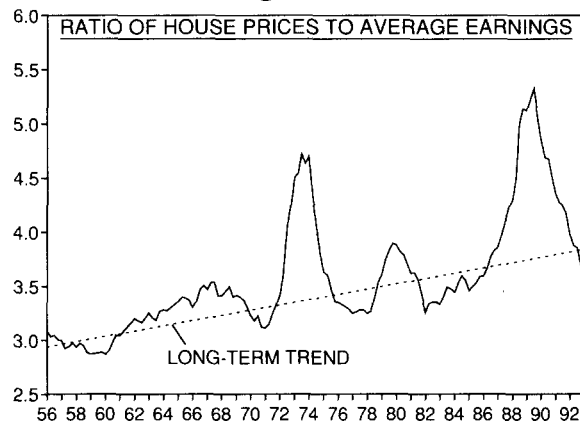
Second, the fall in house prices has severely reduced housing turnover, thereby directly reducing housing-related consumer spending (on carpets, furniture, white goods and so on). In part this stems from a reluctance by individuals to move house when there is a possibility that house prices may still have further to fall. It also arises from the fact that many households are restrained from moving house because they cannot repay their mortgage loan with the proceeds from the house sale.

Forces for Recovery in 1993

Looking ahead, there are several factors that make recovery likely.

First, there is a reasonable chance that the housing market will stabilise during 1993. The "bubble" in house prices which developed during the boom years of the late 1980s has now well and truly burst. House prices have fallen below their long-term trend relative to average earnings and this should provide increasing support to the housing market. Furthermore, as mortgage rates have come down, the debt-servicing burden has fallen to much more comfortable levels. The missing ingredient is still confidence but this is likely to return gradually during the year as people feel the benefit of lower interest rates.

Figure 2.3



A second factor supporting recovery is the stance of economic policy. On existing plans, there is likely to be a discretionary easing in fiscal policy of almost 1% in the coming financial year. While the government may use the Budget to claw back some of this easing, fiscal policy is still likely to be supportive of economic activity in 1993, in direct contrast to the equivalent stage in the 1981-82 recovery.

Monetary policy is clearly supportive of recovery. Since last September, base rates have fallen by 3% and sterling has declined by around 11%. For 1993 as a whole, it is probably reasonable to assume that outside the ERM base rates are likely to follow a path approximately 2% or more below the path they would otherwise have followed with sterling perhaps at least 10% lower. According to simulations on most macroeconomic models, such a policy change would be expected to boost economic growth by up to 1% a year in both 1993 and 1994.

A third factor that may help the economy to recover is a further easing in the pace of adjustment by the company sector to its financial deficit. Companies have taken decisive steps over the past two years to control costs and this should be reflected in a reasonable recovery in profitability over the next two years. As the company sector's financial position improves further, there will be less need for companies to pare back investment and stocks further. Indeed the introduction of time limited enhanced capital allowances in last year's Autumn Statement may help to bring forward some investment from 1994 into the current year.

The above factors are expected to result in a progressive resumption in economic growth during the course of 1993. The Treasury's Autumn Statement forecast was for GDP growth of 1% this year and this is close to the latest consensus estimates. Unlike last year, when the Green Budget argued that risks relative to the central consensus forecast were stacked heavily on the downside, risks to this year's central projection seem fairly evenly balanced. A potential downside risk is the possibility that a deep recession might develop in continental Europe this year, in which case UK GDP growth would be severely hampered by the likelihood of a further sizable negative contribution from net trade. A second downside risk is that far from being content with stabilising its debt/income ratio, the personal sector may continue building up savings in order to reduce the ratio. If so, consumer spending will remain very weak in 1993 and recovery will once again be postponed. In this event, though, the government is likely to sanction a further large monetary easing.

On the upside, it is possible that once confidence returns to the housing market there could be a quite rapid drop in the savings ratio, leading to a much firmer trend in consumer spending than is currently expected. All in all the risks surrounding consensus estimates for growth are probably much more evenly balanced this year, particularly now the government has openly espoused a pro-growth economic policy.

Inflation Prospects After Devaluation

While most economic forecasters agree that the substantial easing in policy that has taken place since Britain left the ERM will lead to a recovery in economic activity during 1993, there is disagreement about the outlook for inflation. The Treasury's Autumn Statement forecast was for underlying retail price inflation (excluding mortgages) of 3.75% in 1993Q4, little changed from that in the final quarter of 1992. Most other forecasters project a deterioration in underlying inflation to around 4% by the fourth quarter of 1993 and to 4.5% by the end of 1994.

However, there is a wide variation around the consensus. At the pessimistic end of the range, the National Institute expects underlying inflation to rise to almost 5% by the end of 1993 and to remain there during 1994. By contrast, Goldman Sachs expects core inflation to fall to 3.6% in 1993Q4 and to 3.2% by the end of 1994.

Table 2.2. Demand Prospects

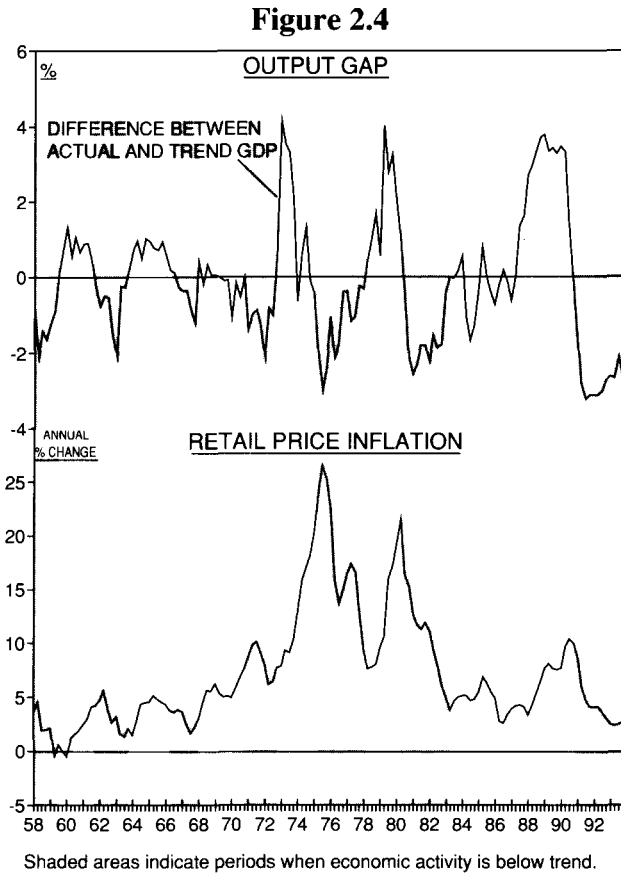
Annual % Change, Volume	1991	1992	1993
Private consumption			
HMT		-0.2	1.3
Goldman Sachs	-2.0	-0.2	1.6
Consensus		-0.2	1.0
Total fixed investment			
HMT		-2.2	0.4
Goldman Sachs	-10.1	-0.8	-0.1
Consensus		-1.9	-0.4
Exports of goods and services			
HMT		3.2	5.5
Goldman Sachs	0.2	3.1	6.2
Consensus		2.8	4.6
Imports of goods and services			
HMT		6.5	5.8
Goldman Sachs	-3.1	5.7	5.6
Consensus		6.0	4.0
Real GDP			
HMT		-0.9	1.0
Goldman Sachs	-2.4	-0.6	1.6
Consensus		-0.8	1.1

Sources: HMT and Goldman Sachs - as Table 2.1.
Consensus - 'Forecasts for the UK Economy', HM Treasury, December 1992/January 1993.

The outlook for inflation is of course complicated by the depreciation in sterling that has taken place since Britain left the ERM. Early evidence of the inflationary effects of the devaluation can be seen in the producer input price statistics. Seasonally adjusted input prices rose by 4.8% between September and December 1992, taking the annual rate of increase in December to 5.2%, the highest since November 1989. However, there is little evidence that this is about to impact final goods' prices. Producer output price inflation continues to improve on an underlying basis. Excluding food, drink and tobacco, output prices rose by 2.4% in the year to December and at an annualised rate of 2.0% in the latest 6 months. Despite the sterling depreciation the CBI Survey suggests that price pressures in manufacturing remain exceptionally weak.

Offsetting the inflationary impact of the sterling depreciation is the ongoing disinflationary effects of the domestic recession. Estimates of the degree of slack in the economy may vary but there is little doubt that there is a great deal. Historical experience suggests that until much of this slack

is taken up, domestic inflationary pressures are likely to remain benign. Indeed, as the graph shows, UK inflation generally remains on a downwards path for as long as economic activity is below trend.



The most potent domestic disinflationary force stems from the labour market. At the whole economy level, labour costs account for around two-thirds of firms' total costs. Recent and prospective labour market developments point to a further drop in this important source of inflationary pressure over the next year or two. Pay settlements across the whole economy have fallen to around 4%. With headline inflation running at under 3% as a result of mortgage rate cuts, and with unemployment continuing to rise sharply, pay settlements should remain under downward pressure in the private sector. In addition, the government plans to limit the increase in the public sector pay bill to just 1.5% in 1993. Pay deals across the whole economy could drop to 3% during the current pay round which would be consistent with average earnings growth of 3.5-4% by the end of 1993. At the same time productivity, especially in manufacturing, is increasing sharply. In the three months to October, manufacturing productivity was up by 5.2% on the previous year.

Green Budget 1993

This combination of rising productivity and declining wage settlements could reduce the increase in whole economy labour costs to zero in 1993, thereby serving to offset most if not all of the additional inflation arising from higher import prices. In the next few months, the latter may dominate taking the underlying rate of inflation back to around 4% for a time before the domestic disinflationary forces reassert themselves.

Table 2.3. Other Key Indicators

	1991Q4	1992Q4	1993Q4
Price inflation (%)^a			
HMT		3.8	3.8
Goldman Sachs	5.6	3.7	3.6
Consensus		3.7	4.3
	1991Q4	1992Q4	1993Q4
Unemployment (m)			
Goldman Sachs	2.52	2.91	3.17
Consensus		2.91	3.15
	1991	1992	1993
Current account (£bn)			
HMT	-6.3	-12.0	-15.5
Goldman Sachs		-10.6	-17.7
Consensus		-11.7	-14.4

Note: ^aRPI excluding mortgage interest payments.

Source: As Table 2.2.

External Trade

The depreciation in sterling since the UK left the ERM has made sterling about as competitive as it ever was during the 1980s. However, the initial impact of the depreciation will be to worsen the current account deficit as the adverse effects on the terms of trade of higher import prices will feed through much earlier than any improvement in relative trade volumes. According to most macroeconomic models, the first year effect of a 10% sterling depreciation is to worsen the current account deficit by around £4bn. This comes at a time when the current account deficit is already worryingly high for this stage of the economic cycle. Excluding oil and erratic items the improvement in the visible trade balance came to an end in mid-1991, since when there has been a slow and persistent deterioration which took the current account deficit up to about 2% of GDP last year.

The Economic Forecast

The ongoing problem is that there has almost always been a tendency for the current account of the balance of payments to worsen during economic recoveries. The only exception to this during the post-war period was between 1975-1978 when the current account improved by about 2% of GDP during the recovery phase. But this period was characterised by an exceptionally favourable level of sterling competitiveness (about 15% better than currently) and a strong upswing in the world economy with OECD growth averaging more than 4% a year over that period. According to calculations by Goldman Sachs (which are described in greater detail in Chapter 4, at present levels of competitiveness and even assuming a relatively rapid pick-up in OECD GNP (averaging 3.5% a year over the next half decade), UK economic growth would need to be restricted to less than 2% a year in order to hold the current account deficit below 2% of GDP.

During 1993 a combination of sluggish growth in UK export markets, a recovery in domestic demand, the lagged effects of the deterioration in competitiveness while the UK was inside the ERM, and the adverse J curve effect, mean that the current account is likely to worsen. The Treasury's forecast of a current account deficit of £15.5bn in 1993 is in line with the consensus expectation, but the possibility that European export markets could weaken more than expected implies that there is an important risk that the deficit could turn out to be higher than the Treasury expects.

3 Macroeconomic Policy: Monetary and Exchange Rate Conditions

3.1 Introduction

In each of the last two years, budgetary policy has been dominated by the impending General Election, with medium-term problems definitely taking a back seat in the framing of tax and expenditure plans. This year, the government has the luxury of a full Parliamentary term ahead of it, with few near-term political constraints on its freedom of fiscal action. Furthermore, as the economy shows initial signs of emerging from recession, there is less focus on the near-term outlook for demand, and correspondingly more focus on the deep-rooted structural problems facing the UK - including chronically high unemployment, a major trend worsening in the trade deficit, and a rapidly rising ratio of public sector debt to GDP.

Budgetary policy during 1993 will be framed with these problems very much in mind. Both Treasury officials and their ministers will be eager to take advantage of the brief window in the electoral cycle when significant medium-term budgetary reforms are possible. Furthermore, this year is unusual in that the Treasury will have two bites at the fiscal cherry - the first being in the usual Spring Budget in March, and the second being in the first of the new "unified" Budgets in December. The government will no doubt be thinking about the two Budgets together, and will seek to use this twin opportunity to set fiscal policy on a satisfactory course for the remainder of the Parliament.

In order to understand budgetary policy in 1993, we therefore need to take a close look at medium-term trends in the economy. Before doing this, however, we need to examine the context for exchange rate policy and monetary policy, both of which are relevant to the decisions which will be taken in the fiscal area.

Sterling's departure from the European Exchange Rate Mechanism has greatly increased the options available to the government for the setting of domestic monetary policy, and in the balancing of policy between the fiscal and monetary wings. At present, the government seems determined to take advantage of this opportunity, and the possibility of sterling's re-entry to the ERM is not on the agenda for this year. It now seems likely that the currency will remain floating at least until the UK recession is clearly over, the European economies are back in synchronisation, and Britain's "twin" deficits (on the current account and the government budget) have been corrected. All this could take a very long time.

3.2 Exchange Rate Policy

Lessons from the ERM

A year ago, sterling's membership of the Exchange Rate Mechanism was seen as the centrepiece of macroeconomic strategy, with all other elements of policy being subordinate to the overriding imperative of keeping sterling within its ERM bands. In preparing last year's Green Budget, we took it for granted as a policy assumption that the ERM straitjacket would remain in place. We also argued that it was by no means clear at that stage that the economy would in fact benefit from an early and unilateral devaluation of sterling.

We said that an immediate unilateral devaluation would not necessarily reduce UK interest rates from the levels that had by then been reached (base rates were standing at 10.5%). Furthermore, we argued that the nature of the medium-term balance of payments constraint was not yet clear enough to justify the credibility losses which would have been associated with a unilateral change in sterling's parities. However, we did point out the following:

These arguments need not apply forever. Once inflation has settled at a new low level, it is possible that some downward adjustment in sterling's central rate might be thought appropriate, especially if this is achieved in the context of a generalised ERM realignment.

Furthermore, we argued strongly that the overall stance of macroeconomic policy was, by the early part of 1992, much too tight. Unemployment was by then rising clearly above the rate which is associated with constant inflation (the non-accelerating inflation rate of unemployment, or NAIRU), and the decline in underlying inflation seemed to be proceeding at a rate faster than that intended by the government. Since we accepted that base rates were unlikely to decline very rapidly in the context of ERM membership, we argued that fiscal policy should be eased **both** to boost domestic activity **and** to underpin the government's commitment to the ERM. This last point was not widely understood at the time, though we concluded the following:

There is only so much strain that any political process will take without demanding sudden and unpredictable lurches in policy. If economic policy is seen to be totally powerless (or, still worse, perverse) in the face of a continuing recession in demand, the pressure to leave the ERM or to devalue the currency could become politically impossible to resist. A more responsive fiscal policy could reduce the risk that political discontent with the ERM will rise to breaking point. This is a point which applies not only to the UK, but also to France and other ERM members.

Green Budget 1993

In the event, the government decided against making any significant easing in the fiscal stance in the Budget, and economic activity remained considerably more sluggish than had been expected by the consensus of economic forecasters at the beginning of the year. Furthermore, as Table 3.1 shows, there was a substantial worsening in the underlying trade position during the course of 1992. The level of GDP last year was more than 3% lower than that expected by the Treasury in its 1991 Autumn Statement projection, but the current account of the balance of payments was nevertheless about £2bn worse than expected at that time. This represents a formidable worsening in Britain's underlying trade performance, much of which has come on the exports side.

Table 3.1. How the Underlying Trade Position Worsened

FORECASTS/OUTTURNS FOR 1992								
	World Export Markets (%)	Non-Oil Export Volume (%)	Export Performance ^a (%)	GDP (%)	Domestic Demand (%)	Non-Oil Import Volume (%)	Import Performance ^b (%)	Current Account Balance (£bn)
1991 Autumn Statement	6	7.75	+1.75	2.25	3	9.5	+6.5	-9.5
1992 Budget	6	3.75	-0.25	1	1.25	4.75	+3.5	-6.5
Likely Outturn	4.25	2.5	-1.75	-1	0.25	6.5	+6.25	-11.5

Notes: ^aNon-oil export volume less market growth.

^bNon-oil import growth less domestic demand growth.

A year ago, the Treasury expected non-oil export volume to rise by 7.75%, slightly faster than the 6% growth expected in world markets for manufactured goods. In the event, non-oil export volume actually increased by no more than 2.5%, substantially less than the 4.25% growth in world markets. There was also some deterioration in import penetration, compared to what was expected at the time of the 1991 Autumn Statement, but this was explained partially by the sectoral pattern of the recession. Domestic demand growth for manufactured goods has remained relatively strong in the UK last year, while demand for services has fallen; since the import content of the demand for manufactured goods is considerably greater than the import content of the demand for services, this explains the rise which has taken place in the overall ratio of imports to domestic demand.

By last September, the financial markets had come to realise that the domestic economy remained in deep recession, and that the underlying trade position had worsened considerably in the course of the year. Meanwhile, the prospects for an early easing in German interest rates appeared slim, and the devaluation of the Italian lira in early September punctured the myth that the existing ERM bands were sacrosanct. These factors, taken alongside concerns about the impending French Referendum

on the Maastricht Treaty, led to a severe speculative attack on sterling on 15/16 September, leaving the government no option but to suspend sterling's membership of the system.

Figure 3.1



This is not the place to conduct a detailed post-mortem of sterling's membership of the ERM. However, it is in retrospect difficult to see what could have been done differently in 1992 to have maintained sterling's membership of the system. An easier fiscal policy, as recommended in the Green Budget last year, might temporarily have underpinned sterling by boosting domestic activity. But, given the worsening which was occurring in Britain's underlying trade performance at the time, the markets might have become increasingly concerned about the alleged "overvaluation" of sterling and, in the context of events elsewhere in the ERM, this would probably have been sufficient to have made sterling's position untenable.

Similarly, while the government has been criticised for failing to increase interest rates as the pound came under pressure in the summer of 1992, experience in other countries has suggested that this would have been largely futile, since the markets would not have believed that such interest rate rises would have been sustainable against the background of chronically weak activity. Finally, a relatively modest devaluation for sterling within the ERM, in exchange for a slim reduction in German interest rates - a package deal which might have been on offer from the Bundesbank on several occasions last autumn - would probably not have saved the situation. It certainly did not work for Italy, which initially devalued the lira by 7%, but was then rapidly forced out of the ERM anyway.

Conditions for ERM Re-entry

These factors are clearly important for the **future** development of UK economic policy, since the unhappy experiences of last autumn, and the apparent lack of any policy which could have secured sterling's position in the ERM, have clearly influenced the government's attitude towards taking the UK back into the system. Officially, the government continues to say that sterling will one day rejoin the ERM, but only when certain "fault lines" in the system have been corrected. Initially, discussion of these "fault lines" focused on the detailed workings of the ERM, and especially on the symmetry of foreign exchange intervention arrangements between weak and strong currencies. However, the Chancellor's letter on monetary policy to the Treasury Select Committee on 8 October 1992 said that the "requirements of German and UK monetary policy" must come closer into line before sterling could re-enter the system, and there must also be a narrowing in the interest differential between Germany and the United States. In recent weeks, the Prime Minister has also suggested that sterling's re-entry into the system might be dependent on a wider arrangement being put in place to determine exchange rate relationships between the ERM currencies, the dollar and the yen. This follows from the British government's belief that the extreme weakness of the dollar in the past two years undermined the competitive position of the European traded goods sector, making it more difficult to maintain fixed exchange rate relationships within the EC.

The Prime Minister has now specifically stated that the UK will not re-join the ERM this year, and it seems probable that sterling will continue to float outside the system for a prolonged period after that. Indeed, it is by no means obvious that the system will survive indefinitely in anything like its present form. Clearly, the immediate pressures on the system will diminish once German interest rates decline more markedly, and the political commitment to monetary integration elsewhere in the European Community still seems exceptionally strong. However, the unhappy events of 1992 - affecting not just the UK but virtually the whole of the ERM - have raised question marks about whether a semi-fixed exchange rate regime is compatible with free capital movements within Europe. Furthermore, while some analysts have concluded that the appropriate answer to this dilemma is to move immediately to full monetary union, this seems unlikely to win widespread political support within Europe in the current economic environment. In any case, it seems most uncertain whether the economic and political integration of the EC Member States has proceeded far enough to justify such a move.

Although the Community is still pressing ahead with the ratification of the Maastricht Treaty, it is not now likely that monetary union on the Maastricht model, involving the full Community, can be implemented this century. This raises several thorny questions for the EC. Can the ERM be gradually stitched back together in an environment of free capital movements? If not, should controls be re-imposed on capital movements?

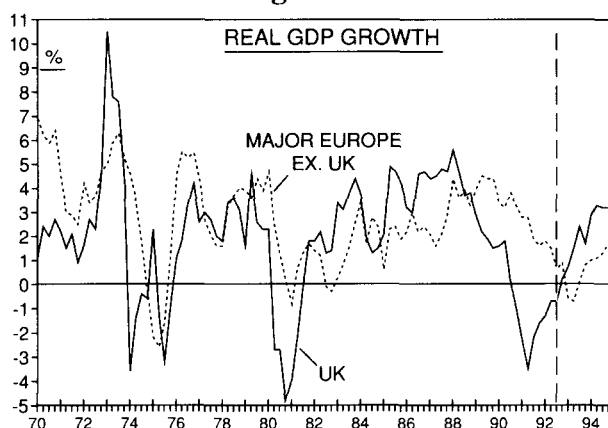
Or should a smaller group of core countries move more rapidly towards full monetary union? Or, alternatively, should all European currencies float against each other?

Implications for Policy

It is likely to take several years for the answers to these questions to become clear, during which period the UK government is unlikely to take the risk of plunging sterling back into an unstable ERM. Furthermore, Britain's twin deficit problem (i.e. simultaneous deficits on the current account and the Budget) may well require some rebalancing of monetary and fiscal policy - easier monetary, tighter fiscal - which would be harder inside the ERM than outside it.

Only once this rebalancing has been successfully accomplished, and once the European economies are back in synchronisation, then re-entry to a system like the ERM might be thought desirable. But all this obviously implies that macroeconomic policy needs to be set on the assumption that Britain will remain outside the ERM, or any successor system, for some considerable time.

Figure 3.2



This makes a crucial difference to economic strategy. The alternative scenario would be for Britain to sit inside a "hard" ERM. In that case British interest rates would be locked to the German level (plus a small risk premium) and any independent demand management in Britain could only be conducted through budgetary policy. Monetary policy would therefore be generally tighter than outside the system, and the real exchange rate, at least initially, would be higher. As an offset to this, it is possible that budgetary policy would be looser.

The implication is that the "twin deficits" would remain large over the medium term, but these would probably be easier to finance within a fully credible ERM. (In a credible exchange rate system, capital flows tend to be stabilising. Thus if a current account deficit pushes the exchange rate towards the bottom of its ERM band, this tends to trigger capital flows in the opposite direction which, for a time at least, finance the current account.) The eventual solution to the trade deficit in such an environment would have been to have reduced the real exchange rate by holding the UK inflation rate below the European average for some years, thus taking the "virtuous" low inflation route which has been chosen by France and Denmark in the last five years.

Perhaps the events of 1992 suggest that this route was never tenable for the UK, but in any case it is certainly not tenable now. Monetary and fiscal policy need to be set in a very different environment in which the exchange rate cannot possibly be bound into a "credible" fixed rate system for several years. Inside a credible ERM, it was possible to take the view that the twin deficit problem should be addressed slowly via the low inflation route. Outside a credible ERM, the deficits will be harder to finance satisfactorily, and therefore need to be corrected more rapidly by a rebalancing of fiscal and monetary policy.

3.3 Monetary Targets

While sterling was inside the ERM, the problem of how to set a nominal anchor for the economy was largely solved. Although the government continued to operate a target for M0 growth, this would clearly have been subordinated to the exchange rate target if the two had ever conflicted. With sterling's departure from the system, however, the government has been forced to search once again for a coherent way of imposing a nominal framework on the economy by using domestic indicators, monetary or otherwise.

This in fact boils down to two separate questions which are often confused. The first is how the government should express the ultimate **objectives** of economic policy. Should it aim solely for a low inflation objective, or should it specifically adopt other macro objectives as well, such as a satisfactory growth rate in GDP, or an improvement in the balance of payments? Second, having decided upon the correct objective for demand management, the subordinate question arises of how to operate monetary/fiscal policy so that this objective is achieved.

The Ultimate Objectives of Policy

First, let us consider the objectives of policy. Ever since 1976 or so, British governments have consistently argued that macroeconomic policy should be aimed solely at the control of inflation over the medium term. This approach stems from a coherent theoretical underpinning. Essentially, it assumes that some form of market-clearing mechanism exists in the macroeconomy, such that there is only one level of unemployment

consistent with stable inflation. If the economy is "shocked" below this unemployment rate, then inflation will not just rise, but will **accelerate** until unemployment returns to its "natural" rate. This implies that the government should aim only to control inflation, since it will be unable to affect the long-run level of output or employment. This result follows straightforwardly from perfect competition assumptions which have tended to underpin some monetarist models of the economy. It also follows from some imperfect competition models which generate a non-accelerating inflation rate of unemployment (NAIRU).

As long as the government believes in this basic framework, then macroeconomic policy is relegated to a matter of technique, since the long-run objective (low inflation) is predetermined. There is no question of having to mix output and inflation objectives in any complicated way. This still leaves considerable room for debate about the appropriate techniques which should be used to ensure that inflation remains low, but these really are second-order questions, where there has been substantial variation over the last 15 years. From the mid-1970s to the mid-1980s, the government basically used domestic monetary targets to attempt to hit its inflation objectives. In the second half of the 1980s, it operated with a mix of monetary and exchange rate targets. From October 1990 to September 1992, membership of the ERM meant that the government was operating an almost pure exchange rate target. Most recently, it has returned to the type of mix which was used in the late-1980s.

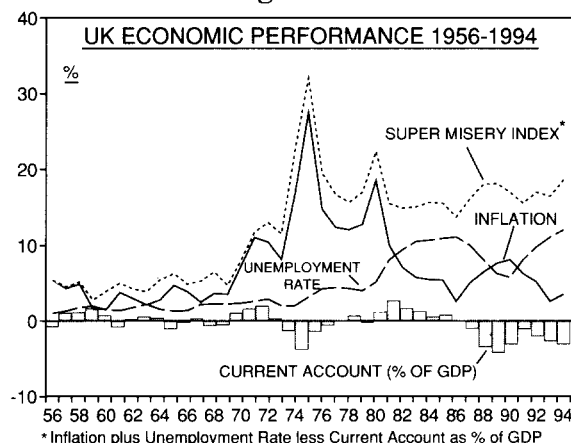
These manoeuvres have been widely criticised by analysts as betraying a deep inconsistency or confusion in economic management, but lying beneath each twist and turn there has in fact been a coherent approach to the economy. This was based on the explicit belief that policy should be aimed only at inflation, and should pay no attention to real growth or unemployment. Any inconsistency was only second order, about means not ends.

In recent years, however, there have been increasing grounds for questioning whether the underlying model on which the government was operating was correct. The longer the recession has dragged on, the more difficult it has been to argue that the output losses associated with any programme of disinflation were only temporary. It has seemed increasingly likely that the recession was not only involving a temporary deviation in output below its trend level, but was **permanently** moving the trend lower.

This can happen in several ways. Increases in unemployment can become permanent as the jobless lose the ability or motivation to enter the labour force. Declines in investment can reduce the capital stock. And the size of the traded goods sector can shrink, making future demand growth unsupportable without a balance of payments crisis.

Many would claim that one or more of these "hysteresis effects" actually occurred in the 1980s, and it is possible that they are happening again now. If so, then the reduction in inflation is being won at the cost of permanent losses in output, which is the very opposite of what the market-clearing model, or its imperfect competition cousins, would imply. Under these circumstances, it makes no sense to ignore the short-term output costs of a disinflationary policy.

Figure 3.3



Almost the first decision taken by the Treasury after leaving the ERM was to set a new inflation objective (a 1-4% target range for retail price inflation excluding mortgages), which was to become the ultimate objective for economic strategy in the new environment. In one sense, this was an unimportant change, since low inflation had long been stated to be the sole objective of macroeconomic policy. But, in another sense, the formal publication of an inflation objective could contain an important signal, implying that the government remains committed to a 1980s-style analysis of the underlying economic framework. Or, at any rate, this would have been the case if the rest of the government's rhetoric had fallen into line with the logic behind the new inflation objective.

So far, this has certainly not happened. For example, although the Prime Minister pays lip service to the inflation target, most of his remarks about economic policy in recent weeks have emphasised the need to regenerate growth in real GDP, which throws open the whole question of what should be the ultimate objective of macroeconomic policy. Furthermore, in his New Year interview with *The Times*, the Chancellor added to the confusion. When asked under what circumstances he would reduce interest rates further, he referred to two criteria: first, whether real GDP growth seemed likely to fall below the 1% forecast for 1993 made by the Treasury in the Autumn Statement; and, second, whether monetary demand and nominal GDP growth were "manifestly too low".

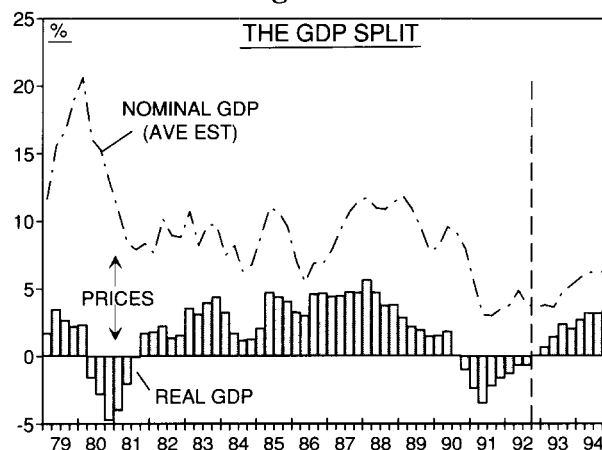
Macroeconomic Policy: Monetary and Exchange Rate Conditions

While these criteria might be perfectly sensible, they do not imply that monetary policy is being set solely to hit an inflation target. Obviously, a real GDP objective is entirely at the opposite end of the policy spectrum. Meanwhile, a target for nominal GDP represents a half-way house, with real GDP and inflation being given equal weights in the government's thinking. (Under a nominal GDP target, 1% extra inflation requires 1% less real GDP growth, and vice versa.)

What are we to conclude from all of this? It only makes sense to assign a 100% weight to inflation as the ultimate objective of policy if the government believes that, in the long run, the level of output is set by supply-side factors, so that GDP and unemployment will be the same, whatever inflation rate is chosen. Under such circumstances, the government might as well choose a low inflation rate as a high rate. However, since there are obvious grounds for questioning whether such a model of the economy is valid (and since, even if it is valid, there might be **temporary** losses in output and employment involved in hitting any inflation target) it would seem more sensible to assign some weight to inflation and unemployment objectives in the setting of macroeconomic policy.

Operating a nominal GDP target implicitly assigns a 50% weight to real GDP, and a 50% weight to inflation, which might be a reasonable rule of thumb. However, at times, it might well be right to assign a much larger weight to either inflation or real growth, depending on which is deviating most from "normal". For example, if growth has recently collapsed, then it might make sense to assign to growth-unemployment objectives virtually a 100% weight in the setting of policy for a while. On the other hand, if inflation has recently risen rapidly, then the control of prices could be assigned a 100% weight.

Figure 3.4



Green Budget 1993

Although this might appear sensible - and is often built-in to "government welfare functions" included in the economic literature - it obviously involves leaving a vast amount of discretion in the hands of the elected government in the setting of economic policy. This could reduce the "credibility" of counter-inflation policy, thus raising long-run price expectations and worsening the trade-off between inflation and unemployment. These considerations are, indeed, the main arguments in favour of "exogenising" monetary policy by putting it in the hands of an independent central bank, or by rejoining the ERM.

It can therefore be seen that, once it is admitted that output and employment are not entirely determined by supply-side factors over the medium term, but are impacted by short-run developments on the demand side as well, the setting of macroeconomic policy objectives becomes far more difficult. It is no longer possible to make a simple dichotomy between inflation and GDP growth, with the former being assigned to macroeconomic demand management, and the latter being assigned to medium-term supply-side policy. Furthermore, a deeper consequence follows from this. If it is not possible to assign monetary policy solely to the control of inflation (because monetary policy has real as well as nominal consequences for the economy), then it becomes much more difficult to take monetary policy out of the political process, finding some form of outside agent to impose a nominal straitjacket on the economy.

This applies whether the outside agent happens to be the exchange rate mechanism or an independent central bank. Putting monetary policy on this sort of "auto pilot" is mainly justifiable on the grounds that the control of inflation is a technical matter of monetary management, with no long-term consequences for output or employment. Once it is admitted that there might be consequences for output and employment, then the setting of monetary policy inherently involves highly politicised trade-offs between prices and jobs, and these are much more difficult to relegate to an "auto pilot" such as the ERM or an independent central bank. Indeed, they are the very stuff of democratic politics.

At present, European governments are reacting in very different ways to these conflicting arguments. In some countries like France and Spain, governments are implicitly acting as if there is a clear dichotomy between monetary and real variables in the economy. They are therefore content to "exogenise" the setting of monetary policy, on the grounds that this will keep inflation under control without incurring medium-term output costs. This kind of thinking underpins both the commitment to ERM membership, and the shift to an independent central bank, to which both France and Spain have committed themselves during 1993.

In Britain, on the other hand, there is no longer much willingness to "exogenise" monetary policy in this way. The ERM is now off the agenda, and an independent central bank has never been seriously on it. And although, in theory, the government is committed only to an inflation target, with no mention of growth or employment objectives, this is clearly

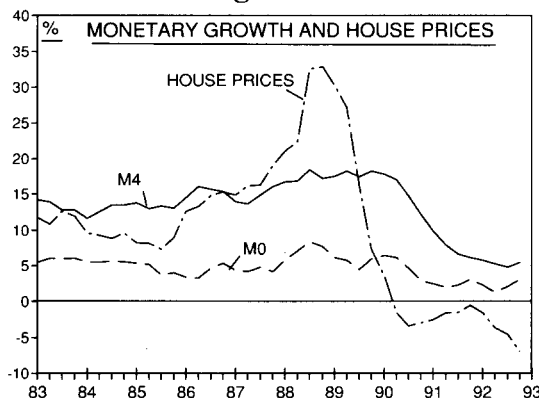
not what is happening in practice. Elected politicians are happy to have regained control of all the instruments of macroeconomic management, and they intend to operate them in a wholly pragmatic way.

The Techniques of Monetary Policy

Turning to the techniques of monetary policy, the government also needs to decide how to assign weights to various domestic monetary aggregates, the exchange rate and other variables in making its assessment of "monetary conditions". Whatever the ultimate objective of policy - whether it is inflation, nominal GDP or real activity - it is useful to take such information into account in the setting of short-term interest rates, which at the end of the day are the only **instrument** of monetary policy available to the government.

On these issues, the Chancellor has, as noted above, moved back to a formulation of policy closely in line with that which was followed in the middle of the 1980s. He insists that he will continue to give "full weight" to the exchange rate in assessing monetary conditions, but swiftly adds that he has not set a formal "target range" for sterling. In addition, the Chancellor will be monitoring a wide range of domestic monetary and asset price indicators. The official target range for M0 has been left at 0-4%, and there is now a "monitoring range" of 4-8% for M4 growth. It is not clear precisely what is the difference between a "target" and a "monitoring" range for the setting of policy; nor is it clear how the Chancellor would respond if these monetary indicators moved in a markedly different direction from the exchange rate, or the asset price indicators which he is also monitoring.

Figure 3.5



Green Budget 1993

In Table 3.2, we show a stylised presentation from Goldman Sachs of the varying weights which appear to have been attached to the indicators used by the authorities to interpret monetary conditions since 1980-81.

Essentially, the current formulation of policy appears to give approximately equal weight to the exchange rate and domestic monetary indicators, with narrow money being accorded a rather larger weight than broad money. This is essentially what was done in the late-1980s, though the present formulation probably gives slightly greater weight to house prices, share prices and the shape of the yield curve than Chancellor Lawson did five years ago.

Table 3.2. Assessing Monetary Conditions^a

Percentage Weights ^b	Broad Money	Narrow Money	Exchange Rate	Other ^c	Total
1980-81	85	0	10	5	100
1981-82	75	10	10	5	100
1982-83	45	25	25	5	100
1983-84	35	30	30	5	100
1984-85	30	30	35	5	100
1985-86	30	30	35	5	100
1986-87	25	30	40	5	100
1987-88	5	30	60	5	100
1988-89	5	20	70	5	100
1989-90	5	40	50	5	100
1990-91	5	10	80	5	100
1991-92	0	0	100	0	100
1992-93					
-pre 16 Sept	0	0	100	0	100
-post 16 Sept	15	25	40	20	100

Notes: ^aThe table shows an assessment of the weights which the authorities have attached at various times to different monetary variables in the setting of interest rate policy. Current policy is similar to that which was followed in the mid-1980s, though house prices are now playing a larger role.

^bGoldman Sachs estimates.

^cIncluding house prices, share prices, real interest rates, shape of the yield curve.

It is obvious that the current formulation for monetary policy offers almost total flexibility for the Chancellor to come to any judgement he chooses on the appropriate level for base rates. Complete pragmatism has, within one year, replaced the complete rigidity of the exchange rate mechanism. Furthermore, as we noted above, this pragmatism extends to both the ultimate objectives of policy (where there is nowadays clearly a pragmatic mix between real growth and inflation objectives) and the intermediate indicators (where there is a pragmatic mix between domestic monetary targets, the exchange rate and other indicators of monetary conditions).

The advantage of such a pragmatic approach is that the government is no longer putting all of its monetary eggs in one basket. However, the obvious disadvantage is that the absence of formal monetary rules could allow well-meaning politicians to make similar mistakes to those which were made by Chancellor Lawson in the late-1980s. This risk has led many economic commentators to seek a more rigid, or at least more transparent, framework for monetary policy to replace the ERM. In some quarters, this has led to demands to make the Bank of England independent. Alternatively, it has been suggested that more formal weights should be attached to the various indicators of monetary conditions, either by producing "divisia" indices of domestic monetary growth, or by using econometric techniques to assign formal weights to domestic monetary aggregates, the exchange rate etc. according to the effects of each of these variables on inflation or nominal demand.

Some of these ideas may turn out to have merit, though "divisia" indices and various econometric methods of deriving "monetary tightness indices" are subject to severe technical problems which may make them impractical. Furthermore, it seems very doubtful whether such indicators really add very much of value to the policy process. At the end of the day, if the government is to set policy to control inflation, then it should base its monetary policy on the best assessment it can make of inflation prospects in the next year or two. This surely comes from the output of a full macroeconomic model and not from any subset of information, such as a monetary tightness index.

In any case, the government has now clearly embarked on a course which does **not** include any of these more formal alternatives in its plans. Having been burned by tying its hands so firmly into a fixed nominal regime (the ERM), there has now been a revulsion from such methods. A few years ago, Chancellor Lawson told the Treasury Select Committee that base rates would take whatever level he, the Chancellor, deemed suitable, after taking all available information into account. This adequately describes the formulation of monetary policy in the post-ERM world.

3.4 Conclusion

British ministers have now moved from a situation of no control over domestic monetary policy to a position of absolute control. This may have advantages, in view of the fact that it no longer seems possible to claim with conviction that inflation should be the only concern of macroeconomic management. On the other hand, earlier experience has suggested that if monetary policy is left wholly in the hands of elected politicians, there can be a systematic inflationary bias over time. If the private sector **expects** this to be a problem, then it **will** be a problem, since interest rates on long-term debt will stay high, and the short-run trade-off between inflation and unemployment could deteriorate.

Green Budget 1993

Perhaps what is needed is a compromise solution which lies somewhere in between the ERM/independent central bank solution, and the 100% pragmatism solution which is now in place in Britain. This may be the intention behind the Chancellor's desire to make the policy process more transparent, and the Treasury more subject to outside influence. The Independent Forecasting Panel (known as the "seven wise men"), and the Bank of England's independent quarterly report on inflation prospects, could provide some modest check on the ability of politicians to inject an inflationary medium-term bias into monetary policy. Further steps in this direction may be necessary if the government is determined to stay outside the ERM, and to step aside from any European progress towards full monetary union.

Meanwhile, the complete freedom which the government intends to maintain for the time being in the setting of both exchange rate and monetary policy will enable the government to "rebalance" the stance of fiscal and monetary policy in the next couple of years, if it so wishes. How much it chooses to move in this direction will depend largely on its assessment of the extent of the "twin deficit" problem, and the next Chapter discusses this in detail.

4 The Economy in the Medium Term

4.1 Introduction

Following the significant easing in policy that has taken place since Britain left the ERM, the government should clearly now be worried less about the **likelihood** of a recovery in domestic demand, which can if necessary be generated by further base rate cuts, and should be more worried about its **sustainability**. This concern arises for two reasons. First, despite the depth and longevity of the recession, and the existence of considerable slack in the economy at present, the recent sterling devaluation has raised concerns that inflation may soon move above the government's 1-4% target band (for the RPI excluding mortgages). Second, the UK is most unusually still running a current account deficit in the depths of recession. It is normal during the upswing for domestic demand to grow more rapidly than GDP, so that the current account deteriorates. If this happens in the next few years, the balance of payments position would worsen from an already very adverse starting point, and such a worsening could rapidly become unfinanceable.

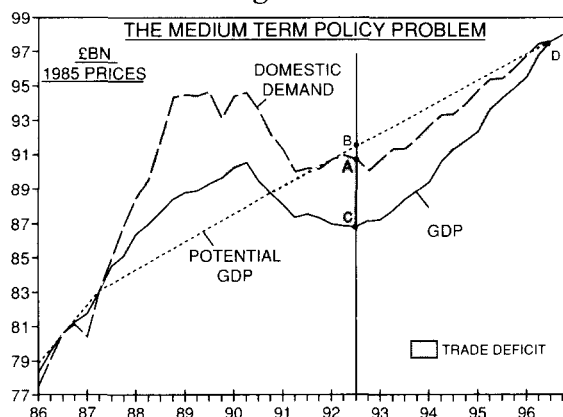
The problem, therefore, is whether the economy can grow quickly enough to take up idle resources without creating either a rise in inflation or an unsustainable balance of payments position. If it cannot, the UK will be consigned to exceptionally high unemployment - and nightmarish problems with the public finances - over the medium term.

4.2 The Policy Problem

The government's medium-term policy problem is sketched out in simple terms in the graph below. This shows how domestic demand, actual GDP (i.e. the total output of the economy) and potential GDP have behaved in the last few years. By definition, Britain's net trade position, measured in volume terms, is equal to the difference between domestic demand and actual GDP, shown as AC in the graph. Changes in AC are therefore highly correlated with changes in the current account of the balance of payments. (Since the latter is measured at current prices, and since it includes interest and transfer payments as well as the trade in goods and services, it is not identical to AC, but it is close enough for our present purposes.) The government therefore needs to reduce AC over the medium term by ensuring that domestic demand grows more slowly than GDP.

The graph also tells us something about inflation, unemployment and the PSBR. The level of unemployment will mainly be determined by the gap between actual and potential GDP, shown as BC. In a recession, when actual GDP falls below potential, unemployment will rise above its "natural" rate, and inflation pressures will subside. Furthermore, when

Figure 4.1



output drops below potential, there will be a tendency for the PSBR to rise for cyclical reasons. The non-cyclical or "structural" element of the PSBR can only be measured when output is at potential. By the time the economy returns to its productive potential at point D, the government should aim to have reduced the "structural" PSBR to the level it deems consistent with a sustainable path for government debt over the medium term. (Of course it is possible in theory that the path for debt might become unsustainable while the economy is moving from C to D, but the present level of government debt/GDP in the UK is low enough to make this appear unlikely.)

In the medium term, the government's policy objectives must be fourfold. First, it must attempt to close the gap between actual and potential GDP (BC) so that unemployment can come down. Second, it must not allow actual GDP to grow so rapidly that inflation rises as the gap between actual and potential GDP is narrowed. Third, it must encourage a recovery in GDP while simultaneously narrowing, or at worst maintaining, the gap between GDP and domestic demand (AC). In other words, domestic demand must not be allowed to rise faster over the next few years than GDP. Fourth, it must ensure that the PSBR drops to a sustainable level by the time that output has returned to its potential level, and that outstanding government debt does not get out of control in the meantime. A fifth objective - to increase the rate of growth in potential GDP - is the most important of all, but it takes us well outside the scope of the policy instruments discussed in this chapter.

As we noted in Chapter 3, these medium-term policy objectives would have been the same whether Britain was inside or outside the ERM. Had Britain remained within the ERM the growth of domestic demand would have been constrained by real interest rates remaining relatively high, helping to curb import volume growth. Downward pressure on inflation would also have been maintained, leading to a steady improvement in competitiveness which in turn would have helped to boost exports. The government's game plan for adjustment within the ERM would

presumably have followed the path traced out by Denmark in recent years. Since 1986 domestic demand in Denmark has stagnated; GDP growth has averaged 1% a year over this period which in turn has led to a steady reduction in inflation and a substantial turnaround in the current account from a record deficit of 5.4% of GDP in 1986 to an estimated surplus of 2.5% of GDP in 1992.

Textbook Solutions

Now that the UK is outside the ERM, the most obvious textbook solution to an impending problem of this sort would be to constrain domestic demand growth by tightening fiscal policy while easing monetary policy to permit a further drop in the exchange rate. This should then produce an export-led recovery, which would simultaneously cut the PSBR while protecting the balance of payments position. Provided that the pace of recovery in GDP is properly controlled by the use of the fiscal weapon, there is a reasonable chance that the inflationary effects of devaluation can be suppressed, at least for a time.

However, while it is easy to state the government's problem in these broad terms, it is far harder actually to implement the suggested game plan in practice, since virtually every step of the process is subject to great uncertainty. The remainder of this chapter examines the following major sources of uncertainty:

- (i) How much slack is there in the economy to be taken up? In other words, how large is the gap BC in Figure 4.1? And what is the potential rate of growth in the economy over the medium term? This determines the slope of the line BD.
- (ii) Can the gap between actual and potential GDP be closed without a widening in the gap between GDP and domestic demand? In other words, can the economy grow quickly enough to take up the slack without running into balance of payments problems?
- (iii) Can the gap between actual and potential GDP be narrowed without this leading to inflation rising above the government's target range?

In the following chapter we assess the current and likely future level of the PSBR, and ask whether the PSBR be financed satisfactorily in the meantime, and what level of "structural" budget deficit the government should aim for.

4.3 The Output Gap and Growth in Productive Potential

The starting point for any analysis must be to determine where the economy is at now relative to its potential since the size of this output gap gives an indication of how fast and for how long the economy can grow before running into renewed problems with inflation. There are various ways of calculating the output gap. One method which both the Treasury and Goldman Sachs have used frequently in the past is to use the information contained in the CSO's coincident cyclical indicator.¹ Readings above 100 on the coincident indicator are intended to indicate that the economy is above its long-term trend while readings below 100 indicate that it is below its long-term trend.

Using this approach, the output gap is now of the order of 6%, and it could well rise to 7% in the course of 1993. This is in line with the estimate recently produced by the OECD in its December 1992 Economic Outlook, and also seems close to the figure the Prime Minister had in mind when he was talking recently about the impact of recession on the PSBR.

Erosion of Capacity

However, it is certainly arguable that this method is generating implausibly large estimates of the size of the output gap that currently exists. In previous economic downswings during the post-war period, the output gap has never exceeded 3%, even during the deep recessions of 1974-75 and 1980-81. It seems very unlikely, despite the severity of the current recession, that the output gap is now double that recorded during those previous deep recessions. Rather, it is likely that once the output gap reaches a certain size, firms scrap capacity in order to tailor production needs more closely to expected demand. Furthermore, the experience of the 1980s suggests that many long-term unemployed workers in effect leave the labour force during the recession, and never re-join it during the recovery.

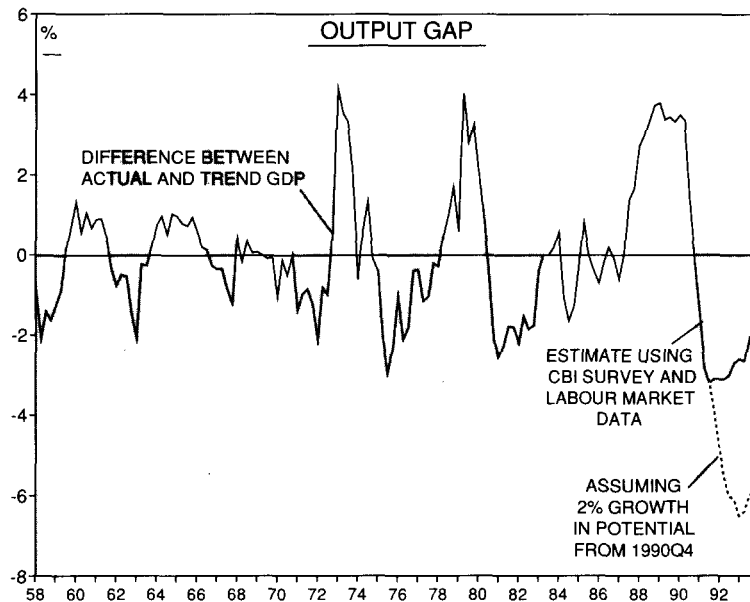
Unfortunately, there is no reliable way of estimating how large these "hysteresis" effects are until economic activity next recovers sufficiently to test its productive potential. In particular, official estimates of how much plant and equipment is scrapped in any given period are notoriously arbitrary and unreliable. Perhaps the best that can be done is to use other

¹To calculate the output gap, we first need to construct a series for potential GDP. Whenever the coincident indicator equals 100, we set actual GDP equal to trend GDP to establish benchmarks at which the economy is on trend. These points can then be linked to provide a continuous estimate of potential GDP. It is then straightforward to calculate deviations between this series and actual GDP to give an indication of the output gap. A problem with this approach is how to judge the evolution of potential GDP, and hence the output gap, beyond the point at which the economy was last recorded as being on trend. (The CSO currently estimates that the economy was last on trend in the fourth quarter of 1990.) One way is simply to extrapolate potential GDP at a constant rate, say at an annual rate of 2.5% per annum.

The Economy in the Medium Term

statistical information which has in the past been correlated with the output gap to produce an estimate of how the gap has changed since 1990. Information which is relevant in this regard includes labour market data and the CBI survey on capacity utilisation. A recent study of these data by Goldman Sachs concludes that the output gap may have stopped rising in mid-1991, since when firms may have been reducing capacity in line with actual output. According to this study, the current level of the output gap may be about 3%, about half the level estimated by the OECD. It could be slightly higher, say 3-4%, in 1993. However, what seems apparent above all else from these various studies is that there is an immense degree of uncertainty surrounding any estimate of the output gap at present, and this should be taken into account in the formulation of policy.

Figure 4.2



Growth in Productive Potential

Going forward, it is important to consider how fast productive potential might expand. Only then can we try to analyse how actual output is likely to behave relative to potential output over the next few years. There are essentially two methods commonly used by economists to assess the trend rate of growth in productive potential. The first is simply to take past growth rates in output, and to assume that these will be extrapolated into the future.

For example, the growth rate in real GDP between the 1979 cyclical peak and the 1988 peak was 2.2% a year; alternatively, the growth rate between the cyclical trough in 1981 and that in 1992 was also 2.2% a year. These figures lie somewhere between the relatively low trend growth rates

Green Budget 1993

achieved in the 1970s and the much higher rates achieved in the late 1960s. (From 1973 to 1979 the growth rate was just 1.7% a year while from 1964 to 1973 trend growth averaged 3.0% a year.) In fact, growth over the last cycle was not far short of the figure of 2.4% a year which has been achieved throughout the whole of the post-war period.

A more sophisticated way of estimating the trend growth rate is to make direct estimates of the behaviour of potential output, which is generally defined as the maximum level of output consistent with stable inflation. Both the OECD and the IMF attempt to do this on a regular basis for all of the major developed economies.¹

These calculations generally suggest that potential output in the UK might grow by about 2.5% a year from 1991 to 1996, which would be a little higher than was achieved on average during the 1980s. However, none of these estimates take account of the potential balance of payments constraint on the UK economy. There is no doubt that the current account deficit in 1992 was unusually large for the trough of a business cycle. This suggests that the trend rate of growth during the 1980s might have been artificially boosted to some extent by an ability to import resources from overseas. This not only "relaxed" the balance of payments constraint on the economy for a while, but also held the real exchange rate higher than otherwise would have been possible, and thus kept the rate of inflation "artificially" low. In both these ways, the importing of resources from overseas boosted the trend rate of growth of output. If it is not possible to import similar resources during the 1990s, then it would be prudent to plan on a somewhat lower growth rate of potential output from 1993 onwards. To allow for this, we assume in our analysis that potential output grows at an annualised rate of 2% p.a. from the beginning of 1993.

In order to produce an initial estimate of the possible rate of GDP growth over the medium term, we can bring together the two components discussed above: first, we assume that real GDP will be about 3-4% below potential in 1993, and second we assume that potential GDP will from now on grow by 2% p.a. If we make the further assumption that the economy will eliminate the current margin of spare capacity in four equal steps from 1994 to 1997, we derive our central estimate for growth in real GDP over the medium term. The growth rate rises from 1.8% in 1993-94 (Goldman Sachs' short-term forecast) to 3% p.a. in each of the following 4 years. The economy is assumed to return to normal capacity working by 1997-98.

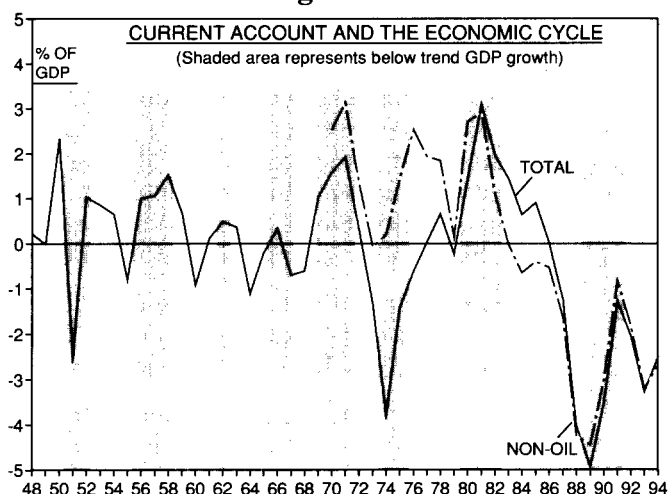
¹The framework is as follows. Equations for wage inflation and price inflation are used to calculate the NAIRU, which is the minimum level of unemployment consistent with stable inflation. These critical unemployment rates are then used to calculate the growth in business sector potential employment; and the resulting employment figures are combined with estimates of the capital stock to explain total output (via a production function). Technical progress is generally estimated by adding a trend term to these equations.

This is all very well, but these calculations sidestep two crucial questions mentioned earlier. First, can this growth rate be attained without a serious deterioration in the balance of payments? Second, would such a growth rate trigger an unacceptable increase in inflation?

4.4 The Balance of Payments Constraint

There have been five previous episodes in the post-war period in which GDP has fallen below trend and then recovered. The duration of these periods of below trend activity has varied considerably from around 6-9 quarters in the 1960s and early 1970s to around 12-14 quarters in the mid-1970s and early 1980s. Given the exceptionally depressed starting point for GDP this time, there are grounds for hoping that the forthcoming upswing will be of relatively lengthy duration. However, it is difficult to overlook the fact that in four of the last five recovery periods the current account has deteriorated markedly as domestic demand grew faster than GDP.

Figure 4.3



The exception to this rule in fact came in the mid-1970s, when on most other criteria the economy was behaving extremely poorly. Between the trough in economic activity in 1975Q3 and the beginning of 1978, when GDP got back to trend, there was a marked improvement in the current account from an underlying deficit of 1.5% of GDP to a surplus of around 0.75% of GDP.

A number of developments occurred during this period. First, from the beginning of 1972 to the end of 1976, sterling depreciated by almost 50% on a trade weighted basis, leading to a 20% improvement in competitiveness over this period. This substantial improvement in competitiveness occurred at a time when the world economy was moving

into a sharp cyclical upswing with OECD GNP growth averaging 4.2% a year from 1976 to 1978. During 1977 the stance of policy also moved towards a much easier monetary policy - the Bank of England's minimum lending rate fell to a low of 5% in October 1977 - and a much tougher budgetary stance. According to the OECD, the cyclically adjusted budgetary stance tightened by 1.6% of GDP in 1977. This helped to curb domestic demand growth while net trade volumes were given a tremendous boost by the upswing in world economic activity and the very favourable competitive position of UK exporters.

The point is that no trends in the economy are inexorable. The course of the balance of payments over the next few years is not set on some pre-determined 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 Britain's control, but some of them can be affected by the setting of macroeconomic and microeconomic policy at home.

Growth and the Current Account

Many estimates have been made about the possible path for the current account if the economy grows at about 3% p.a. over the medium term. These estimates are subject to such great uncertainty that it is certainly questionable whether they can sensibly be used as the basis for policy. Relatively small changes in Britain's share of world trade, or in the propensity to import, can make huge differences to the path for the current account over the medium term. This has been amply demonstrated over the past 12 months, when the deterioration in the underlying current account position (see Chapter 3) has made a considerable difference to many economists' assessment of the medium-term policy predicament.

However, despite these uncertainties, some broad patterns tend to emerge in most studies of the current account. One recent study by Goldman Sachs reached the following conclusions, which are fairly typical:

- (i) If competitiveness remains unchanged, then UK GDP needs to grow at least 1% less rapidly than the OECD average to keep the current account deficit roughly unchanged. If the OECD grows on trend at 3% a year, this permits annual growth of under 2% in the UK without a trend worsening in the current account.
- (ii) 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 from deteriorating.

What does this imply for the medium-term path for output and trade in the economy? First, it should also be remembered that global economic activity is currently below trend and that this has depressed UK export markets. Over the last economic cycle, OECD GDP growth averaged around 2.75% a year (2.5% a year from peak to peak between 1978-88 and 3% a year from trough to trough between 1982-91). In 1991 and 1992,

The Economy in the Medium Term

growth in the major developed economies has averaged just 0.5% and 1.5% respectively. It seems reasonable to believe that the OECD will experience a period of above trend growth during the next few years, perhaps averaging 3.5% a year during the next four years.

To see what this assumption about world economic growth implies for the UK balance of payments, Goldman Sachs has undertaken two simple simulations. The first is to ask what growth rate of UK GDP would be consistent with a broadly stable balance of payments position on the assumption of unchanged competitiveness. The second is to ask what level of competitiveness is required to achieve a target GDP growth rate of, say, 3% a year while again leaving the balance of payments broadly stable.

The results of these two exercises are shown in the accompanying graphs. In both graphs, the left hand scale shows the ratio of non-oil import volume to non-oil export volume (using the CSO's published trade indices with a base date of 1985=100). Changes in this ratio are the dominant cause of changes in the current account. In 1992, with a current account deficit just below 2% of GDP, this ratio stood at about 104. A reasonable target for this ratio would be somewhere around 100-104, consistent with a current account deficit of 1-2% of GDP.

The first graph makes the assumption that competitiveness is unchanged from current levels and shows what growth rate in GDP is consistent with a sustainable medium-term balance of payments position (again defined as a deficit of around 1-2% of GDP on the current account). On Goldman Sachs' calculations, allowing for the further adverse effects on trade that are likely to come in next two years from the worsening in competitiveness which occurred in 1992, a maximum growth rate in GDP of 1.5-1.75% is all that is likely to prove feasible. Furthermore, this is based on the optimistic assumption of OECD growth averaging 3.5% a year.

Competitiveness

The second graph shows projections for the import/export ratio for different levels of competitiveness with growth in GDP of 3% a year. To secure the necessary reduction in the ratio over the medium term on this growth rate requires a further boost to competitiveness of around 10% from current levels. A further 10% gain in competitiveness would take sterling's real effective exchange rate to its most competitive position since the late 1970s.

How is the government likely to respond to calculations of this sort? It seems most **unlikely** to respond by actively seeking a further 10% decline in the exchange rate from current levels in the near future. Apart from the inherent uncertainty in all calculations of this type, the main reason for this is that the sterling depreciation of almost 15% which has already occurred has imparted a significant inflationary shock to the system, and it is advisable to see how this is absorbed before attempting any further devaluation.

Figure 4.4

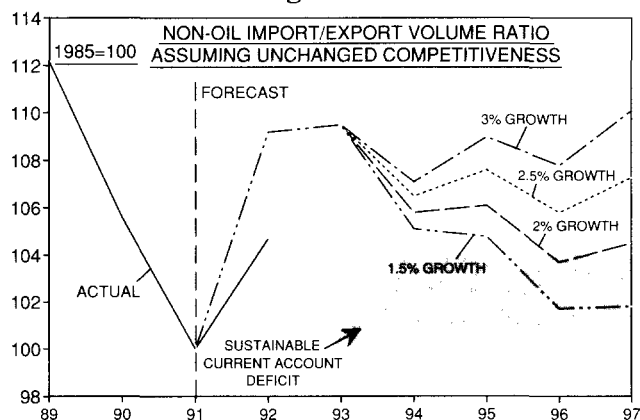
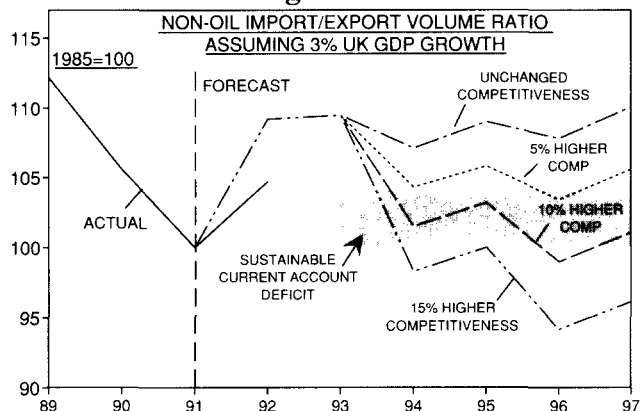


Figure 4.5



It is indeed possible that the government will oppose any further devaluation of the exchange rate for quite some while, if not indefinitely. It can be argued that the improvement in UK exporting performance in the past few years might make the trade account more responsive to a gain in competitiveness than would be implied by the models estimated on earlier data. It can also be argued, as usual, that there are good reasons for believing that the present state of the current account deficit is not as bad as it appears from the official data, and/or that a widening deficit may be surprisingly easy to finance over the medium term.

Financing the Deficit

The main reason for hoping that the current account deficit may not be as bad as it looks is that there is an unexplained residual in the balance of payments accounts amounting to about £10 billion in 1992 which could be consistent with unrecorded net exports of goods and services. Furthermore, the world as a whole is currently reporting a global current account deficit of more than \$100 billion a year. Part of this seems likely to be due to

The Economy in the Medium Term

unrecorded exports of services from the UK. However, while these points should not be entirely overlooked, the fact is that revisions to the balance of payments residual in recent years have generally come on the capital side of the accounts, leaving initial estimates of the current account barely changed. It seems most unlikely that misrecording of trade flows is sufficiently important to change the above medium-term calculations by more than a small amount.

On the financing of the current account deficit, several points are relevant. First, sizeable inflows of capital in the form of direct investment from Japan seem set to continue, and this will "automatically" finance part of the current account deficit. Second, capital gains on UK overseas assets are running at about 1% of GDP each year, so a current account deficit of this size can be run without reducing net overseas assets. Third, part of the reason why the current account deficit is unusually large during the present recession is that business sector investment at home has remained unusually high; this means that there is a build-up of productive assets at home to offset the rundown in net portfolio assets overseas as the current account deficit is financed.

Unfortunately, these arguments have an all too familiar ring, since they were used by Chancellor Lawson in the late 1980s to excuse the appearance of a large current account deficit at that time. They did not prevent this deficit becoming extremely hard to finance, except via short-term capital inflows seeking very high rates of interest in the UK. Furthermore, at that time it could be argued that the current account deficit was the counterpart only of a large private sector financial deficit, with no role being played by the public sector. This factor, which might have made the current account deficit in the late 1980s less troubling, no longer applies.

It would be very optimistic of the government to conclude from these arguments that the current account deficit will not prove to be a problem if the UK economy achieves a satisfactory GDP growth rate 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 recovery, simply because the starting position for the current account deficit was so much stronger in 1981 than it is now. At the very least, the government should seek to prevent the present level of competitiveness from being eroded by an exchange rate appreciation during the recovery in UK activity. More likely, the government should bias policy in the direction of achieving further gains to competitiveness as and when it becomes confident that wage increases are not responding to the devaluation shock (see below).

Of course, the most depressing feature of the current account deficit which has become most apparent in recent years is the long-term tendency for the deficit to worsen over time at any given level of unemployment. This inexorable worsening from one cycle to another is no doubt simply part of the trend relative decline in the UK economy, which no government has yet been able to reverse. Exchange rate changes have never been sufficient

in the past to arrest this trend deterioration in British economic performance, and there is no reason to believe that they will be sufficient this time either. Devaluation may buy a little time in which to address the more fundamental problems of the economy, but it does nothing more.

4.5 The Inflation Constraint

One reason why devaluations have generally not "worked" in the past is that the beneficial effects of a decline in the nominal exchange rate on UK competitiveness have been fully eroded over 4 or 5 years by a pick-up in UK inflation. Because of the responsiveness of wages to increases in retail prices, and because of the responsiveness of the latter to increases in import prices, the real exchange rate has usually reverted quite quickly to its starting point following a decline in the nominal exchange rate. If the same happens again this time, then the recent devaluation will be an abject failure, and it will be most unclear how the economy can achieve a satisfactory growth rate over the medium term. It will be similarly unclear how the ratio of government debt/GDP can be controlled without massive tax increases. There is therefore a great deal riding on this devaluation proving successful.

Standard simulations on econometric models are not very encouraging. For example, according to average results of simulations on the LBS and NIESR models (using the versions of the models most recently released to the ESRC Macroeconomic Modelling Bureau at Warwick University), a 15% devaluation will add about 2% to inflation in 1994, and about 3-4% per annum in each of the next 3 years. This would eliminate all of the competitive gains from the devaluation by the fifth year - which explains why the same models show the devaluation having virtually no beneficial effects on the current account, even over the medium term.

Fortunately, however, there are grounds for hoping that these standard simulation results may be somewhat too pessimistic in current circumstances, at least in the period immediately following devaluation. As explained above, there is an unprecedented margin of spare capacity in the economy at present, and the labour market remains extremely weak. There seems to be a much better chance than usual that the adverse effects of the devaluation on inflation will, for a time, be dampened by two factors. First, the pass-through of the devaluation effects into import prices, and from there into domestic prices, may be dampened by declines in profit margins. Second, the pass-through from retail prices to wage costs may be dampened by the continuing impact of very high unemployment on wage deals.

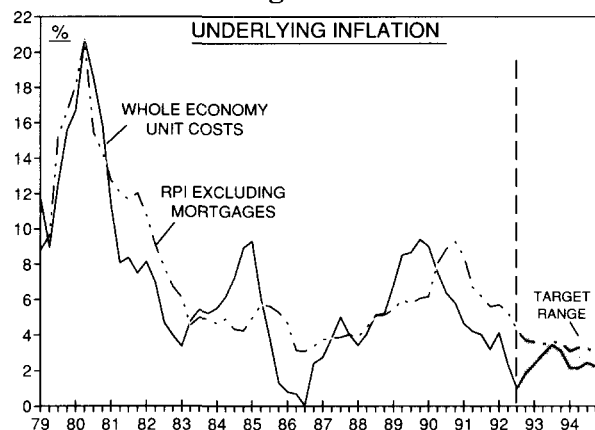
The experience of the large devaluation in sterling which occurred in 1981-83 is interesting, since this had no immediate adverse effects on either price inflation or on wage deals. Furthermore, in each of the last 5 upswings in GDP, price inflation has continued to decline for at least the first two years of the recovery phase as gains in productivity have

The Economy in the Medium Term

accelerated and wage increases have remained very subdued. Therefore it would be quite surprising if underlying inflation rose markedly in the next two years.

Recently estimated models of the inflation process at Goldman Sachs, designed to examine whether the adverse effects of devaluation on inflation will outweigh the beneficial effects of the domestic recession, have concluded the following. First, there will be some pass-through effects from the devaluation this year, which are likely to keep the underlying rate of price inflation in a 3-4% range for most of the year. Second, a downward trend for underlying inflation should be resumed in 1994 **on the crucial assumption that increases in wage costs in the 1993-94 wage round remain low.** (At present, basic wage increases are running at about 3.5% in the private sector, and the government is attempting to impose a 1.5% increase on public sector wage bills this year. With productivity likely to grow by 3-4% in the whole economy this year, overall wage costs may be barely changed.)

Figure 4.6



The basic conclusion from this work is that the long-term effects of the devaluation on inflation might indeed be quite large, but these will take effect only over a very long time horizon, and that they will be relative to an exceptionally low base. Underlying inflation is likely to be close enough to the government's 1-4% target band over the next two years for other problems - such as the trade deficit and the PSBR - to take precedence in the formulation of policy. To be clear about the nature of the policy problem facing government we therefore need to look in some detail at the likely level of the PSBR in the short and medium term, and it is to this that we turn in Chapter 5.

5 Public Finances and Budgetary Policy

5.1 Introduction

The description in Chapter 4 of the British economic predicament will be uppermost in the Chancellor's mind as he makes plans for the government finances. The last four years have seen a rapid and dramatic deterioration in the state of the public sector finances. The three years of surplus that closed the 1980s look set to be followed by many more years of deficit, with the PSBR as a share of GDP moving towards the level seen in 1975-76 which precipitated the calling-in of the IMF. Much of the deficit, some two-thirds according to the Prime Minister, is attributable to recession, but a substantial portion of the deficit is simply the result of tax cuts and public spending increases that have been implemented in the last half decade. In the FSBR in March the Chancellor will be forced to make public forecasts for the PSBR which show it remaining high for some time to come.

We begin this chapter with our own forecasts of the PSBR in 1992-93 and 1993-94. We then extend these to 1997-98 assuming that current tax and spending policies are unchanged. With these views of the public finances as background we discuss the sustainability of such levels of debt, and in particular the implications of our calculations for policy in both the March and December Budgets.

5.2 The Public Finances in the Short Term

The PSBR in 1992-93

By December of last year, the PSBR (excluding privatisation proceeds) had already reached £32bn, a substantial deterioration on last year's pattern. Simple extrapolation of the monthly revenue figures, based on past experience of seasonal flows, points to a PSBR of around £38bn this year. This would be a disappointing outcome, given the £28bn forecast at Budget time last year.

What accounts for the overshoot? Although the government forecast that it would meet its new control total in the Autumn Statement, general government expenditure was expected to be £2bn larger than planned. The overspend was predicted to be £1.5bn each on local authority spending, cyclical social security and central government spending, with some offset from the allocation of the reserve. The extra cost of cyclical social security arises from the 2.82m average unemployment assumed, rather than the 2.4m assumption in the Budget.

On the revenue side, weaker activity has depressed receipts. The Autumn Statement predicted a £6.5bn shortfall. Higher unemployment and lower consumer spending are the principal reasons for £2bn each less expected from income tax and corporation tax and £3.7bn less from Customs and Excise receipts. Together these added £8.7bn to the Budget day target. Three-quarters of the overshoot predicted last November was accounted for by revenue shortfalls, and one quarter by overspending.

Table 5.1 shows our public finance forecasts for 1992-93 and 1993-94. Seasoned Budget-watchers will recognise this table; it is what we expect to see in Table 1.1 at the front of the Budget Red Book. Our forecasts are slightly worse than the Autumn Statement predictions; we predict a PSBR of £38bn, or nearly £10bn more than at Budget time last year. This is of course subject to error: the range of our economic assumptions point to an error of £1bn; in the last ten Green Budgets we have on average been £3bn out.

The PSBR in 1993-94

Next year we expect the PSBR to rise further, to a total of £54 billion on unchanged policies.¹ Compared with last year's Red Book, the government's latest spending plans show a £2bn overshoot in general government expenditure, mainly accounted for by extra local authority self-financed spending again, and cyclical social security. But much more serious is what is likely to happen to revenues: we forecast that they will be £20bn less than shown in the 1992 Red Book. Overall then, borrowing will be £22bn higher next year than was thought last March.

The size of the PSBR is of course a result of the continuation of the recession. Money GDP next year is likely to be more than £30bn less than was anticipated in the last Budget, with significant revenue consequences. Economic developments next year are again uncertain. We have assumed GDP will be up 1.8%, with unemployment increasing further, retail price inflation down to 2.5% and earnings growth falling further to 5%. What would happen to the public finances if consumers' expenditure were more or less buoyant than we assume or unemployment increased more or less rapidly? The sensitivity of tax accruals to our main working assumptions is shown in Table 5.2, which also shows our base assumptions for changes next year. An extra percentage point of GDP - some £6bn of output - results directly in just over £3bn of extra revenue. Wage growth affects revenues by more than employment growth, because average tax rates on earnings are lower than marginal rates. Conversely, 1% growth in consumer prices raises less revenue than a 1% rise in spending, because one third of indirect tax revenues comes from specific (as opposed to *ad valorem*) excise duties.

¹Our "unchanged policy" prediction assumes that spending targets are achieved and taxes are unaltered apart from already announced changes and the indexation of income tax allowances and thresholds and the revalorisation of excise duties.

Green Budget 1993

Table 5.1. The Public Finances 1992-93 and 1993-94

£bn	1992-93		1993-94
	1992 Budget	Latest Estimate	
Income tax	59.6	57.4	58.3
Corporation tax	16.8	14.6	15.0
Petroleum revenue tax	0.1	0.1	0.1
Capital gains tax	1.1	1.0	1.0
Inheritance tax	1.3	1.2	1.2
Stamp duties	1.5	1.4	1.4
Total Inland Revenue	80.4	75.7	77.1
VAT	40.0	37.8	39.3
Petrol	11.8	11.3	11.8
Tobacco	6.6	6.2	6.4
Alcohol	5.3	5.0	5.2
Betting and gaming	1.1	1.0	1.0
Car tax	0.7	0.3	0.0
Customs duties	1.9	1.8	1.8
Agricultural levies	0.0	0.0	0.0
Total Customs and Excise	67.4	63.4	65.5
Vehicle excise duties	3.2	3.2	3.2
Oil royalties	0.5	0.5	0.5
Rates	14.1	14.1	14.8
Other taxes and royalties	4.1	4.1	4.2
Total taxes and royalties	169.8	161.0	165.4
National Insurance contributions	38.7	37.5	39.1
Community charge	8.0	8.0	8.2
Interest and dividends	5.5	5.0	5.1
Other receipts	7.7	10.7	8.7
General government receipts excluding privatisation	229.8	222.2	226.5
Central government own expenditure	157.2	158.7	166.1
Central government support for LAs	58.5	58.9	58.7
Local authority self-financed	9.5	10.9	11.1
Public corporations	3.4	3.4	3.9
Reserve	4.0	0.1	4.0
New control total	232.5	232.0	243.8
Cyclical social security	11.5	13.0	15.5
Central government debt interest	17.6	17.7	20.0
Accounting adjustments	4.7	6.0	7.5
General government expenditure	266.4	268.7	286.8
Privatisation	-8.0	-8.0	-5.5
General government borrowing requirement	28.7	38.5	54.8
Public corporations borrowing requirement	-0.6	-0.7	-1.0
Public sector borrowing requirement	28.1	37.8	53.8

The PSBR for this year and next will be large, but the crucial question for government is whether and how quickly the PSBR will fall in subsequent years.

Table 5.2. Sensitivity Analysis: Working Assumptions and Revenue Effect of 1% Change in Assumptions for 1993-94 Forecast

Variable	Assumption (% Growth)	Revenue Change From 1% More (£bn)
GDP	1.8	3.3
Wages	4.2	1.3
Employment	-1.8	0.9
Retail prices	2.5	0.3
Consumers' expenditure	1.5	0.6
Corporate profits	3.5	0.2

5.3 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 projection is detailed in the appendix, but below we show the baseline growth path. We expect real output at the end of the current fiscal year to be below the level at the beginning, with a modest recovery beginning next year. In the medium term, we have based our predictions on 3% growth per annum. We expect inflation to continue to fall in 1993-94, though to be rising again by 1995-96. Growth rates in alternative optimistic and pessimistic scenarios are also given. These are not symmetrical around our base case forecast. The optimistic case allows for 3.5% p.a. growth after next year, roughly what was achieved in the best period of the 1980s. The pessimistic case allows for growth of only 1.5% p.a., the rate which we calculate is compatible with an unchanged current account deficit at present levels of competitiveness.

Table 5.3. Alternative Macroeconomic Working Assumptions

Percentage Growth in GDP	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
Optimistic	0.0	2.3	3.5	3.5	3.5	3.5
Base	-0.3	1.8	3.0	3.0	3.0	3.0
Pessimistic	-0.6	0.3	1.5	1.5	1.5	1.5

Green Budget 1993

Our medium-term projections use the government's spending plans to 1995-96, and thereafter we assume a modest decline in the spending growth rate. On the revenue side, we use the standard Green Budget model of tax receipts assuming unchanged policies; again see the Appendix for a more detailed description.

Table 5.4 shows the key elements of the baseline forecast. The fragility of the recovery next year means that general government receipts increase only modestly. Tax cuts in last year's Budget and Autumn Statement also have some effect. Receipts increase much more strongly in the following years, as the recovery takes hold. Privatisation proceeds become negligible by 1995-96, as the candidates for sale in the government's asset portfolio are exhausted.

The result is that the PSBR remains stubbornly high, at over £50bn. Even economic growth of 3% per year for a number of years does not improve the deficit by much.

Table 5.4. The Public Finances in the Medium Term

£bn	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
Inland Revenue	75.7	77.1	82.5	89.2	97.4	106.0
Customs and Excise	63.4	65.5	68.7	72.5	76.4	80.6
Total taxes and royalties	161.0	165.4	174.6	185.9	198.8	212.3
General government receipts	222.2	226.5	240.3	256.6	273.1	290.4
Control total	232.0	243.8	253.5	263.2	273.0	282.0
General government spending	268.7	286.8	303.0	316.7	330.0	342.0
Privatisation	-8.0	-5.5	-5.5	-1.0	-1.0	0.0
PSBR ^a	37.8	53.8	56.2	58.1	54.9	50.6

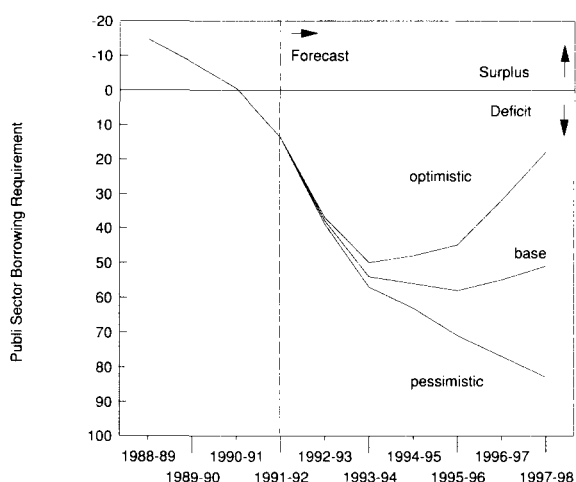
Note: ^aPSBR includes effect of public corporations' borrowing which is not shown.

Table 5.5 and Figure 5.1 show the PSBR under three growth scenarios. It underlines an obvious though important point: the outcome for the public finances is critically dependent on the performance of the economy. The path of the PSBR in the three cases diverges in 1994-95. In the optimistic case it begins to fall, in the base case it steadies and in the pessimistic case it continues to increase. Thereafter, in each case the PSBR continues the trend. The gap between the extreme cases is some £60bn in 1997-98. Although the growth assumptions in these cases are at the extreme of what might happen, neither scenario can be thought of as absurd. The extent to which extra revenue needs to be raised depends on how much GDP growth is attained.

Table 5.5. The PSBR in the Medium Term: Sensitivity Analysis

		1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
PSBR (£bn)	Optimistic	37	50	48	45	32	18
	Baseline	38	54	56	58	55	51
	Pessimistic	39	57	63	71	77	83

Figure 5.1
The Public Sector Borrowing Requirement



5.4 The PSBR and Debt Sustainability

If we are right in estimating that the PSBR in 1993-94 is likely to be about £54bn, which is equivalent to about 8.75% of GDP, or about 9.5% excluding privatisation receipts, then it is obviously far higher than anything which might be considered consistent with a sustainable path for public debt, so there is no question that the PSBR must be brought down sharply over the medium term.

This raises two issues. First, what should the government's long-term objective for the PSBR be, once the economy has eliminated its present margin of spare capacity? Second, how fast should the government seek to move towards this eventual PSBR objective?

There are a number of possible options for targeting the PSBR. Some have suggested that balancing the budget over the economic cycle would be a good idea. Some have implicitly appeared to support balancing the Budget at the top of the cycle. The government here has spoken of a target of 1% of GDP - again apparently an average over the cycle.

Figure 5.2

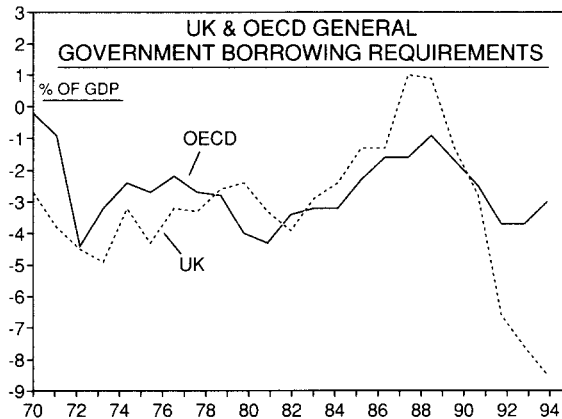
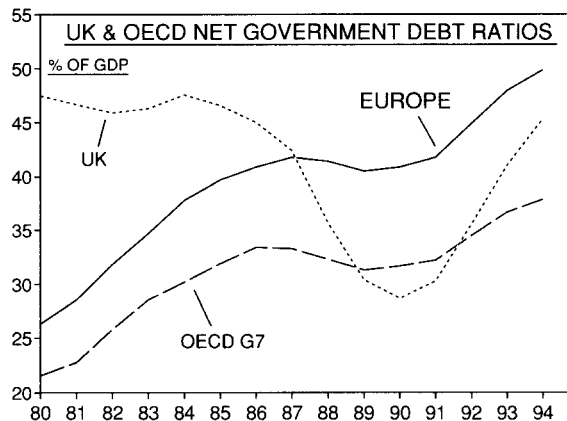


Figure 5.3



A reasonable long-term objective for the public finances would be to stabilise the ratio of public debt/GDP, once the economy has returned to full capacity working. Assuming that the real interest rate from that time onwards will be 4%, that the trend growth rate in real GDP will be 2.25%, and that the debt/GDP ratio will by then have risen to 60%, the ratio of gross public debt/GDP can be stabilised only if the public sector surplus (excluding interest payments) is around 1% of GDP. Since government interest payments may be around 4% of GDP at that time, this would suggest an overall budget deficit consistent with debt stability of about 3% of GDP (or about £21bn in the mid-1990s). By coincidence, this would be exactly equal to the limit for the budget deficit which is included in the Maastricht Treaty. This would be the target for the economy in a normal year, in which the economy was neither overheating nor underperforming. Any overshooting of this target in years of recession would have to be clawed back by undershooting in years of boom.

While this much may be relatively uncontroversial, a much more difficult question is, how fast the government should aim to hit this target. It is all very well to say "it should be achieved as soon as the economy has returned to full capacity working", but it is quite another to say when this might be. Such calculations depend on two very uncertain factors: the margin of spare capacity in the economy now, and the growth rate of GDP relative to trend from now on.

It seems unlikely that the Treasury's new medium-term assessment will incorporate a growth rate in real GDP which is more than 1% p.a. above trend after 1993-94, or 3% p.a. in total. This growth rate of 3% p.a. is what we have used in our baseline forecasts for the PSBR, detailed above. Anything faster than this runs the risk of being inconsistent with the objective of reducing inflation to the bottom half of the 1-4% target band by the end of the current Parliament. This means that the margin of spare capacity will be reduced by 1% p.a. from 1993-94.

The problem then boils down to the basic one of deciding how much spare capacity exists in the economy now. As explained earlier, the OECD has suggested that the output gap might now be about 7% of GDP, while other evidence suggests that it might be nearer 3-4%. Let us examine the consequences of making each of these two assumptions.

Scenario I - Slow Resolution

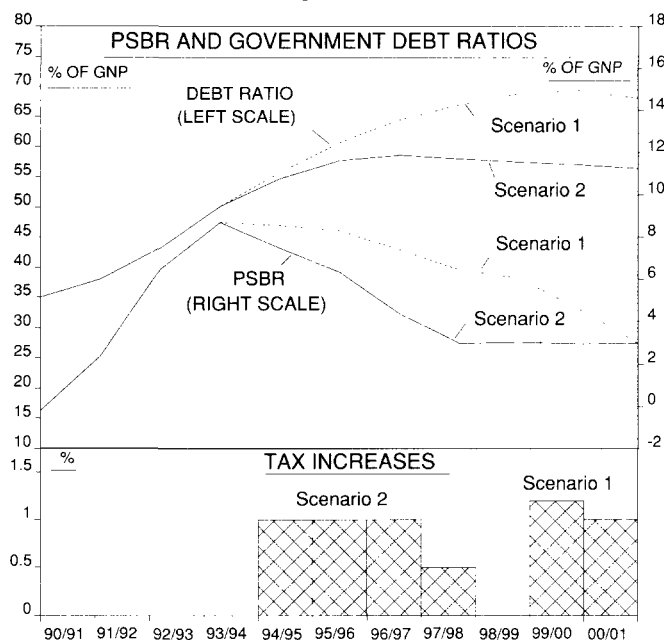
Scenario 1 assumes that the output gap is now 7%, and is absorbed at a rate of 1% p.a. By simple arithmetic, the economy will then return to full capacity working by the years 2000-01. This is 3 years beyond the time horizon of the fiscal projections published elsewhere in this document. However, it is straightforward to extend the projections for the PSBR on the assumption that the government revenue/GDP ratio remains unchanged, while government expenditure grows in real terms at 2% p.a. from 1997-98 onwards. On these assumptions, the PSBR would fall to around 5.25% of GDP by the final year of the planning horizon (2000-01), so that a tax increase of about 2.25% of GDP would need to be announced at some point in order to reduce the PSBR to 3% of GDP, the level consistent with the Maastricht Treaty and a stable debt ratio.

This does not seem too onerous, but the problem with this approach is that the cumulative PSBR from now until the end of the century would be very large indeed, so the ratio of government debt/GDP would rise markedly before the debt ratio is stabilised. In 1992, the ratio of gross government debt/GDP stood at only 42%, but the PSBR is now so high that the debt ratio is rising at about 5 percentage points a year. On the arithmetic just presented, the debt ratio would rise to over 70% of GDP by the end of the century, and government debt interest would be running at about 6% of GDP.

Scenario II - Rapid Adjustment

This seems unsatisfactory, so let us examine Scenario 2, which assumes that the output gap is now only 4%, and that it is absorbed at a rate of 1% p.a. from 1993 onwards. On these assumptions, the PSBR would drop only to about 6.5% of GDP by the time the economy achieves full capacity working in 1997-98. Therefore much larger tax increases, equivalent to 3.5% of GDP, would be needed by that date to hit the government's long-term objective of a PSBR equal to 3% of GDP. If these tax increases were spread evenly from 1994-97, the debt/GDP ratio would stabilise at about 58% in the middle of the decade, just below the Maastricht limit.

Figure 5.4



Several conclusions become obvious from these examples. First, there is no chance of the government being able to publish realistic figures in this year's MTFS which achieve budget balance, or anything like it, by the end of the normal 4 or 5-year time horizon. Second, the extent of the problem which the Treasury *does* admit depends largely on the official estimate of the output gap which underpins the MTFS. If the Treasury is willing to defend a large estimate of the output gap (like 7%), then it will take until the end of the century to return to full capacity working, and this gives much longer to reduce the PSBR by gradually reducing the share of public spending in GDP. The extent of the tax increase which is needed to cut the PSBR to 3% of GDP by the end of the period is correspondingly reduced (to only about 2% of GDP), and is spread over a very long time period. But the disadvantage of adopting this approach is that the increase in the debt ratio over the next seven years would be very large indeed.

If, by contrast, the Treasury opts for a smaller estimate of the output gap (say 4%), then the MTFS would need to show a time path which reduces the PSBR to its sustainable level by 1997-98. This implies that a larger tax increase would be needed (about 3.5% of GDP), and it would have to be introduced more rapidly. The corresponding advantage of doing this, however, would be that the debt ratio would be brought under control more quickly than under the alternative scenario.

5.5 Budget Strategy for 1993

The government is clearly grappling with a series of interlocking policy problems. Although it is difficult to quantify any of them with any precision, the broad trends seem clear enough to warrant attention this year. The core of the problem is that, at present levels of competitiveness, and even assuming a relatively rapid pick-up in OECD GNP (averaging 3.5% p.a. over the next half decade), it seems that growth in UK GDP might need to be restricted to around 2% p.a. or less in order to hold the current account deficit to below 2% of GDP over the medium term. This would not be a sufficiently rapid rate of GDP growth to make any dent in the PSBR, so the ratio of government debt/GDP would continue to rise at an alarming pace if such a situation were allowed to develop.

In order to reduce the chances of this happening, it would seem appropriate to do the following. First, the nascent recovery in domestic demand may need to be further encouraged by easing monetary policy again. Second, once this has been achieved - and only then - it will be desirable to address the medium-term PSBR problem by announcing a tightening in the budgetary stance, probably phased to take effect over two or three years. Since the government has already announced its public spending plans for this period, and since it is likely to have considerable difficulty in hitting these plans, most of this budgetary tightening will almost certainly need to come from higher taxation. The appropriate size of the cumulative tax increase depends on the considerations discussed above, but it seems likely to be around 2-4% of GDP.

In order to ensure that the pre-announcement of such a large tax increase does not abort the recovery in domestic demand, two precautions should probably be taken. The first is that the increase should probably be announced in December, not in March (though there is clearly a danger that consumers will start to anticipate the increase before it is announced). The second is that it should probably be accompanied by a further decline in base rates.

Such a rebalancing of policy would simultaneously reduce the chances of hitting a balance of payments constraint during the early stages of the economic recovery, and would increase the chances of stabilising public debt by the middle of the decade at an acceptable rate. If it turns out that the tax increase jeopardises the economic recovery, it can be offset by progressive further decline in base rates. If, on the other hand, it turns out

Green Budget 1993

that the economic recovery proceeds rapidly, and the PSBR falls more quickly than expected, then the government can give some of the revenue back by cutting income tax before the next election.

The alternative to taking this sort of action in 1993 is simply to hope that neither the PSBR nor the current account causes a financial crisis which forces the government into emergency fiscal and/or monetary action in the next two or three years. Such is the uncertainty involved in any economic projection that such an outcome can certainly not be ruled out. However, the political and economic penalties for getting into this situation would be very severe for the present government. On a risk/reward basis, it would appear better to announce painful action this year, and then hope that some of this action can be unwound before the election.

6 Private Finance in the Public Sector

One response to the predicament just described was the Chancellor's Autumn Statement initiative to inject more private finance into what are traditionally seen as public sector projects. It is likely that the budget will renew the government's commitment to this policy, although it is less likely to see any major new policy development in this area.

The idea of bolstering private finance can be seen as a logical extension of the privatisation process, but is strongly motivated by the government's medium-term revenue shortfall. At its most limited, "private finance" can be seen as a new means of paying for services provided by a government which has insufficient funds to meet public expectations and demand. The traditional way of raising money from the private sector would be to collect it in the form of taxes, but if that is not possible for a number of reasons, the authorities need to find new sources of revenue.

The latest initiative aims to bolster the private sector's involvement in capital projects, but the general idea stretches far more widely to any sort of government activity. We start by looking at current items of spending, and then turn to capital projects.

6.1 Current Spending

Commercialisation

The most obvious new way of raising money is to make people pay directly for what they had previously paid for through taxation. Thus, for example, the state could tell people to provide their own pension or pay prices that reflect the cost of their prescriptions. This cuts government spending - and with it the structural deficit - without raising taxes.

The public might be more willing to pay for their *own* pension or prescriptions than they are to pay higher taxes for a higher basic state pension or cheaper prescriptions - even if the aggregate result were the same. Giving people an obvious and personal trade-off between consuming today and in retirement, or between having prescriptions or not having them, might encourage a more efficient overall level of pension and prescription provision.

If the government can find ways of alleviating the more difficult distributional implications of user-fees, and if new taxes are unpopular, commercialisation of this kind may be the best alternative. The government is clearly concerned to identify areas of spending which are currently financed through general taxation and which could easily be financed privately. Road charges are a popular example. At the moment, roads are treated as a "public good", but in principle there is little reason not to treat them as a private good. Charging for roads - or at least, for some roads such as motorways - might provide a significant amount of

revenue. The British public drive some 150-200bn miles a year - £1bn would require the average mile to cost between 0.5p and 1p, just over £1 a week for each car user.

This kind of policy is most justifiable in a narrow economic sense where the costs charged to users reflect the cost of providing the service for which they are being charged. This confronts the public with efficient incentives only to consume items which they really value. Not only can they pay for roads with road pricing, but they can also learn something about the demand for roads as well.

Policy towards higher education, in which students have been compelled to bear a proportion of their maintenance costs, is an important example of this principle in practice.

Hypothecated Revenues

If user charges are not possible, there are other ways of raising money that fall somewhere inbetween totally commercial provision and general state provision.

The first is the use of hypothecated revenues, taxes which are earmarked for particular forms of spending. National insurance is a form of hypothecated tax - and the rate is certainly of less political focus than that of income tax. The new national lottery - to be introduced in 1994 - provides another form of hypothecated revenue. (Indeed, as subscription to the lottery is voluntary, it is particularly important that its revenue is hypothecated to popular forms of spending.)

If the public are averse to general increases in taxation not because they do not want more schools and hospitals, but because they do not trust government to spend the new taxes they raise on schools and hospitals, hypothecated revenues may command wider public support than general increases in taxation.

Returning to the example of roads, instead of road pricing, we could simply raise petrol tax and earmark some of the increase to the roads programme, which still might be preferred to general increases in tax to pay for better roads.

It is important to note, however, that unless government is committed to retaining the allocation of non-hypothecated revenues constant, the introduction or increase of hypothecated revenues may simply lead to a reduction in funding from general revenues, and have no restraining impact on the freedom of government to allocate funds as it desires.

Unfortunately, serious hypothecation has certain inflexibilities attached to it. Would we really want the schools budget to be tied to corporate profitability, for example? It might be argued that we could constantly top up the schools budget, or indeed raid it (just as the government does the National Insurance fund) without undermining the principle of hypothecation. But nevertheless, in countries where hypothecation is well

entrenched, like Brazil, it can simply become an impediment to making essential public spending adjustments. Once revenues are committed, it appears hard to remove them.

Charges

A second way of raising money without increasing general taxes is to use charges as a backdoor form of general taxation. A policy of charging for use of roads, where the road fees were not devoted to the roads programme, would simply be a tax by another name. It might or might not be a more popular tax than the current taxes upon which we rely.

The problem with these tax charges is that they do not provide efficient personal incentives. If we randomly chose to tax the use of the roads, it could discourage people from using roads. There may be a rationale for this, but it would clearly be unfortunate for the roads to lie empty on account of excessive taxation. If the roads were an important source of revenue, the authorities' desire to raise funds might corrupt them in their duty to set an optimal road price.

Possible Revenue Consequences

Asking how large the implications of commercialisation, hypothecation and charges could be for narrowing the structural deficit is rather like asking the length of a piece of elastic. It is possible to imagine ways of introducing a large range of commercialisation into the basic pension, health, education and transport. Some have suggested that commercial unemployment insurance is on the horizon.

However, the public's and the economists' stomach for large-scale commercialisation might well be tempered by its distributional consequences. While those on above average incomes might prefer to top up their child's school fees than pay higher taxes, that option will not be available those on lower incomes. On earnings related pensions, the one very significant area in which this drive has already progressed, the government cut the taxes of those who accepted the offer to exit the state scheme. In doing so they spent money rather than saving it. If the government said that everybody had to provide their own earnings-related pension, and also in future pay the full rate of National Insurance, it might not seem quite as attractive. Indeed, tax increases might look more acceptable. Much of what the government spends at present has more or less explicit redistributive objectives. Free provision of health and education and access to the road network are central parts of the economic and social lives of the whole population.

6.2 Capital Projects

The ideas on private finance outlined for current spending can be extended to large capital projects, and it is these which have been emphasised in the latest private financing initiative. Projects like the Queen Elizabeth II bridge at Dartford, which would almost certainly have been publicly provided in previous decades, are envisaged as increasingly being financed

by private sector contractors, who will charge for their use. A similar principle was exemplified by Eurotunnel, and could be by new private roads. These are all areas where the private sector requires a public sector licence, but will charge users and in which the taxpayer will have no real stake. No longer will the sponsoring department have to assess whether there is a better public sector equivalent project. Licences will simply be issued after a competitive process.

The Autumn Statement outlined three other types of private sector initiative. First are those in which the government and private sector act as joint partners. Here, the government departments will not have a controlling stake; they will make a contribution which is capped, but they will be free to initiate ventures competitively, as long as they believe their contribution is a desirable use of public funds.

Secondly, there are those in which the public sector leases assets from private sector investors. Arrangements which had prevailed for property will be extended so that the capital value of leased assets will now not count as public spending - just the ongoing leasing payments. British Rail, for example, would be able to lease trains that it previously would have bought.

Finally, there are those projects where the private sector provides services - typically using heavy capital investment - to the public sector. For example, a hospital or prison could be built and run by a private firm, with a government department as main customer.

In all these situations, capital investment which might currently qualify as public investment will no longer contribute to the public expenditure control total, and will thus not push up the PSBR. A cynic might thus interpret the government's recent promotion of private finance as a creative means of hiding the true extent of the PSBR. After all, an easier way to introduce private sector finance into public sector capital projects without raising taxes is simply to sell bonds to the private sector. The money raised could finance well-managed, socially desirable public projects. This - the more traditional means of using private finance - very explicitly *does* push up the PSBR.

Motivations for Private Finance

So why might new forms of private finance be desirable? One reason is simple. If governments do adopt PSBR targets, and do limit their borrowing, they may find themselves rejecting projects which would prove socially useful. If they can find ways around the PSBR, then such projects will not be rejected and we are all better off if they are pursued.

Of course, a simpler response to this problem would be to abandon the PSBR and indeed government spending targets when it is obvious that the value of marginal public sector projects is very high. The PSBR is simply an inappropriate target variable if it excludes the pursuit of activities which, for example, save the government money over the long term. Other

Private Finance in the Public Sector

things being equal, merely financing these projects in more creative ways will not make them come cheaper - the cost to society of providing a hospital is about the same whether it is paid for by bonds or by leasing.

If we accepted this argument, instead of finding new ways of introducing private finance, we would find new ways of measuring government spending and assessing the public sector's worth. If the government invested in a building, it would have a valuable asset which would thus not qualify as a large negative item in public accounts, just as though the money had been spent on stationery.

This alternative route of reconfiguring public sector accounts would be a desirable one to follow whether or not the private sector leases assets to the public sector. Nearly everyone has long recognised that the PSBR - which, for example, arbitrarily differentiates between the sale of government bonds and shares in government assets - is not a perfect measure of either the government's fiscal stance nor of its prudence. The difficulty is in drawing up a workable alternative.

However, the route adopted by the government has a second purpose on top of that of releasing funds for desirable but previously obstructed items, and that is to ensure that the cost of providing public assets falls as a result of private sector involvement. Thus, for spending to fall outside the public domain, two important rules will have to apply: the private sector contractor must be selected competitively; and the private sector contractor must bear a substantial portion of the project risk. If the initiative represents a genuine attempt to bring private sector management into the public sector; and if the use of competition as a means of selecting contractors is extended, the new arrangements could imply a sensible extension of public management principles.

But do they merit excluding items from the PSBR? The question here is the degree to which the government can truly and efficiently pass risk into the private sector, in the provision of public goods. No one could say what the British government would do if Eurotunnel went bankrupt. It might simply wave its hands, allow the shareholders to lose all their money, and wait for Lord Hanson to buy the hole in the ground from the receiver, and start operating it. Equally plausible, however, is the view that they would follow the French government into creating some kind of new corporation, with a large state shareholding, while preserving some of the original shareholders' stakes.

If they were inclined to adopt this second route, they would have few grounds for saying that private sector Eurotunnel is really distinct from a public sector contractor. If it was clear to everybody that they had to reject this second route, it is not clear that all these infrastructure schemes would be very popular.

Another objection to private finance has been articulately described by the Treasury itself in the Public Competition and Purchasing Unit's (PCPU) Progress Report to the Prime Minister in 1991. That report describes the outcome of privately contracted works projects, and says:

Overrun is often outside the project sponsor's control. Construction projects are inherently risky; if all the risk is put on a contractor that results in higher prices.

To avoid counting towards the PSBR, the private sector takes the risk, but it does not do so free of charge. There is some argument as to whether it is more expensive to privatise risk or keep it in the public sector. (If we really believed the PCPU, we might believe the government should absorb private sector risk at cheaper rates than those of the banks and shareholders.) But the taxpayer ends up paying for it, even where the taxpayer might have borne the risk more cheaply. It may be that the cost savings of private management outweigh the extra costs of risk management, but clearly the government's own advisers on this matter did not think so.

Interestingly, we have plenty of experience of this kind of behaviour, largely by local authorities, more or less overtly as a means of avoiding central government capital controls. The typical experience would be a local authority sharing a piece of land with a developer, creating a partnership entity, with the developer constructing, say, a shopping mall and a community centre, and the profits being split in some equitable way. Here, the construction risk has usually been in the private sector.

It is hard to believe that the motivation for this behaviour has been anything other than an accounting one, although local authority officials will concede that it is better to use creative accounting to finance a worthy project, than to exclude the worthy project.

Implications for the PSBR

What might the implications of private finance of capital projects be? The government has said that all of it will be used as additional spending, implicitly in as far as user fees cover the private sector's finance. We might thus stop the discussion there: it has no effect on the PSBR.

However, where the private sector provides capital the support of which is *not* covered by user fees, the funds will not be additional. For example, suppose that private operators decide to build a new hospital and then run it for the NHS. The NHS will pay them to run the hospital, including in the fee an amount to provide a reasonable return on their capital investment. If the hospital were additional to existing hospitals, the NHS would have burdened itself with its new running costs which it might not have wanted, thus it is more likely that the hospital would not be additional. In this case, it would have an effect on the PSBR.

What would the effect be? If the capital project is £10 million, then on the old style behaviour, it would have represented £10 million of spending this year, with interest thereafter. Under the private finance scheme, it involves no spending this year, but an annual return on capital in later years.

Notice that the public sector's net worth is the same under both schemes. In one case, it has more debt, from a higher PSBR, but it also has an asset.

Private Finance in the Public Sector

This example illustrates the most worrying aspect of the private finance initiative. In practice, of the £15bn central government spending on asset creation, only £1.5bn is health, where the PSBR effect described is most likely. The Ministry of Defence accounts for the biggest tranche - some £5.5bn. Most contracts are already in the private sector, and there will be little room for further privatisation here. Overall, therefore, the true creative accounting aspects of this initiative are likely to be limited. More likely it will re-classify worthy projects that ought to have been pursued, but which would not have been pursued, out of the PSBR. If that is what it takes to get them, then few would complain.

Table 6.1. Private Finance: Hypothetical Effect on the PSBR^a

	Spending if no Private Finance		Spending if Private Finance	
	Capital	Interest	Capital	Capital 'Rental'
First Year	£15m		zero	
Later Years		£1.5m		£1.5m
Final Year (asset is sold)	-£15m		zero	

Note: ^aAssumes no depreciation, and that private and public sector cost of capital equals 10%

7 Issues in Taxation

If private finance is unlikely to prove a panacea, then the Chancellor will have to turn his attention to taxation. The Chancellor will probably use the first Budget in 1993 to protect Britain's fledgling recovery, deferring significant tax increases until December at the earliest. Nevertheless, he is almost certainly already resigned to the fact that the level of taxation will need to rise over the medium term. And it is tax increases which will be weighing heavily on his mind as he makes his budget decisions.

In this section of the Green Budget, we outline some options for raising large amounts of cash. These could be implemented or pre-announced in either March or December.

The quickest and easiest means of raising a large amount of money - and one which could be acclaimed as removing anomalies from our tax system - is an extension to the VAT base. Other indirect taxes too can be squeezed a little harder. But spending taxes do carry problems - increasing the RPI and then falling disproportionately on the poor.

A second method of raising taxes is to rely on backdoor increases to taxes on income. Holding tax free allowances constant in nominal terms - when inflation is running at up to 4%, yields the government a real increase in revenue as long as incomes are rising. Similarly, the higher rate thresholds can be held down, with the government enjoying an increasing proportion of income taxed at 40%.

On business, there is little money to be raised without - at least in the short term - undermining the sustainability of recovery. The Chancellor is unlikely either to spend money cutting tax rates, extending the temporary increase in capital allowances announced in the Autumn Statement, or to repeat last year's cut in the business rate, however desirable such a move would be. The only pot of gold to be found is in one possible solution to the nagging surplus advance corporation tax (ACT) problem, which would effectively tax pension funds more highly.

Finally, the Chancellor could look to environmental taxes to provide an answer to the PSBR dilemma. These, after all, can be justified as helping the economy, rather than hindering it. It would be hard for the opposition to oppose them. We discuss the potential of these below.

The need to raise money unfortunately detracts from the more interesting parts of a Chancellor's job: reforming the tax system (which is most easily achieved when revenue is available to protect losers) and handing out tax cuts. It is still unlikely that the Budget would not see some structural changes to the tax system: further integration of National Insurance and income tax, for example, or resolution to technical problems such as surplus ACT or the taxation of the self-employed. We outline many of these potential changes below, starting with potential revenue raisers, VAT, excise duties, and personal taxes; and continuing with company taxes and environmental taxes.

7.1 Indirect Taxes

As illustrated by the 1991 Budget which increased the VAT rate by 2.5%, the Chancellor is prepared to use indirect taxes as a means of generating additional revenues. There has been much recent speculation that changes to indirect taxes may again form the focus for budgetary changes. VAT is an obvious source of additional revenue, the Single Market has implications for excise duty levels, and the Chancellor has already said that he will seek to recoup the loss in revenues from the abolition of car tax through other taxes on motoring. In this section we look in some detail at the issues surrounding VAT, the Single Market and also possible changes in excise duties.

Value Added Taxation

Two main options are available to the Chancellor if he wants to raise more money from VAT; either increasing the standard rate or widening the coverage. The much vaunted idea of new luxury rate is now inconsistent with Britain's European obligations. On the one hand, increasing the standard rate of VAT would represent a political U-turn on Conservative commitments made prior to the general election. On the other, although there are strong arguments in favour of moving towards a more uniform system of indirect taxation, there is also a strong political and social attachment to zero rating.

The Standard Rate

In the 1991 Budget, the Chancellor announced an increase in the VAT rate to 17.5%. The full revenue impact of this change was estimated at £5.5bn for 1992-93. The 1991 increase followed a pattern of generally rising VAT rates in the UK.

Throughout most of the 1970s the standard rate of VAT was set at 8%, with a higher rate, applied to luxury goods,¹ of 12.5%. The Budget of 1979 saw a rationalisation of the structure of VAT, with an increase in the standard rate to 15%. This upward trend in UK VAT rates is far from unique; as is illustrated by Table 7.1, standard rates of VAT have been rising throughout the European Community, as they have elsewhere.

The standard rate of VAT in the UK remains low by comparison with many other EC Member States. At the last general election the Conservative manifesto made no reference to VAT. Should the Chancellor decide once again to raise the standard rate of VAT, Treasury estimates suggest that a one percentage point increase in the rate would raise slightly under £1.7bn.² Any increase in the standard rate would increase further the

¹ The principal categories of expenditure subject to higher rate VAT were most domestic electrical appliances, photographic equipment, jewelry, pleasure boats, caravans and petrol.

² The full figure for the financial year 1994-95 is estimated at £2.35bn.

apparently anomalous tax treatment of zero-rated items by widening the gap between the tax rate they face and that faced by standard-rated goods, and increasing the rate may seem too 'visible' an option.

Table 7.1. Standard VAT Rates in European States

Country	Year of Introduction	Rate at Introduction	Rate in 1980	Rate in 1992
Denmark	1967	10	22	25
France	1968	16.7	17.6	18.6
Germany	1968	10	13	15
Netherlands	1969	12	18	18.5
Luxembourg	1970	8	10	15
Belgium	1971	16	16	19.5
Ireland	1972	16.4	20	21
Italy	1973	12	14	19
UK	1973	10	15	17.5

Source: Aaron, 1981; HM Customs & Excise, 1992.

Extending the VAT Base

If raising the standard VAT rate, or introducing a luxury rate, is deemed politically and/or economically inappropriate, but extra revenue is still required from VAT, the obvious way is to extend the VAT base to cover some currently zero-rated goods. In all other EC Member States, with the exception of Ireland, zero-rate coverage is minimal, although there is more extensive use of reduced-rate VAT. In the UK, around 24% of consumers' expenditure is zero rated.¹

The potential revenue gains from abolishing zero rating are large, as shown in Table 7.2. The challenge for the government is whether they believe they could withstand the criticism they would suffer if they extended VAT and whether there is an alternative. The remainder of this section discusses in more detail the economic arguments relevant to this debate.

Moreover, the economic arguments in favour of moving towards a more uniform system of expenditure taxation are well established. If different items are taxed at different rates, consumers will switch their spending to low-taxed items. In so far as they do switch their spending, the government receives less tax revenue, and consumers make a sacrifice in not buying items that they might value more highly.

¹ Based on 1990 Family Expenditure Survey data and a 15% VAT rate: zero rate 24%, standard rate 54%, exempt goods 4%, new housing (technically zero rated) 18%.

Table 7.2. Estimated Yield Forgone on Zero-Rated Goods and Services, 1991-92^a

	£ billion
Food	7.0
Domestic fuel and power	2.5
Construction of new dwellings ^b	3.4
Passenger transport ^c	2.3
Books, newspapers, etc.	1.0
Children's clothing	0.6
Water and sewerage services	0.5
Drugs and medicine on prescription	0.4

Notes: ^aNot all expenditure under these headings is zero rated. No allowance is made for changes in behaviour.

^bIncludes zero-rated expenditure on land purchased for construction of new dwellings.

^cIncludes aviation.

Source: HM Treasury, 1992.

These arguments suggest a number of directions for VAT reform:

- Unless a strong case can be made for the special treatment of a particular good or service, there is a general presumption in favour of tax uniformity.
- Reducing differences in relative tax rates will, *a priori*, reduce the level of distortion in the allocation of resources resulting from the tax system. Further, this will reduce the incentive for tax evasion and avoidance.
- Increased uniformity, particularly reducing the extent of zero rating, should reduce the administrative and compliance costs of the tax system.

Regardless of changes to the tax base, the second of these points suggests that continuing the upward trend in the standard rate of VAT will serve to exacerbate distortions.

As Tables 7.2 and 7.3 show, there is considerable variation in the expenditure types subject to preferential VAT treatment.

So if extending the VAT base is such a good idea, why has not it been done before? The existence and preservation of the zero rate is more the product of political history than economic sense. At its root are perhaps two principal causes: first, the perception that a uniform VAT structure, without zero rating, would be particularly regressive in its impact; second, and related closely to the first, is a long history of political debate over the appropriateness of taxing food, by far the largest category of expenditures currently zero rated. It is for these distributional reasons that zero rating has become one of the sacred cows of tax policy.

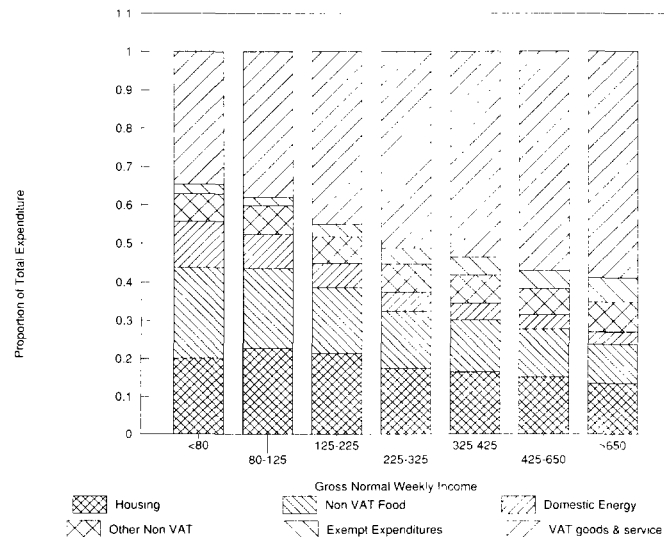
Table 7.3. Main Exempt Expenditure Categories

Land
Insurance
Postal services
Betting, gaming and lotteries
Finance
Education
Health and welfare
Burial and cremation
Trade unions and professional bodies
Sports competitions
Works of art

Source: HM Treasury Tax and Benefit Reference Manual.

As Figure 7.1 illustrates, zero-rated goods form a higher proportion of the spending of low-income households, although as can be seen this result is driven by the expenditure pattern of food and fuel and, to a lesser extent, housing. Exempt goods, however, form a higher proportion of the spending of high-income households. Of course, within each of these income groups, particular household groups, will gain more or less from the structure of VAT. The most obvious example is households with children who will gain most from the zero rating of children's clothing.

Figure 7.1
Distribution of Household Expenditure by VAT Category, 1990



Source: IFS calculation based on 1990 Family Expenditure Survey.

Although the indirect tax system is progressive, it does not follow that it represents the most appropriate means of achieving progressivity. It is not clear, if the desired objective of the tax system is to achieve progressivity relative to income, why one should resort to taxation of a proxy for income, namely consumption, rather than income itself.¹ Differential rates of indirect taxation represent a very blunt instrument for achieving progressivity. It should further be remembered that, in absolute terms, zero rating is of more benefit to rich than poor households since expenditure on zero-rated (and exempted) items does rise with income, even if this rise is proportionately less. Thus, for example, of the income groups in Figure 7.1, on average the lowest income group (less than £80 per week) gained £2.10 per week from the zero rating of food, whilst those in the highest group (over £650) gained £6.50.

As Davis and Kay (1985) clearly illustrate, the overall progressivity of the VAT system is small relative to that of income tax, and income tax is a more effective means of achieving progressivity than VAT. It is not necessary, for example, to exclude food from the tax base in order to protect low-income households from the burden of indirect taxation if appropriate adjustment is made elsewhere in the tax and benefit system. Thus distributional implications should not by themselves rule out possible reform of the structure of the indirect tax system. It may not even follow that zero or reduced rates of VAT benefit final consumers. Traders faced with recouping a certain level of VAT may adjust prices in line with what the market would bear regardless of the tax rate. Thus, for example, supermarkets may alter their prices on food such that they cross-subsidise items on which VAT is charged.

Two other reasons underlie the list of zero-rated and exempt goods: first, preferential treatment for 'merit' goods (items for which it is politically desirable to encourage consumption, such as newspapers). Items which come most easily under the heading of merit goods are children's clothing, books and newspapers, burial services, and private schools and medical services. For each of these items one could easily imagine goods or services which are equally meritorious but yet remain subject to VAT.

The second reason for special treatment is that of practical and administrative complexity. Foremost of the expenditure categories which come under this heading are financial and related services and housing. Briefly, since financial services are generally financed out of differences between lending and borrowing rates, which do not represent sales for VAT purposes, the VAT system simply does not work effectively in this area.² This suggests that an alternative means of taxation may be necessary rather than, as has become the generally accepted principle, simply exempting financial services. This may well emerge as a major medium-term tax issue.

¹ The justification that taxation of income has a disincentive effect on work behaviour may also be applied to high rates of tax applied to the goods consumed by high-income individuals.

² See Edwards and Mayer (1983).

Finally, among goods which are or have been supplied primarily through the public sector, the most important (in expenditure terms) are public transport and domestic energy and power. Public transport has traditionally operated at a loss and would therefore yield little net revenue, whilst electricity and gas remain subject to a degree of regulation. It does not follow, however, that because these sectors have prices that are already adjusted in some way, they should be subject to further special treatment under the VAT system. Moreover, if these sectors move towards market prices and profitability, why should they remain zero rated?

Implications of Extending the VAT Base

The previous section has indicated that there are strong economic arguments in favour of a uniform system of VAT. It has also been suggested that concern over the distributional impact of extending the VAT base may be overcome by appropriate changes to the direct tax and benefit system. In this section we attempt to assess some of the possible impacts of changes to the VAT system. On the one hand, there will be revenue gains and possibly administrative savings and, on the other, distributional and inflationary implications. Any revenue gains may be used to finance changes in other parts of the tax and benefit system, in public spending, or in the VAT rate.

It is not the purpose of this section to suggest what these changes might be, although, given the distributional sensitivity of zero rating, it is impossible to imagine that any Chancellor would consider such major changes to the tax base without offsetting changes elsewhere. However, in assessing the impact of changes to the VAT base, some attempt will be made to illustrate how the most serious distributional impacts might be offset.

The arguments in favour of uniformity suggest that the appropriate change would be to move to a single uniform VAT system. In reality, it is unlikely that the specific problems relating to the treatment of housing (and land) and financial services could be overcome directly through the VAT system. Similarly, taxation of many of the goods and services included within the list of exempt categories would cause specific administrative and other practical problems and have only minor revenue implications. The major impacts of an extension to the VAT base can be assessed by considering the remaining zero-rated expenditure categories: food, domestic energy, public transport, children's clothing, books and newspapers.

In practice there are a variety of possible adjustments which could be made, varying from extending the base to cover selected items to a general extension to all the above zero-rated goods. The possible scope for such reforms is subject to European Community agreement, discussed in more detail below. Table 7.4 shows estimates of the revenue and inflationary impacts of a number of changes to the VAT system which fall within the terms of the EC agreement. Extending standard-rate VAT to cover all the main zero-rated items would raise in the region of £11bn. Combining the extension of the VAT base with a reduction in the VAT rate to 15%, the

minimum possible under European Community agreement, would still raise an additional £5.3bn. Alternatively, in common with other Community members, a reduced rate of VAT of, say, 5% could be introduced.

Table 7.4. Revenue and Price Effects of Changing the VAT Base

Change to VAT System	Net Additional Revenue from Personal Sector (£ billion)	Effect on Consumer Prices (%)
Standard-rate VAT (17.5%) on expenditures currently zero rated (excluding housing)	10.7	3.7
Reduced-rate VAT (5%) on expenditures currently zero rated (excluding housing)	3.4	1.0
Reduced standard-rate VAT (15%) on expenditures currently zero rated (excluding housing)	5.3	1.9

Source: IFS estimates.

Of the above changes, imposing standard-rate VAT at 17.5% would entail the most serious distributional impacts, as is shown by Table 7.5. The table provides calculations, for household (equivalised) income deciles, of average additional tax payments and proportional changes in net disposable income. Although in absolute terms higher-income households are seen to pay more in additional VAT, the proportionate reduction in their disposable income is much smaller. The regressive impact of increasing the VAT base alone is well illustrated. However, as already discussed, such a change would raise substantial additional revenues which could be used to alleviate the distributional impact of the tax change.

The obvious tools to use to compensate those on low incomes are income tax allowance increases, social security benefit increases and in particular because of children's clothing, benefits for children.

Table 7.6 shows the combined effect of extending the VAT base and increasing tax allowances by 10%, increasing income support and state pensions by £5 for single adults and by £8 for couples, and increasing child benefit to £12 for each child. The purpose of this exercise is *not* to suggest that this is an appropriate "package" of reforms but to show that offsetting changes can be effective in reducing distributional impacts. As with Table 7.5, the figures are averages across households and will undoubtedly conceal households that remain particularly adversely

Table 7.5. Effect of Extending the VAT Base on Household Net Incomes

Equivalent Income Decile ^a	Change in Net Income (£ per week)	Percentage Change in Net Income
Lowest	-6.97	-6.79
2	-6.06	-6.45
3	-7.56	-6.42
4	-8.80	-5.58
5	-9.55	-4.71
6	-9.98	-4.09
7	-9.82	-3.51
8	-10.14	-3.01
9	-10.39	-2.72
Highest	-10.81	-1.77
All households	-9.01	-3.56

Note: ^aIncome adjusted for family size.
 Source: IFS calculations based on 1990 Family Expenditure Survey.

Table 7.6. Effect of Extending the VAT Base on Household Net Incomes (with offsetting measures)

Equivalent Income Decile ^a	Change in Net Income (£ per week)	Percentage Change in Net Income
Lowest	2.17	2.11
2	0.82	0.87
3	-0.46	-0.39
4	-1.70	-1.08
5	-2.78	-1.37
6	-3.91	-1.60
7	-4.37	-1.56
8	-4.83	-1.43
9	-5.58	-1.46
Highest	-6.14	-1.01
All households	-2.68	-1.06

Note: ^aIncome adjusted for family size.
 Source: IFS calculations based on 1990 Family Expenditure Survey.

affected. Further, full take-up of benefit entitlements is assumed which may not, of course, occur. Overall the "package" of changes is not revenue-neutral. As can be seen from the reduction in average disposable income, it raises an additional £3.2bn.

Although politically risky, extending the VAT base has much to commend it given the need to raise revenue. Such a change could be implemented over several years, and need not be regressive in its overall impact.

European Harmonisation and the Single Market

On 1 January 1993 the Single European Market came into effect. With the scrapping of border controls it had been widely accepted that reform of the structure and administration of indirect taxes was necessary. As part of these reforms Member States had agreed to a package of binding minimum excise duties and VAT. This package was the result of a protracted series of negotiations which maintained, to a far greater extent than was initially intended, the existing structure of indirect taxes in most Member States. Table 7.7 shows the agreed minimum rates of excise duties and the equivalent current UK rates.

Table 7.7. EC Agreed Excise Duty Rates and Current UK Equivalents^a

Product	Agreed Minimum Rate	Current UK Rate
Leaded petrol	337 ECU per 1000 litres	350 ECU per 1000 litres
Unleaded petrol	287 ECU per 1000 litres	295 ECU per 1000 litres
Road diesel oil	245 ECU per 1000 litres	288 ECU per 1000 litres
Cigarettes	57% of retail price of cigarettes in the most popular price category	61% of retail price of cigarettes in the most popular price category
Beer	0.748 ECU per degree Plato (per hectolitre)	5.58 ECU per degree Plato (per hectolitre)
Still wine	Nil rate	159 ECU per hectolitre
Sparkling wine	Nil rate	262 ECU per hectolitre
Spirits	1000 ECU per hectolitre of pure alcohol ^b	2496 ECU per hectolitre of pure alcohol

Notes: ^aAssumes £ = 1.26 ECU

^bA dual rate of 550 ECU exists for those states with current excise duty rates below 1000 ECU.

Source: Single Market Reports, HM Customs and Excise and IFS calculations.

To some, the agreement on the package of excise and VAT rates was seen to represent further Community encroachment into domestic fiscal policy. Amidst claims that the UK had ceded tax sovereignty to Brussels, the Chancellor responded that the agreement 'preserves the flexibility of future British governments to set VAT rates and excise duties' and 'requires no increase in any UK tax rate or duty'. Despite the protests, the UK is one of the few Member States which has not been required to adjust its indirect tax structure to accommodate the move to a barrier-free Europe.¹ This, in part, has been due to our relatively simple structure of VAT and high levels of excise duties. Further, the UK was aided by simple geography, which ensures that we are much less open to potential loss of revenue through cross-border shopping than many Member States.

The agreed reforms do not in themselves protect high tax Member States from the potential loss of tax revenues resulting from cross-border shopping or fraudulent movements of goods. The removal of limits on personal importation of goods from the European Community may place a constraint on increases in domestic duty rates. Much has been made in the media of the possibility of wide-spread cross-border shopping. Excise duty rates on alcohol and tobacco products remain significantly lower in many Member States than in the UK. At this stage it is particularly difficult to quantify what the potential revenue losses to the Exchequer may be from both legal and fraudulent importation of excisable goods. Estimates by Customs and Excise have suggested a figure of £100-£400m from legitimate purchase. The wide margin in this figure serves only to illustrate the difficulty in assessing potential losses. One piece of recent good news should be the agreement reached by the French National Assembly to increase tobacco prices by 30% within the next six months. In respect of fraudulent movement of goods it rests with Customs and Excise themselves to enforce effective policing over the movement of goods. In this respect there is of course a trade-off between the cost of additional policing and its effectiveness in reducing fraudulent movements. Nonetheless, should the revenue losses resulting from the Single Market prove to be unacceptably high, they may provide pressure for some downward movement in domestic excise duty rates.

Excise Duty Revalorisation

In the previous two Budgets the majority of excise duties have been increased in line with inflation. Exceptions to this rule have been duties on motor fuels and tobacco. In the case of tobacco, increases above the rate of inflation have been justified on the grounds of health concerns, whereas for motor fuels, real increases in excise duty on leaded petrol have been imposed to encourage switching to unleaded. The underlying trend of

¹ One minor change to the excise duties which came into effect on 1 January 1993 was a change to the rate and structure of excise duties on fortified and made-wines. This represented the first stage of a bilateral agreement with Spain under which the duty differential between Spanish and British sherry will be reduced to 25%. The impact of the change was to reduce the duty on imported sherry by around 5p on a 75 cl. bottle, and by around 30p on port.

increases in the real value of excise duties on motor fuels and tobacco is illustrated in Table 7.8. As can also be seen from the Table, current excise duty rates on wine and spirits are by comparison relatively low in real terms.

Table 7.8. Real Value of Excise Duties

1980 = 100	Beer	Wine	Spirits	Tobacco	Petrol (4-star)	Petrol (unleaded) ^a	DERV	VED
1980	100	100	100	100	100		100	100
1981	120	101	100	114	120		120	101
1982	122	102	95	116	120		92	103
1983	122	102	94	116	120		102	104
1984	129	78	91	126	120		101	105
1985	133	80	89	130	120		101	111
1986	126	76	84	139	122		103	105
1987	121	73	81	135	118	112	100	102
1988	122	74	78	134	120	108	101	98
1989	114	69	73	127	112	97	95	92
1990	115	69	75	129	115	99	97	85
1991	120	73	78	142	126	109	107	82
1992	122	74	79	153	132	111	108	87

Note: ^aDuty rate on unleaded petrol equal to leaded prior to 1987.

It is hard to envisage, given the current constraints on public sector finances, that excise duties will not be increased by at least the underlying change in the RPI. Failure to do so would cost the Chancellor around £600 million in lost revenue. Further, with the rate of inflation continuing to fall, the trade-off between the inflationary impact of excise duty increases and additional revenue remains a relatively minor problem. The impact on prices of revalorisation of the main excise duties, assuming an inflation rate of 2.6%, is shown in Table 7.9. Should the Chancellor choose to increase excise duties by more than the inflation rate, the Table shows, for illustrative purposes, the impact that 10 and 15% increases in duty rates would have on retail prices.

As shown in Table 7.8 the real values of excise duties on wines and spirits are low in historical terms. However under EC provisions, the Chancellor may not increase wine duties without imposing corresponding increases in the duty rates on beer. With regard to spirits, following a concerted effort by the Scottish whisky industry to safeguard export markets, the Chancellor persuaded fellow European finance ministers to agree to amended single market provisions for the taxation of spirits. Specifically the agreement ensured that there would be no increase in duty rates in those, mainly southern European, low-tax Member States where there has been a rapid growth in whisky exports. On the one hand, the Chancellor

Green Budget 1993

Table 7.9. Price Effects of Excise Duty Changes

	Beer (pint)	Wine (75 cl. bottle)	Spirits (70 cl. bottle)	Tobacco (packet of 20)	Petrol (litre of 4-star)	Petrol (litre of unleaded)
Current						
Price	132	298	1099	221	50.6	46.1
VAT	19.6	44.0	164.0	32.9	7.5	6.9
Duty	23.4	94.0	555.0	88.6	27.8	23.4
<i>Ad valorem</i>				46.4		
Revalorisation (2.6%)						
Price	132.8	301.3	1116	224.6	51.5	46.8
(% price change)	(0.6)	(1.1)	(1.5)	(1.6)	(1.8)	(1.5)
VAT	19.8	44.9	166.2	33.5	7.7	7.0
Duty	24.0	96.4	569.4	90.9	28.5	24.0
<i>Ad valorem</i>				47.2		
10% duty increase						
Price	134.8	309.5	1164.0	234.9	53.9	48.9
(% price change)	(2.1)	(3.9)	(5.9)	(6.3)	(6.6)	(5.9)
15% duty increase						
Price	136.2	315.0	1196.0	241.8	55.5	50.2
(% price change)	(3.2)	(5.7)	(8.9)	(9.4)	(9.8)	(8.9)

may regard increases in domestic tax rates as a *quid pro quo* for reaching a beneficial agreement on EC tax rates. On the other hand, large increases in domestic taxes would seem inconsistent when the Chancellor has had to argue forcibly for low tax rates elsewhere.

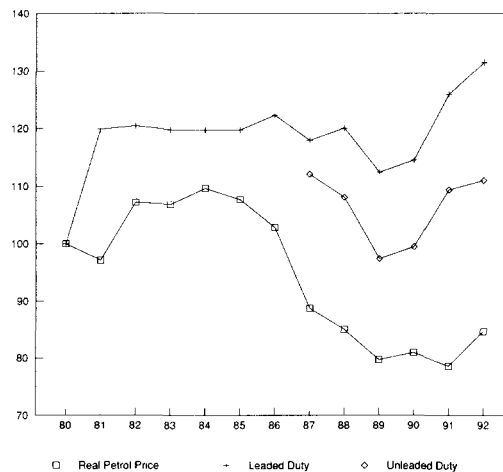
Motoring

One area in which we can be almost certain to see changes is in the taxation of motoring. Following the reduction in the rate of car tax from 10 to 5% in the 1992 Budget, the Chancellor abolished the tax altogether in the Autumn Statement. The revenue cost of abolition has been estimated at around £750 million for 1993-94,¹ an amount which the Chancellor announced he intended to recoup through other taxes on motoring. The obvious options available are increases to the rates of excise duty on motor fuels or increases in Vehicle Excise Duty (VED).

¹ This figure relates only to the abolition of car tax and not to the earlier reduction in the rate from 10 to 5%.

The 1992 Budget saw the first change in the rate of VED on cars (from £100 to £110) since the 1985 Budget. Even allowing for the recent increase, the current rate of VED remains some 20% less in real terms than its 1985 level, as can be seen from Table 7.8. Treasury estimates indicate that increasing the rate of VED by £5 would yield an additional £145 million,¹ suggesting a required increase of £25 to recoup the whole of the forgone car tax revenues. This figure may be contrasted with the expected benefit to new car purchasers of around £400 on the sale price of a typical family car from the abolition of car tax.

Figure 7.2
Real Petrol Prices and Duties, 1980-92



(1980 = 100)

Although, as can be seen from Figure 7.2, the real level of excise duties on petrol has increased over recent years, the price of petrol remains relatively low in historic terms.² Treasury estimates suggest that increasing the rate of excise duties by 1% for both petrol and DERV would raise an additional £110 million, suggesting the need for increases of around 7% in duty rates to recoup the losses from the abolition of car tax.

Environmental concerns would *a priori* suggest a preference for increases in taxation on motor fuels, since fuel consumption is more closely related to vehicle use and, hence, environmental damage. VED remains principally a tax on vehicle ownership and not on use. The current structure of VED on commercial vehicles, which reflects axle weight, does bear a relation to potential damage to the road surface. One possible

¹ This assumes an equivalent change in the rate of VED on HGVs as well as cars and light vans.

² It should be noted that the price index for (all) petrol will reflect the shift towards the use of unleaded.

reform of the structure of VED would be to introduce variable rates of vehicle excise duty for private vehicles linked, perhaps, to vehicle weight and/or engine size.

Increased taxation of motor fuels may, unfortunately, be a relatively ineffective means of promoting environmental improvements. At least in the short run, changes in excise duties and hence prices appear to have a relatively low effect on fuel consumption, certainly in the domestic sector. This low price elasticity of demand does mean that increased excise duties on motor fuels provide a reasonably reliable source of additional revenues.

Where the Chancellor may continue to be "environmentally friendly" is in continuing to increase the duty differential between leaded and unleaded petrol, currently 4.4 pence per litre. The major growth in the use of unleaded petrol occurred in 1989-90 and since then the switch to unleaded petrol has slowed considerably. Currently unleaded petrol accounts for almost 50% of total petrol consumption. Whether there is much to be gained from increasing the differential on environmental grounds is debatable. The slow-down in the growth of unleaded petrol use may well reflect the fact that all those consumers who wish or are able to convert their cars to unleaded petrol have done so. Thus the growth of unleaded consumption reflects only turnover in the car stock. Encouraging turnover would not only be environmentally friendly but would provide further assistance to motor manufacturers.

7.2 Direct Taxes on Individuals

Income Tax

Although income tax raises only around one quarter of total government revenue, it is frequently income tax that is thought of as the obvious way of either raising or lowering the burden of taxation.

Were income tax to be used to raise revenue, the obvious way might seem to increase tax rates. But after over a decade of reduction in the higher and basic rates of tax, the introduction of the reduced 20% rate, and a commitment to cut the basic rate to 20%, any increases in rates seem unlikely. The most plausible rate increase would be the introduction of an additional rate between the 25% and 40% rates, but even this is highly improbable.

There are other ways of raising additional revenue from income tax: allowing inflation to erode the real value of allowances and thresholds, and restricting the value of tax reliefs to the basic rate have both been used since 1979. Freezing allowances raises money by increasing the amount of income subject to tax. With inflation to December only 2.6% the amount of money which could be raised by freezing all allowances and thresholds is around £970 million.

Freezing allowances would be rather regressive by comparison with an equivalent (cost neutral) rise in the basic rate. All basic rate taxpayers would lose equally from a freeze in allowances, while those with higher incomes would lose more than those on lower incomes from a rise in the tax rate. Clearly reduced rate band taxpayers would lose nothing from an increase in the basic rate. These points are illustrated in Table 7.10 which shows the impact of indexing allowances and thresholds and increasing the basic rate by 0.6p against a base system where allowances and thresholds are frozen.

Table 7.10. Gains/Losses from Raising the Basic Rate of Tax Compared with Freezing Allowances and Thresholds

Decile	Gains (£ per week)
1	0.00
2	0.00
3	0.04
4	0.18
5	0.23
6	0.10
7	0.01
8	-0.21
9	-0.54
10	-0.75

An alternative to freezing all allowances and thresholds might be to follow recent precedent and freeze just the married couple's allowance (MCA) and the basic rate limit (the point at which higher rate tax becomes payable). The MCA has been frozen since its introduction with independent taxation in 1990. The basic rate limit has been frozen in two of the last three Budgets, though it was raised in 1991 to cushion the effect of the restriction of mortgage interest tax relief to the basic rate. These measures would raise around £130 million and £180 million respectively (based on calculations from the IFS tax benefit model).

It seems quite likely that the non-indexation of at least the basic rate limit could become a semi-permanent feature of the income tax system. Around 1.7 million of the total of nearly 25 million income tax payers now pay tax at the higher rate of 40%, which is already roughly double the number in the early 1980s. We estimate that continuing to freeze the basic rate limit would increase the number of higher rate taxpayers to around 1.1 million by 1996-7, raising an additional £1.7bn p.a. in 1992-3 prices, and increasing the buoyancy of income tax revenue significantly.

Another possible way of raising some money would be to restrict the value of personal allowances to the basic rate. Under the current system the allowance is subtracted from gross income to obtain taxable income. So to

Green Budget 1993

someone earning £20,000 gross (a basic rate tax payer) the allowance is worth 25% of £3445 or £861.25, but to someone earning £50,000 gross (a higher rate taxpayer) the allowance is worth 40% of £3445 or £1378.

One way of making the allowance of equal value to all taxpayers would be to convert the allowance into a tax credit worth 25% of the allowance, £861.25 at present. This would involve calculating the tax payable on the whole of income and then deducting the £861.25 from that amount. The result would be a loss for higher rate payers, but a gain for those paying the reduced rate of tax. Such a policy was perhaps made more likely by the restriction of mortgage interest tax relief to the basic rate in the 1991 Budget and could raise around £1.3bn. A table of gains and losses by decile from such a policy is shown below.

Table 7.11. Gains/Losses from Restricting Allowances to the Basic Rate

Decile	Gains (£ per week)
1	0.00
2	0.01
3	0.07
4	0.20
5	0.14
6	-0.04
7	-0.29
8	-1.01
9	-1.90
10	-6.38

Although the government is likely to look for some ways of raising revenue, it may also choose to spend some money reducing at least some part of the income tax burden as a sign of its continuing commitment to cutting tax burdens in the medium term. The obvious channel for any tax cuts is a widening of the reduced rate band as a further step towards a basic rate of 20%. Such a change would be even less helpful to those on low incomes than the introduction of the 20% band last year, since to gain from its extension a taxpayer must have taxable income in excess of the existing band width of £2000. If the aim is to help those on low incomes, increasing tax allowances is far more effective than introducing or extending a reduced rate band.

The following table shows the distributional effects of spending the money gained from freezing allowances and thresholds on widening the 20% band as against a straightforward indexation of allowances. The 20% band could be widened by £1000 from £2000 to £3000 using the £970 million raised from freezing allowances and thresholds.

It is clear that such a strategy leads to losses among the lower deciles and gains among higher deciles, confirming that increasing allowances is the better way of reducing the tax bills of those on low income.¹

Table 7.12. Gains/Losses from Expanding Reduced Rate Band and Freezing Allowances

Decile	Gains (£ per week)
1	0.00
2	0.00
3	-0.04
4	-0.09
5	-0.08
6	0.05
7	0.13
8	0.12
9	0.08
10	-0.53

National Insurance Contributions

Part of the cause of the rising PSBR is higher social security payments to the increasing numbers of unemployed people. Although there is practically no sense in which the National Insurance fund is a genuine fund, the fact that it is facing financial pressures now may be used as an argument for raising contributions rates in the medium term. To avoid the risk of serious cash-flow problems the minimum level recommended for the balance in the NI fund is one sixth of benefit expenditure. From its inception until 1989, there was an annual Treasury grant to the NI fund. This was reduced and then abolished as NI contribution revenue grew rapidly and unemployment fell in the late 1980s. The combination of recession, which has increased benefit spending and reduced the growth contributions revenue, and the remarkable success of personal pensions, which has also reduced contribution revenue, led to problems in the fund. The government's response has been to reintroduce the Treasury Supplement for the year 1993-94. The following tables shows the deterioration of the NI fund in recent years.

The 1993-4 figures were based on an unemployment projection of 2.8 million and an earnings growth assumption of 5%. If unemployment were 200,000 higher and earnings growth 1% lower, the balance in the fund would be 14%. Although the fund will benefit from reduction in the rebates available to those with pensions, and a general reduction in the contracting-out rebates, the state of the fund could clearly be used to justify increases in NI rates.

¹The very richest decile lose from this change. This is because the value of a tax allowance to a 40% taxpayer is equal to 40% of the allowance as opposed to 25% for a basic rate payer, and a 20% for a reduced rate payer.

Table 7.13. NI Fund as % of Benefit Expenditure

Year	Self-Funded Element	Treasury Grant	Total
1990-91	40	0	40
1991-92	25	0	25
1992-93*	10	0	10
1993-94*	-3	20	17

Note: *projected

Source: Government Actuary, Social Security Bill 1991-92.

Raising the rate of employees Class 1 NI contributions by 1% would raise around £1.9bn. Such a move would have regressive distributional consequences in comparison with a rise in the basic rate of income tax. The lower income levels at which people start paying NI, the existence of the reduced rate band of income tax and the fact that the NI upper earnings limit (UEL) comes into effect at a lower level of earnings than does the basic rate limit for income tax all contribute to the relative regressivity of an NI contribution increase. Table 7.14 illustrates this, comparing the distributional effects of raising the standard rate of NI contributions by 1% with raising the basic rate of income tax by 1%. Raising NICs by 1% raises slightly more revenue than raising the basic rate of tax (£1.9bn compared with £1.65bn).

Table 7.14. Comparing a 1% rise in NI with a 1% Rise in the Basic Rate of Income Tax

Decile	Gains (£ per week)
1	0.00
2	0.00
3	0.00
4	-0.15
5	-0.27
6	-0.25
7	-0.31
8	-0.15
9	0.04
10	0.94

The NI change raises more money because, although pensioners do not pay NI but do pay income tax, non-pensioners start paying NICs at lower rates of pay than they do income tax, and the 1p rise does not affect income in the 20% reduced rate band. These two effects more than outweigh the fact that the NI UEL is below the basic rate income tax limit.

A number of structural problems remain with the NI system. The most pressing of these is of course the continued existence of the Upper Earnings Limit which results in a reduction in overall marginal direct tax rates from 34% (25% + 9%) to just 25% when it is reached. While the UEL continues to be uprated in line with prices, the numbers with earnings above it will increase (earnings typically rise faster than prices).

Table 7.15. Numbers above NI Ceiling

Year	000s
1984-85	1750
1985-86	2000
1986-87	2000
1987-88	2500
1988-89	3000
1989-90	3250
1990-91	3250
1991-92	3000
1992-93	3000

Source: Government Actuaries Department.

Raising the NI UEL would help to reduce the structural anomaly and raise money. But, given that the Conservatives were the only major party at the last election not to support some such move, it seems unlikely that they will make it now. Any such change may have to wait until the basic rate limit has fallen enough in real terms to make it possible to compensate losers from the abolition of the UEL by reducing the higher rate of income tax.

The other major structural problem with the Class 1 NI system lies at the lower end. Once an employee's earnings exceed the lower earnings limit (£56 per week from April), 2% of *all* those earnings is levied on the employee and 5% of *all* the earnings is levied on the employer. Even this situation is better than it was prior to the 1989 Budget reforms. Changes here in this Budget must be considered unlikely because any lowering of these rates would be expensive.

Another area much in need of reform is self-employed NICs. Currently the self-employed pay two classes of NI - Class 2 and Class 4. The former is a flat rate levy of £5.35 per week on those earning above the "Class 2 floor", £60.37 per week. Class 4 contributions are paid at a rate of 6.3% on profits above the Class 4 floor which currently stands at £117.69 per week and below the ceiling of £420. This system provides 3% of the NI fund.

Green Budget 1993

There is considerable scope for reform both because the self-employed pay considerably lower NICs than the employed and because the existence of the flat rate component reduces the progressivity of the system. Furthermore half of Class 4 NICs are deductible against income tax, which provides the self-employed with another advantage by comparison with employees. And of course the self-employed do not have to pay employers' contributions. A number of reforms suggest themselves. The flat rate Class 2 NI could be abolished in conjunction with a rise in the rate of Class 4 NI to, say, 9%. The IFS tax benefit model suggests that this might raise £350 million in NI, though about a third of that would be lost in reduced income tax payments if half of Class 4 contributions were to remain tax deductible. Such a reform, while raising revenue, would actually be advantageous to those self-employed with the lowest incomes because the flat rate contribution bears relatively more heavily upon them. By contrast those with higher incomes would clearly lose from such a change.

As with employees, the self-employed face a contributions ceiling. This stands at the same level as the Class 1 upper earnings limit. While this ceiling seems reasonable in comparison with that for Class 1 employees contributions, it is worth remembering that half of Class 4 NICs are deductible against income tax and therefore more analogous to employer Class 1 contributions, for which there is no ceiling. This argument might constitute a good case for removing the Class 4 ceiling on at least half of total contributions. That is, given current rates, Class 4 contributions might be levied at 6.3% below the current ceiling and 3.15% above it. This might affect around half a million self-employed. The IFS tax benefit model suggests around £200 million could be raised in this way.

Table 7.16. Raising Revenue from Personal Direct Tax: A Summary

Tax Raising Ready Reckoner	
Reform	Tax Raised (£ million)
Freeze all allowances and thresholds	970
Freeze MCA only	130
Freeze rate thresholds only	180
Restrict allowances to basic rate	1300
Increase basic rate by 1p	1650
Increase higher rate by 1p	330
Increase Class 1 NIC by 1%	1900
Abolish Class 2 Class 4 to 9%	350
Abolish Class 4 ceiling on half Class 4 rate	200

Source: IFS tax and benefit model. Numbers may differ slightly from those published in the Autumn Statement.

Taxation of Savings

During the consumer boom of the late 80s the tax system was seen by government as a potential mean to slow down consumption growth. This view, which was partly responsible for the expansion of Personal Equity Plans (PEPs) and the introduction of Tax Exempt Special Savings Schemes (TESSAs), was probably largely erroneous, since the main impact of such special schemes is to shift money around from one form of saving to another, rather than to increase the flow of new saving. In the current climate, the government would presumably like to encourage consumption rather than spending, and raise money rather than give it away.

Private Pensions

Recent weeks have seen repeated references to the costs involved in the current tax treatment of private pensions. Most of this discussion has been confused and misleading. The current treatment of private pensions is to exempt contributions from tax, exempt fund income from tax, and tax pensions when they are paid quite justifiably. Pensions are effectively treated as deferred earnings. The main anomaly is that a certain proportion of the fund, typically 25%, can be paid out as a tax-free lump sum.

Abolition of the tax-free status of the lump sum could raise £1-£1.5bn a year in the medium term, but would have to be phased in slowly so as to avoid unreasonable disruption of the expectations of those about to retire. If the tax-free lump sum were abolished, private pensions would receive tax treatment similar in result to that accorded to owner occupied housing were Mortgage Interest Relief (MIRAS) to be abolished. Pension contributions are made out of untaxed income, returns on the contributions are untaxed, and the final withdrawal of contributions is taxed, whereas housing investments are made (after the removal of MIR) out of taxed income, but returns to saving in the form of housing consumption and capital gains are not taxed.

Much larger figures than £1.5bn have been discussed recently in the context of private pension tax privileges. It is certainly true that if tax were imposed on pension contributions and/or fund income and no individual or company changed behaviour, tax revenue would rise significantly. But the reason that private pensions are the destination for so much saving is that they are relatively tax efficient. If that status were changed, saving would flow into other such assets, such as housing, PEPs, or TESSAs. If it is right to think of pensions as deferred earnings, it is right to tax them as we do now, except that the tax-free status of the lump sum should be removed. To believe that the government's budgetary problems could be solved by imposing other significant tax burden on private pensions is misleading (see Dilnot and Johnson, 1993 for further discussion of these issues).

PEPs and TESSAs

Some further extension of PEPs may be possible this year, and as we have argued before, would be desirable. Extension of the type of asset permitted within a PEP would be a higher priority than further increases in the maximum which can be contributed.

The most obvious reform to TESSAs would be to remove the requirement that funds must be held for five years to qualify for tax relief. Such a change would put TESSAs on a par with PEPs, and might also release some funds for current consumption, which the government would presumably welcome.

Housing

The tax treatment of housing continues to attract interest, with widespread acceptance that MIR is an undesirable feature of the system. Any reduction in MIR would need to be phased over several years, and is unlikely even in the December 1993 Budget, although it must be a strong possibility at some time in this Parliament. Suggestions have recently been made for ways of boosting the housing market using fiscal incentives. Given the state of public finances, any such scheme would have to be very small in scale, perhaps targeted on first-time buyers. There is a wide range of possibilities from outright grants to first-time buyers to some form of front loading of MIR. Such tinkering with the tax system is in principle undesirable, but might have some positive effects on consumer sentiment.

Income Taxation of the Self-Employed

Following the overhaul of other areas of the direct tax system, such as the 1984 Corporation Tax reform and the introduction of independent taxation, in 1989 the government turned its attention to the taxation of the self-employed, with the publication of an Inland Revenue consultative document, *A Simpler System for Taxing the Self-Employed*.¹ The current system, introduced by Winston Churchill in 1926, is undoubtedly not simple. It is based on two principles: the "source doctrine", that someone who is or has been self-employed will only be taxed on income from that source in a particular fiscal year if they are conducting a business in that fiscal year. The second is the "preceding year basis of assessment": that in a particular fiscal year, their liability to tax is based on their income earned in the accounting period ending in the previous fiscal year. Thus, for an ongoing business drawing its account up to a date other than 5 April, the 1992-93 assessment would be based on profits from 1990-91.

Whilst this may look relatively simple, this procedure is revised for businesses in the first and last three years of their lifetime, for up to nine years in the case of a partnership when partners are added or withdrawn, and up to three years on a change of accounting date.

¹ Inland Revenue (1991), *A Simpler System for Taxing the Self-Employed: A Consultative Document*, London: Inland Revenue.

These rules result in a tax system with a number of undesirable properties. Since in the first year of a business there is no "preceding year" on which to base tax computations, the first year's profits may form the basis of assessment up to three times. To compensate for this, an equivalent period escapes assessment when the business closes. The result is that it is only by accident that the profits liable for tax over the lifetime of a business are equal to profits earned. If nominal profits are higher at the end of a business than at the beginning, the self-employed tax-payer will pay tax on less than the profits earned. This is inequitable (the self-employed are on average treated more generously than employees) and arbitrary (some of the self-employed will gain, some will lose).

Such a complex system is undoubtedly burdensome on the Revenue, on the self-employed tax-payer, and on their advisers. This is reflected in the level of compliance and administrative costs. It also provides opportunities for tax avoidance, through manipulating the pattern of profits over time, by making particular choices at the opening and closing of a business, and by adding extra partners. This introduces further inequities, between sophisticated and well-advised tax-payers, and those unable to afford professional advice.

The Inland Revenue's (1991) original proposal was to move to a "current year" basis of assessment. The tax liability for a particular fiscal year would be based on profits earned in the accounting period ending in that fiscal year. The rules for opening and closing businesses would be considerably simplified. However, this system has a number of problems. A tax-payer who moved from self-employment to employment or changes accounting date would be taxed on more income in that year than actually arose, potentially shifting them into a higher rate of tax. It retains inequities between tax-payers choosing different dates in the accounting year.

A further consultative document was issued last November,¹ taking the original proposals forward. A wider reform of the personal tax system was proposed, bringing together the procedures for taxing different types of income, such as investment income paid gross, and investment income of higher rate tax-payers with basic rate tax deducted at source. This may be seen as the first stage in the abolition of the arbitrary Schedular system, in which income from different sources is taxed according to different rules, involving different tax offices and undoubtedly complicating the system unnecessarily.

The major proposal was to bring further sources of income into the current year basis of assessment, with a similar timetable of tax payments. However, Chapter 7 of the document proposed a "fiscal year" basis of assessment, with self-employed tax-payers drawing up accounts and paying tax in relation to fiscal years, rather than other chosen accounting

¹ Inland Revenue (1992), *A Simpler System for Assessing Personal Tax: A Consultative Document*, London: Inland Revenue.

periods. Such a reform would offer much greater potential for simplification. It produces no complications with the opening and closing of businesses, is much easier for tax-payers to understand and shifts the taxation of self-employment income more into line with other sources of income, such as employment, pensions and investment income.

Reform of the taxation of the self-employed has become more pressing, as the number self-employed has increased dramatically, from less than 2,000,000 in 1979 to 3,500,000 in 1989. Comments on the Revenue's "simplification review" are required by 31 January, 1992 so changes may be announced in one of this year's Budgets. Introduction of the changes will take some time longer: a transitional period will be required for the changes to the taxation of the self-employed; further reform to the Schular machinery would require administrative reform. We can expect to hear announcements in 1993 of some or all of a shift to self-assessment, to the unified assessment of different sources of income and to unified basis of assessment, most probably the current-year basis.

Taxation of Benefits-in-Kind

The taxation of perks has been an issue of recent litigation, unfavourable in outcome to the Inland Revenue. The Budget might well revisit the issue as the Revenue are keen to establish and codify what they consider to be sensible practice in this area.

The problem is an old one: how much do you tax people when they receive remuneration in forms which cannot easily be valued. In principle, companies bestow upon their staff many items which are not strictly necessary for the execution of their duties - a fabulous desk or a good view from the office window are better seen as consumer items for the user than they are as vital items of the workplace. In theory, we should tax these in the hands of the employee, just as we should tax their cash income, or the gold bars or groceries they sometimes receive. We should exempt them only in as far as they are necessary for the employee to perform his or her duties. The most common perk, the company car, raises all the practical problems that it does precisely because it is a significant item that is often used for both work and personal purposes. Indeed, company cars have attracted specific treatment, and have been the subject of a recent consultation document.

For practical purposes, the Revenue and most tax purists believe that it is best simply to overlook items of consumption that are integral to the working environment, as it is too hard to separate out that which can be justified as a necessary business cost, and that which is a form of backdoor pay for the staff.

But that still leaves many other items - health and other insurance, favourable travel loans, discount purchases of the employer's own output. At what level should we value, say, the discount air travel of British Airways employees for the purpose of taxing them? The options which have governed debate to date are three: the price which the employee

would have had to pay for them in an open market; the average cost to the employer of providing them; or the marginal cost to the employer of providing them.

In many other countries, it is market price that is used. The recent British court case was essentially an argument over whether average cost or marginal cost of provision should be the appropriate valuation base. The result upheld the marginal cost principle.¹

What principle should govern the choice between the different options? The authorities seem to dislike perks, even though it is often efficient for various items - such as loans and insurance - to be provided by an employer rather than purchased in an open market. Often, the perks are cheap or free to provide, and of high value to the employees and it would be damaging to outlaw them. Why discourage British Airways from offering its staff a concession which costs the company next to nothing and is highly valued by its workforce?

Nevertheless, it is equally damaging to have companies paying their staff through creative but wasteful means, simply in order to avoid the tax payable on cash income.

The principle which renders the system neutral in its treatment of benefits-in-kind is one which taxes what might be called *phantom income* - the wage or salary a company does not have to pay because it offers the perk instead. It is, for example, the discount on the British Airways wage bill created by the fact they offer their staff a travel concession. Another way of expressing the same thing - under reasonable assumptions - is as the staff's valuation of the perk. It is the value which the British Airways employees place on their travel concession, the salary they are willing to give up in order to have the perk.

Unfortunately, the staff valuation is not a directly observable variable. It would be fine if we could wire British Airways employees up to a lie detector and ask them what salary equivalent they would need to buy them out of their travel concession, but we cannot. All we can definitely say is that the staff could not place a higher value on the concession than the market price of the tickets they obtain, as they would surely prefer cash in excess of the market price of the tickets, to the tickets themselves. And the staff valuation is very unlikely to be less than the marginal cost of providing it, as if staff value the ticket at less than marginal cost, it would pay British Airways to give them the cash instead. The true valuation is almost certainly bounded by these two numbers.

In principle, for those purchases that an employee would have made anyway, the valuation is the upper end of the range - the market price. For purchases which the employee would not have used cash to make, the valuation should be less than the market price. It follows then, that in

¹ For those earning less than £8,500, the valuation basis is value to the employee, defined as the money or money's worth the employee could get for the benefit (and not what expense is saved by it).

Green Budget 1993

principle the tax charge should depend on each individual employee, and what his or her preferences are. It might mean, for example, that the flights of rich British Airways employees should be valued more highly than those of the poorer ones as the rich would have been more likely to have travelled anyway, and paid a full fare for their ticket. The first discount flight each year should be valued more highly than the later ones as the later ones were less likely to be made anyway.

These principles, in extreme form, obviously cannot provide the basis of an administerable system of taxation. In their most extreme form, they imply that we should estimate what each employee is *potentially* able to earn, and tax him or her on that regardless of the actual wage they obtain, because if they earn less it must be attributable to the pleasant conditions they enjoy at work.

In practice, however, these principles are hard to execute. For one thing, it will usually be easier to treat the company as a unit, rather than each employee. The level of tax on cheap fares is better negotiated with BA than with thousands of individuals, especially for those benefits that necessarily need to be provided to all employees or none (such as some insurance schemes).

Secondly, it will usually be a matter of judgement and negotiation as to just what value needs to be imposed.

What is very clear, however, is that items which are cheap to provide, and which employees would not usually purchase themselves, cannot reasonably be taxed as though they were worth the market valuation, nor indeed necessarily the average cost of provision. Although it is hard to specify a just and efficient policy on taxing perks, arguments between companies and the Inland Revenue should at least concern the employees' valuation of their perks, not the arbitrary application of a particular solution. It is unlikely that any system could deliver a simple formula to govern this issue. A better policy might at least subject detailed decisions to independent scrutiny.

Unless the government have special insights on this matter, they would do better to use the Budget as a release date for a consultation paper rather than a full-blown policy. Primary legislation will not adequately deal with a matter that obviously requires judgement and negotiation on a case-by-case basis. The goal should be a framework within which consistent detailed decision-making can occur. Any review of policy in this area might also focus on some of the profit-related pay and share schemes that many claim no longer sense any very useful purpose.

7.3 Taxes on Companies

Corporation Tax and ACT

One issue is currently dominating discussion of corporation tax: that is what has become known as the problem of surplus advance corporation tax (ACT). The Treasury probably receives more representations from large British companies on this subject than on any other, and is keen at least to be seen to be doing something about it. Other changes to corporation tax - reductions in the rate, for example - will probably sit on the backburner in the meantime.

Reform of ACT raises questions about the whole structure and existence of corporate taxes and some of the possible solutions could cost, or indeed raise, substantial amounts of revenue. To solve the problem of surplus ACT, however, requires us to understand whether there is truly a problem, and if so, how it arises. Here, we simply describe the background to surplus ACT, outline the problems it creates and suggest a range of options for reform.

Advanced Corporation Tax

ACT is a problem because no one really knows whether it is an income tax or a corporation tax, or indeed whether corporation tax itself is really a form of income tax. In most western tax systems, companies pay corporation tax on any profits they earn, and shareholders pay income tax on any dividends they receive (unless the shareholder is not an income tax payer). But what about dividends that are received out of taxed profits? Here, conventional tax systems can be divided into two different types: in some countries - such as America and the Netherlands - dividends are effectively taxed twice under both the corporate and income tax systems. In others, such as those of Britain, France and Germany, the system is designed to ensure that most of this double taxation is avoided.

The US type system - the "classical" system - is the simplest. A company earns its profits, on which it pays corporation tax. It then pays out a dividend, on which shareholders pay income tax. Obviously, this means that dividends end up being taxed twice, once when the company makes profits to pay the dividends, and once when the shareholders actually get them. The "imputation" system, introduced in the UK in 1973, was brought in to cut down on this double taxation.

The workings of the British system are rather involved. If a large company earns profits and pays them out as dividends, it pays ACT on 25% of the gross dividend. This is really an advanced collection of income tax rather than of corporation tax. It also pays mainstream corporation tax of 33% on all the profits it has earned - in the same way as the American system. The difference is that the company can then offset the ACT already paid against the corporation tax that it owes. This means that it only pays a little mainstream corporation tax on the profits it distributes as dividends - just the difference between ACT and corporation tax rates.

In this system, basic income tax rate shareholders have now paid 33% tax on the profit which produced the dividend - 25% of that was ACT, the other 8% was corporation tax. Higher rate tax-payers have to fill out a tax return and pay some extra income tax on their dividend - the difference between the 25% ACT rate and the 40% higher income tax rate. Zero rate income tax-payers - including the pension funds and institutions who own most British shares, plus PEP holders - receive a rebate of the 25% ACT collected. They end up paying only the mainstream corporation tax - at a full rate on the retained profits and at a reduced rate (the difference between the corporation tax and ACT rate) on the dividends.

The net result of all of this is that distributed profits are taxed at the shareholder's income tax rate plus the difference between the basic income tax (or ACT) rate and the corporation tax rate.¹

It is clear that ACT straddles the income tax and corporation tax systems. On the one hand, it looks like a corporation tax because it is collected from the company not from the tax-payer (although that is also true of most income tax and national insurance).

On the other hand, it operates much more as a pre-payment of income tax. It is levied at the basic rate of income tax (on gross dividends); exempt tax-payers such as pension funds get a full rebate; basic rate tax-payers need pay no more, and higher rate tax-payers pay an additional 15%. If we kept 33% on retained profits, had a low 'top up' corporation tax on dividends, and abolished ACT, leaving the income tax system to apply a fuller rate of tax on dividends, their shareholders would barely notice.

Surplus ACT

The distinction between ACT as an income tax and ACT as a corporation tax is crucial in the debate over surplus or unrelieved ACT. This arises when companies are paying out more in dividends than they have in UK taxable profits, so they are paying ACT on the dividends, but no UK corporation tax.² A company may find itself in this position for two basic reasons. First, it may be paying dividends out of reserves - out of money earned in past years. But this is unlikely to be a permanent problem because it can often carry the surplus backwards to set against past tax or forwards against future tax.

Second, and more importantly, they might have earned most of their profits overseas. In this case, the UK government reduces their UK corporation tax bill by the amount of foreign taxes they have paid. They might thus not have any UK taxes at all, but be earning large enough profits to pay out dividends. They still have to pay ACT on these

¹To be precise, the interaction between corporation tax and income tax means that the effective overall tax rate on dividends is 10.67% for pension funds, 33% for basic-rate tax-payers, and 46.4% for higher rate tax-payers.

²The right to offset is limited to the lower of the amount of mainstream corporation tax due, and 25% of UK taxable profits.

dividends, but run out of mainstream tax to set it against. So the foreign earned profits are subject to double taxation - foreign company taxes and UK ACT.

Now, if we believed ACT was a corporation tax, then it would seem inappropriate for non-UK profit-making companies to be paying ACT. Why should they pay ACT if they are not paying corporation tax? This is essentially the view of the companies which have been lobbying so hard to have the problem dealt with. It seems to make sense because the British corporation tax bill is usually reduced by the corporation taxes paid abroad.

If, however, we believe that ACT is an income tax, this argument no longer works. If I happen to put my savings into a company that earns all its profits abroad, is it right that I should pay no income tax at all on the dividends? Worse still, exempt shareholders like pension funds get a full refund of the ACT pre-payment. If no ACT is paid and no mainstream corporation tax is paid, but the shareholder still gets a tax refund, the UK exchequer will actually end up out of pocket.¹

The difference between these two views of ACT matters because of the way foreign taxes are credited against UK taxes. If a company makes profits in Germany, German company taxes can be offset against UK company taxes. German income taxes can generally be offset against UK income tax. Within the UK, company taxes are partly offset against income tax. What is not allowed in this network of double tax protections is one that allows you to reduce your British income tax bill by the amount of foreign company tax you effectively pay. The system is designed to ensure that the minimum tax paid overall, regardless of foreign tax liabilities, is the income tax due on the shareholder's receipt of dividends.²

This argument shows that the correct treatment of ACT is far from clear, and that one option would be simply to tell companies to stop complaining, that this is a tax on their shareholders and not on them. But this would not be an adequate response, because surplus ACT does create genuine distortions.

The Problems Created by Surplus ACT

Bias Against International Investment

Many British companies find themselves facing higher effective tax rates on foreign than on domestic profits, preventing them from making efficient choices on the mix of UK and foreign investment, and putting companies with substantial foreign earnings at a disadvantage. Although this might be partly due to the way that other governments tax profits, much of the bias arises from surplus ACT.

¹The 1982 Green Paper on Corporation Tax reasserted the intended link between credit for ACT at the corporate level, and credit at the personal level (para 14.14).

²This is not true of direct portfolio investment abroad.

It means that surplus ACT firms like BP - companies which pay in effect both foreign company taxes and UK income tax - have a strong incentive to boost their UK profits and raise their overseas costs. These companies are in the paradoxical situation that every pound of costs that can be transferred outside the UK means less UK tax to pay. This is because when UK profits rise, the new UK taxes that are incurred can be fully offset against taxes that are already being paid. So there is no extra UK tax to pay. But when foreign profits fall, this will genuinely reduce the tax bill, because there is no UK corporation tax liability against which the foreign tax can be set. The goal therefore is to boost overseas costs (by moving cost centres like R&D overseas) and boost UK profits relative to overseas profits, by concentrating efforts on UK activities.

Mergers

As well as encouraging UK activity within the company, there is also an incentive simply to "buy-in" (or be "bought by") mainstream corporation tax capacity by acquiring subsidiaries with domestic operations.¹ Merger and acquisition activity is not costless, and it seems undesirable to encourage it with substantial tax incentives.

International Holding Companies

A further problem tied up with ACT is the way that we treat profits that are routed through the UK to foreign owners. At the company level, profits received from abroad and then paid out are subject to the usual limits on ACT offset. But overseas shareholders may be unable to claim a full imputation credit on dividends received. This means that the company may have surplus ACT, but this shortfall is not matched by a credit to UK tax at the personal level.

The result is that shareholders may be taxed in the UK on money that is sent to them via the UK, even if the profits were not generated by a UK subsidiary. This renders the UK an unattractive place to locate a European holding company, relative to countries with more generous regimes.² In as far as the business services sector based in the UK is important, Britain must remain an attractive centre for company headquarters and regional headquarters.

Options for Reform

A wide range of measures³ to eliminate or alleviate the problem of unrelieved ACT has been proposed. We consider some of the directions for reform and the more serious and widely-cited proposals.

¹ However, anti-avoidance rules limit the right to carry forward surplus ACT after a change in ownership, or trade. But even in these cases, merger may be attractive as a way to eliminate future expected surplus ACT.

² Such as the Netherlands.

³ See for example Gammie (1991), for an almost exhaustive list of possibilities, or the Institute of Directors 1992 publication *Advance Corporation Tax*.

Because these schemes are quite complicated, the table below is provided to give an indication of the effects of some of them, focusing on the foreign profit problem. In each case we show the net returns to various shareholders, and the taxes raised, where £100 of profit is remitted to the UK net of overseas tax at 33%. The company is assumed to make no other profits, and pays out the maximum possible dividend to shareholders. Column 1 shows the current position for a UK profit of £100, and column 2 the position for an overseas profit of £100. The other columns show how other systems compare.

We start with some options which re-cast the ACT system: imagine that ACT is abolished and dividends only taxed with the low top-up corporation tax as at present. What could we then do to replace the ACT component of tax? We continue with some reforms that directly attempt to change the taxation of foreign sourced profits within a more limited way.

Abolish ACT

Tax Dividends With Income Tax Only

One option would be to replace ACT with - or merely to rename it - income tax. We would continue to tax undistributed profits at 33% as at present; we would continue to levy a top-up corporation tax on dividends (equal to the difference between the current corporation tax rates and the ACT rate); but we would effectively use the income tax system to collect further tax on dividends. The corporation tax would have a split rate.

This is actually a mere cosmetic change. It really involves renaming ACT income tax in the hope that companies would worry less about it. But much of its substance can be introduced in various forms of more subtle disguise, known as franking or net rate schemes.

These variants turn the current system on its head. At the moment, you can write off ACT against income tax, even if you pay no income tax you get cash back. We could change that to a scheme whereby the company can write off ACT against corporation tax, even though it pays no corporation tax. (It gets a credit back, enriching the shareholders who effectively own the credit.) Now, the shareholders would pay income tax on the dividend, and would get a credit for ACT actually paid, but not for the surplus ACT given back to the company.¹

Does this solve the problem? Like the mere renaming of the tax, it can improve the position for international holding companies, because foreign profits routed through the UK will generally not have to pay any corporation tax, while foreign shareholders will not normally pay UK income tax. So no tax will be paid.

¹ There are various ways of doing this. Under a franking system, the company would pay dividends with income tax credits attached, but only to the extent that it has made profits on which UK tax has been paid. Under a net rate system, shareholders would get a credit against income tax, but at a rate multiplied by the fraction of profits on which UK tax has been paid (or the total tax paid).

But it does not solve the other problems, because it does not really change the system. Instead of foreign profits bearing both foreign tax and ACT, they will now bear both foreign tax and income tax. Since the amount of tax credit available to shareholders depends on the level of UK profits, there will still be a bias against foreign investment and an incentive to acquire companies which pay UK tax. This option is shown in column (6) of the table.

The only real difference would be one of perception. Company directors may no longer feel it to be their problem, and may be less inclined to let it distort their behaviour. Whether this kind of re-labelling could really change actual behaviour is unclear. Sometimes we observe it can make a difference, sometimes we think it does not. Most people think it makes some difference whether employees' or employers' national insurance rises, even though the two taxes are in substance very much the same.

Tax Dividends under the Full Corporation Tax

An alternative - with some substantial attractions - is to abolish ACT, abolish most or all the income tax due on dividends,¹ and to allow dividends to be taxed simply as though they were retained. Exempt and basic rate taxpayers will not have to pay any income tax, although we could continue to raise a little extra from higher rate tax-payers.

For most companies, this will make little difference to the amount of tax paid. Instead of paying 25% ACT plus 8% corporation tax on dividends, they will pay 33% corporation tax.

This solves the holding company problem because relief for foreign taxes paid will generally wipe out the corporation tax charge, and no further tax will be due. So profits routed through the UK will generally attract no tax charge.

It will also solve the surplus ACT problem because the corporation tax system recognises foreign taxes, and thus BP's foreign taxes will be credited against its British taxes. It will have no reason to acquire additional UK profits, or boost foreign costs, unless the foreign tax system is particularly severe, which is not in our hands.

Comparison of the "net return" in column (4) and column (2) of the table shows that if the foreign tax system is identical to the UK's there is no net bias. The government loses revenue by levying very little income tax on dividends paid from foreign profits, but raises money by no longer paying imputation credits to pension funds, with a net revenue gain of a couple of billion pounds.

¹This could be done relatively simply by treating all distributions as non-qualifying distributions.

Clearly, the pension funds are the losers here. The overall rate of tax on the profits of the companies that they own rises from about 24%¹ to 33%. This does not alter the fundamental status of pension funds as exempt institutions - the company in which they invest not exempt from corporation tax at the moment - but nor is it a step towards a more rational system for the long run. Pension funds would have an incentive to switch into holding debt.

Tax Dividends with Both Income and Corporation Tax

Or we could go in both directions at once, and levy both corporation tax and income tax, with no credit at all. That is, to go back to the other more radical approach is to re-apply the classical system. In effect, we combine the two measures above. We abolish ACT, we apply a flat rate corporation tax to all profits, and charge income tax on dividends as well. This of course creates a double tax on dividends, but it removes the distortions created by ACT. If you move a pound of costs from Britain to overseas, you will pay more UK tax. Under the current system, because you can offset ACT against profits taxes, you would not pay more UK tax.

So this option has some merit, and again, would raise large amounts of money. Unfortunately, there will be an outcry from shareholders, unless the money raised was given back in the form of lower corporate taxes generally.

The classical system is probably not on this year's policy agenda, even though some of the arguments pitched against it prior to its abolition have been subject to revision. At that time, the typical justification for the corporation tax was that it plugged holes in the income and capital gains tax system. But as a higher and higher proportion of shareholders are non-income tax paying, the corporate tax needs some independent justification - it serves as a social "charge" on the company, for example - in which case the classical system makes every bit as much sense as the current imputation system. Alternatively, we might say that the corporation tax serves no very useful purpose any more, and that it should be dispensed with as soon as possible.

Alleviating the Effects of Surplus ACT

If we do not adopt one of these reforms of the whole ACT system, we could take some more modest action to reduce the distortions created by surplus ACT.

¹ Assuming a dividend payout ratio of about 40%. This route would have the added advantage of increasing neutrality in the payout decision, by levying a flat non-refundable tax at the company level, regardless of shareholder status and payout policy.

Reduce Foreign Tax

The problem of surplus ACT is, in most cases, one deriving from the interactions of different national tax systems. International taxation raises sticky questions of jurisdiction: if a British firm makes profits on its French activities, should the tax on those profits go to Britain, where the shareholders are, or to France where the profits are made? It is exactly this problem which leads to surplus ACT, because the corporation tax is levied at source - France takes the first bite - but the income tax is levied by shareholder residence - Britain slaps ACT on the already-taxed dividends that come from France.

This is an area ripe for international agreement. In a sense, it matters less whether shareholder residence or profit-source is the basis of allocation, than that both countries involved should agree over which it is. Imagine a British firm in France. It would be fine for the firm if French taxes were allowed in credit against ACT payments to the British government. Although the British government would lose revenue, it would mean that there was never more than one tax on the French-sourced profits. It would also be fine if the French government gave a credit to British firms for some of the tax they have paid - to cover the fact that there is still some British income tax to be paid on them. In that case, again, there would be no double taxation, although the French government would lose revenue relative to the current situation. What is needed is for an agreement to treat these matters reciprocally.

Of course, the worst situation for any government is to treat subsidiaries of foreign companies on the residence principle, and overseas subsidiaries on the source principle. That way it loses out on all revenue. And few people doubt that some sort of negotiated reciprocal solution to the ACT problem would help.

It would be possible, for example, for other countries to return some of the tax, or the imputation credit, on dividends paid to UK companies. Within the EC, there have been proposals for a clearing house for these credits which would allow the UK government to give the relevant credit directly, without loss of revenue.

This could operate in a number of ways. One possibility, shown in the table, would be for one or other government to return a credit to the company. In column 3 we assume an imputation at 25%. Here, the fall in double-tax relief raises the level of mainstream corporation tax payable, thereby eliminating the surplus ACT.

However, this type of solution is only likely to be pursued in the context of plans for European tax harmonisation. And even if the problem is solved in a European context, repatriating profits from non-EC countries, in particular the US and Japan, will remain problematic.

Most unilateral solutions which have been suggested to the British government for dealing with the foreign tax surplus ACT problem, do so by extending the source principle to ACT or being more generous, giving money to foreign governments.

Exempt Foreign Income from ACT

One unilateral measure that would provide some relief would be to allow companies to pass on foreign income to shareholders without accounting for ACT in the normal way. These dividends could then be received free of UK income tax (or free of basic rate tax.¹) The UK government would therefore continue to raise corporation tax revenue where little overseas tax has been paid, but would avoid complications with ACT.

This is an attractive solution in that it allows profits that have suffered creditable foreign tax in excess of UK corporate tax liability to pass through to shareholders broadly free of UK tax. This makes it clear that any remaining bias against foreign investment is in the hands of the foreign government.

It would solve the foreign holding company problem, reduce, but not eliminate, the bias against foreign investment, and eliminate the incentive to acquire domestic companies.

The treatment of foreign income is shown in column (4) of the table. Clearly, the UK government is relinquishing some or all of its right to levy income tax in these cases, and therefore suffering a modest revenue loss, but it could be argued that this is appropriate.

Extending Offset - Tradeable Credits

One way of mitigating the problem would be to extend the circumstances under which ACT can be offset. These range from relaxing the offset limits, to allowing companies to set other allowances against ACT payable, to letting them sell surplus credits to other companies.

The right to trade credits would certainly lower the tax burden on affected companies, and eliminate the use of merger and acquisition as a costly indirect way to trade credits. But it would not solve the underlying problem. The limits on offset exist to protect the level of tax revenue, particularly when credits are refunded to exempt shareholders. Allowing companies to bypass the basic limits by trading surplus credits would be costly and open to abuse.

Column 7 of the table shows the effect on revenues, and the effect on returns, assuming that companies receive the full value of credits sold. The final columns show that for exempt shareholders, the UK government ends up actually paying out tax (in the form of lost revenue from entirely unrelated activity). The Inland Revenue are therefore likely to object

¹ That is treated as "non-qualifying distributions", so that higher rate tax-payers must account for the additional 15%, but exempt shareholders receive no refund.

strongly, and with good reason, to trade in surplus credits, or any scheme which provides very extensive reliefs. It is possible, however, that some of the more minor concessions would be acceptable.¹

International Holding Companies

There are some other suggestions specifically for solving the problem of international holding companies. These typically involve allowing foreign based multinationals to pass non-UK sourced profits back to their home base without paying any ACT (Gammie, 1991). As these firms may have some British based shareholders, legislation would have to be framed in order to ensure that tax evasion did not become possible.

This kind of solution works well where the situation is clear-cut, e.g. a wholly-owned subsidiary of an overseas multinational, but less well where a company simply has a substantial foreign shareholding.

Conclusion

This somewhat tortuous discussion hides several points. If the government wishes to raise a couple of billion pounds from pension funds, disregarding the problems this would impose on their valuations, and sort out the ACT problem, it should exempt dividends from basic rate income tax and levy full corporation tax on them. Pension funds effectively pay corporation tax; they do not pay income tax.

If the government wishes to tinker with the system, it should start by correcting the position of foreign holding companies based in the UK.

In the long term, the government should probably recognise that the corporate tax system requires a rather more substantial overhaul, and attempt to investigate its reform. The Budget could do no worse than simply see the start of discussion on this.

¹ For example, we could set the limit on ACT offset to the corporation tax paid, rather than imposing the 25% rule.

Table 7.17. ACT: Revenue and Returns under Various Schemes

	Domestic Income		Foreign Income			
	Current	Current	Foreign Credit ^a	Non-Qual. Dist. ^c	Full Relief ^d	Franking/Net Rate ^e
Gross profit ^a	100	100	100	100	100	100
Foreign tax	0	33	33	33	33	33
Credit for foreign tax	0	0	22.33	0	0	0
Dividend to UK parent	100	67	89.33	67	67	67
Corporation tax due	10.67	0.00	0.00	0.00	-22.33	0.00
ACT offset limit	25.00	0.00	22.33			
Surplus ACT	0.00	16.75	0.00		0.00	
ACT	22.33	16.75	22.33		22.33	
Net dividend	67.00	50.25	67.00	67.00	67.00	67.00
<i>Exempt shareholder</i>						
Income tax	-22.33	-16.75	-22.33	0.00	-22.33	0.00
Net return	89.33	67.00	89.33	67.00	89.33	67.00
Total UK revenue	10.67	0.00	0.00	0.00	-22.33	0.00
Total foreign tax	0.00	33.00	10.67	33.00	33.00	33.00
<i>Higher-rate shareholder</i>						
Income tax	13.40	10.05	13.40	13.40	13.40	26.80
Net return	53.60	40.20	53.60	53.60	53.60	40.20
Total UK revenue	46.40	26.80	35.73	13.40	13.40	26.80
Total foreign tax	0.00	33.00	10.67	33.00	33.00	33.00

Notes:

^aThis is a simplified example, showing a company with £100 of gross overseas profits and no domestic profit. The profit is all paid as a dividend from subsidiary to parent to shareholder. Foreign tax is charged at 33%, with no return of credit except where stated, and is eligible for double tax relief in the UK.

^b*Foreign credit*: The foreign government gives a credit at a 25% rate on dividends paid to the parent. In the example shown, the UK government accepts the credit as UK corporation tax paid (and reclaims it from the foreign government). Alternatively, the dividend could be passed through with no ACT payable, as with dividends from UK subsidiaries (and again the credit reclaimed). In this particular example the result would be the same.

^c*Non-qualifying distribution*: Dividends are treated as non-qualifying distributions. No ACT is payable; higher rate tax-payers must account for an additional charge; exempt shareholders can claim no credit.

^d*Full relief/trading*: Surplus ACT is returned to the company directly, or indirectly through a credit trading or offset scheme.

^e*Franking/net rate*: Imputation credits can be claimed by shareholders only in proportion to profits that have borne UK corporation tax, or up to the limit of corporation tax paid. The results are the same in this case, but the latter scheme is more generous in other cases.

Measures for Industry

The Chancellor will be keen to use the Budget to announce policies for industry. Recent statements from both Chancellor and Prime Minister have laid a new emphasis on promoting the interests of Britain's manufacturers. Addressing Britain's supply-side problems is both politically popular and economically attractive.

The biggest supply-side measure of the Autumn Statement was the introduction of a temporary tax incentive for investment. This increased first year corporation tax allowances, making it attractive to engage in investment before October this year. At the time, we pointed out that this measure would probably be modestly successful in accelerating investment from next year to this, but extremely unsuccessful in stimulating brand new investment. After all, if an executive knows that she is going to buy a machine next year, it costs her little to buy it this year instead if that saves her tax. On the other hand, she is unlikely to engage in new investment unless she believes that consumers will buy her products - regardless of the tax advantages to doing so. The effect of this measure is to reduce investment below the level it otherwise would have taken next year.

The only question now is whether the Chancellor might extend the scheme for another year. This might bring 1995 investment into 1994, thus delaying the inevitable clawback that he has to face the year after the scheme expires.

But it is unlikely that he will do so. For one thing, it would further destabilise the tax system and reduce government credibility - what sort of environment for investment would be created if the tax rules governing it are so variable? Another reason is that 1994 investment is still likely to be higher than 1993 investment, so tax concessions would be more expensive than now.

So even if the temporary increase in allowances had been a good idea, it would be hard to replicate in the Budget as it is costly to the Exchequer, and unfortunately, there is little new money to spend on supply-side measures.

The same is true of transport and infrastructure projects, which also received everything they could expect in the Autumn Statement. Education and training cost a great deal; new grants to the private sector - for example, to promote R&D - are simply not going to be possible in any large quantity. Similarly, cuts in business rates, which amounted to half a billion pounds last year, and which provide the easiest, quickest and most effective means of providing cash help to firms, are too expensive to make in any significant way.

In short, the constraints of the public finances have raised the question, "is there anything we can be seen to be doing for industry which does not cost money?"

The answer to this question is, "yes", and it is not unlikely that the Chancellor will adopt one of the ideas here, or one conceived in a similar spirit.

Incentives for Training

If there is little the Chancellor can do to promote public sector provision of training, an attractive solution is to devote his efforts to encouraging the private sector to increase its training. This could generate all the acclaim that new public sector spending would attract, while costing nothing in taxes. At the moment, the public sector spends about half as much as the private sector on training.

How could the Chancellor raise private sector levels of training? The answer to this question depends on one's beliefs as to the reason that the private sector does not already engage in more training. Some cynics might claim that the reason people do not train more is that training is not, in fact, terribly closely related to productivity. In that case, it would be unwise to encourage firms to do more training, because they would just be wasting their money to do so.

A second inhibition against private sector training might be the traditional fear of poaching: the company which trains has no effective means of securing its investment. Trained staff can leave and help competitors who never had to bear the burden of training costs. If this is the problem, then the cost of persuading companies to increase their training might be considerable. A small tax concession would not address the central problem at all. Essentially, if poaching was widespread, training would be an activity which is not individually helpful to companies, but which is socially desirable. The classic solution to this problem would be the expensive one, for the state to engage in more training.

There is, however, an alternative possible explanation for the current level of private sector training: that firms simply have not recognised the benefits that it can bring. This argument says that it is in the selfish interest of the company to invest in their staff, but that firms are too myopic or lethargic to recognise this. It is this explanation which leaves the door widest open for the Chancellor to act in the Budget.

In this case, his role would be to promote or market the idea of training, rather than to provide it. This is realistic because the budget required for promotion is probably an order of magnitude smaller than the budget necessary for direct subsidy. And there is a precedent for this kind of state role. In the 1986 Budget, Nigel Lawson introduced a tax concession for profit-related pay, with the words:

This would clearly be in industry's own interests... It should therefore occur without prompting from Government. But there is considerable inertia to overcome, so it might make sense to offer some temporary measure of tax relief...

Green Budget 1993

The relief in that case amounts to less than £50 million a year, and take-up of the scheme has been slight. In other cases of the same principle - encouragement to take up personal pensions, for example - the costs and success have both been much larger.

The method the Chancellor could adopt to promote training might be some kind of tax relief for companies that engage in one of the various training schemes currently being supported by training bodies. This tax concession would be temporary, and would not attempt to subsidise the training itself; it would only have to be big enough to induce employers to look at the merits of these various schemes.

There are several training schemes which could be involved. National Vocational Qualifications (NVQs) - which represent an attempt to parallel the academic levels of achievement with vocational levels - are still looking for recognition, despite receiving a boost in the Budget two years ago, when individual investment in them became tax-deductible. There are also some quality standards associated with the British Standards Institute which could form the basis for company training plans. Finally, there is the large scheme, Investors in People (IiP) which is being heavily promoted by many of the TECs. The National Education and Training Targets stipulate that half of Britain's large or medium size firms should have registered in IiP by 1996.

The advantage of these schemes is that they provide an existing method of certifying that a company is meeting reasonable training standards, and any tax scheme would have to rely on companies meeting certain external standards of training behaviour. It is still hard to see what a tax discount might consist of. It would probably be given to the employer - the decision-maker - but it could be given to the employee, encouraging staff to pressure their employers to train them.

One option would be to *raise* employers' taxes, unless they conformed to some external standard of training. The cash raised could be given back in lower taxes on those firms who do meet these standards. Thus, for example, the employers' National Insurance could be rounded-up from 10.4% to 10.5% for firms who do not subscribe to BS5750 or IiP; and cut to 10.0% for those firms who do. As long as only a fifth of firms took up the scheme, it would be revenue neutral. In the unlikely event that all firms took up one of the schemes, it would unfortunately cost the exchequer about £1bn, but the government might take the view that this would be a happy outcome in itself, for which it would be worth paying that sort of price. Again, if a tax scheme is motivated by a desire to draw people's attention to something, it should only be temporary.

Of course, if employers are not lethargic, but simply believe that training is a waste of time, this will make little difference, and will cost little.

Finally, other options would be to simply spend money on promoting training directly, along the lines of the "1992" campaign (which cost about £25 million). Or, they could adopt a more modest tax relief, on say, the administrative and registration expenses of IiP.

Long-Term Unemployment

A more expensive direction to pursue, but one which is thought to be of interest to the Prime Minister, is that of reforming the treatment of the long-term unemployed. Some have proposed ideas related to workfare - under which the unemployed would be obliged to take up short-term contracts - in the public or private sector - in return for their benefits. Such a scheme could build on 'Jobplan', which commences in April, and which mandates those unemployed for over a year to attend 'guidance workshops'.

These types of schemes involve high administrative and support costs and thus push up spending, whatever the benefits that follow. The Chancellor would probably have to commit substantial funds - something over half a billion pounds - to make such a scheme work effectively. Nevertheless, it may be a price the government thinks is worth paying.

Contract Reform

An area of substantive business concern lies in property contract reform. This again is an area where the government could take action without spending money.

There have been loud cries from retailers that the choice of available standard property contracts is hopelessly narrow. For one thing, the contracts tend to last 25 years; as a principle of English law, they all respect *privity of contract*, which means that even if an original tenant does not occupy the property for 25 years, they are responsible for paying the rent if subsequent tenants default. Finally, while they are subject to rental review, the principles on which these reviews are conducted appears not to be based on any economic rationale.

There are good reasons why the market may be slow to deliver better standard contracts than these. The costs would fall disproportionately heavily on the pioneering landlords and tenants, but the benefits would be shared among the whole community who subsequently followed them.

One role for the government would be to draw up new standard contracts, and to promote their use. Another would be set new regulations on the conduct of arbitration and review hearings. The difficulties that tenants face in overcoming confidentiality clauses appear to be a major hurdle to accurate assessments of what market rents actually prevail in an area, and the state could intervene to ensure that surveyors were not unduly restricted in the information they had available to them. Neither of these measures would involve doing what the property owners are most scared of - re-writing or invalidating contracts which have already been signed. Both might help the situation in which much property lies empty, unable to attract tenants at almost any rent at all; while rents in the buildings occupied by healthy firms exhibit no downward flexibility.

7.4 Taxation and the Environment: A Carbon Tax

Recent years have seen growing interest in the possible use of taxation as a tool of environmental policy. This now seems an area which might be of importance to the government, since there may be scope both to raise revenue, and to act on environmental issues. The most significant debate at present surrounds the EC proposals for a carbon tax, which we discuss at length below. Such a tax would have serious implications for industry, households and the environment, and might raise as much as £9bn a year when fully operational.

The European Commission proposed¹ the introduction of a Community-wide "carbon tax" to encourage industry and consumers to reduce their use of carbon-based energy as part of the Community's response to the environmental problem of global warming. The proposals would tax fossil fuels in proportion to their carbon and energy content, starting at a rate equivalent to \$3 per barrel of oil, and rising in annual \$1 stages to a final level of \$10 per barrel.

The ostensible aim of a carbon tax would be to control the problem of global warming that appears likely to be caused by growing concentrations of greenhouse gases (carbon dioxide, CFCs, methane, etc.) in the earth's atmosphere. Since this is a global problem, the context for policy is global too. Total EC emissions of carbon dioxide, the principal greenhouse gas, amount to only some 13% of current global emissions, so the contribution that unilateral policy action by the European Community could make to improving the situation is limited.

The Commission's proposals come against the background of international discussions and negotiations about the possibility of concerted action to combat the greenhouse effect. Many countries have already committed themselves to quantitative targets to stabilise or reduce carbon dioxide emissions by a given date, but not all countries have to far been willing to contemplate major policy measures. Whether action by the Community is appropriate in these circumstances has been the subject of considerable debate (see, for example, Barrett, 1990).

Microeconomic estimates of the effects of higher energy prices on the demand for domestic energy and petrol by private households seem to confirm that the price sensitivity of demand for energy is low. Estimates using the IFS model of consumer expenditures indicate that an increase in domestic energy prices of 15% would cut household energy consumption by 5.5%, and an increase in petrol prices of 55p per gallon would cut petrol consumption by something over 8% (Pearson and Smith, 1990).

¹"Communication to the Council" (SEC(91)1744 final).

The implication of a low price elasticity is that relatively high taxes would be necessary to have a significant impact on the overall demand for energy. Thus, if a long-run price elasticity of -0.3 is assumed, energy prices would need to be increased by about one-third, to reduce overall energy demand by 10%.

Unlike conventional environmental policy measures such as the direct regulation of technological standards or polluting emissions, environmental taxes and charges generate additional fiscal revenues. These additional revenues present both problems and opportunities. On the one hand, the distribution of the environmental tax revenues across tax-payers may conflict with other objectives of policy. On the other hand, the additional revenues provide scope for various forms of offsetting policy measure, either in the form of reductions in other taxes, or through additional expenditures.

A carbon tax at the level proposed by the European Commission would raise substantial revenues. The Commission proposes that these should accrue to the budgets of Member States, rather than to the Community budget. Pearson and Smith (1991) estimate that a \$10 per barrel tax on carbon and energy applied to all industrial and domestic energy uses would in 1988 have raised revenues equivalent to some 1-1.5% of GDP, and, on average, about 3% of existing tax receipts, around £6-£9bn in current prices.

Of course, higher fuel prices would affect fuel users. The distributional effects of higher prices for domestic energy (fuels for domestic heating, lighting and power) may bear particularly heavily on poorer households. Household spending on energy in the UK is only weakly related to income; the spending of the richest quintile of households is only some 60% higher than the spending of the poorest quintile (Table 7.18). However, a general carbon tax on all forms of energy purchased by households would be likely to be less regressive in its direct distributional impact than a tax on domestic energy alone, because spending on motor fuel tends to rise sharply with income, and taxes on motor fuel thus have a broadly progressive distributional effect.¹

The calculated impact of a tax on carbon and energy at a level equivalent to \$10 per barrel is shown in Table 7.18 for the sample of about 7000 households in the 1988 UK Family Expenditure Survey. Estimates of the impact are made using the IFS Simulation Programme for Indirect Taxes to predict how household spending patterns would adjust to the higher

¹ A carbon tax on industrial energy inputs would also affect households - for example through the effects on the prices of industrial outputs. These distributional effects are not considered here, but some estimates are made by Symons, Proops and Gay (1992).

Green Budget 1993

Table 7.18. Household Spending on Domestic Fuel and Petrol: the Distributional Effects of a Mixed Carbon/Energy Tax at \$10 per Barrel in the UK (by Quintile of Gross Equivalent Household Expenditure), 1988 Prices

	Quintile of Equivalent Expenditure					
	All Households	Poorest	2	3	4	Richest
Household total expenditure (£ p.w.)	£205.34	£67.38	£125.84	£174.09	£233.59	£425.94
Spending on domestic fuel before tax change (£ p.w.)	£10.43	£8.10	£9.22	£10.48	£11.57	£12.78
Spending on petrol before tax change (£ p.w.)	£6.18	£1.02	£3.73	£6.42	£8.73	£10.99
Carbon tax payments, including behavioural response (£ p.w.)	£2.08	£1.29	£1.69	£2.08	£2.45	£2.91
(as % of spending)	1.3%	2.1%	1.4%	1.2%	1.1%	0.8%
Change in consumption of domestic fuel (%)	-6.7%	-12.0%	-9.6%	-8.0%	-6.2%	-0.5%
Change in consumption of petrol (%)	-5.2%	-5.0%	-5.2%	-5.4%	-5.4%	-5.0%

Source: 1988 UK Family Expenditure Survey, and simulations using the IFS Simulation Programme for Indirect Taxes (SPIT).

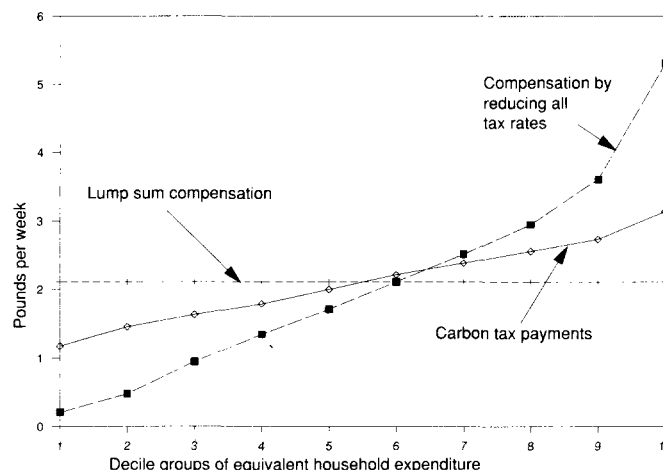
prices for fuel.¹ Assuming that the full burden of the carbon tax would be passed on in energy prices, the average household would have paid an additional £2.08 per week in tax on domestic energy and petrol, equivalent to 1.3% of household spending. The poorest 20% of the population would have paid an additional £1.29 per week, and the richest 20% an additional

¹The model is described in Baker, McKay and Symons (1990). It is based on a demand system of the Almost-Ideal form, estimated using data from the UK Family Expenditure Survey over the period 1970-87 (Blundell, Pashardes and Weber, 1989). The model can be used to simulate the effects of tax changes on 11 broad groups of goods and services, and calculates the effects for each of the households in the most recent survey year.

£2.91 per week. Expressed as percentages of total spending, however, the burden of the additional tax would be higher for the poorest decile (2.1%), and lower for the richest (0.8%).

The revenue from the carbon tax could, however, be used in a way which returned at least as much, on average, to poorer income groups as they paid in carbon tax, by making a lump-sum return of revenues. A weekly lump sum of £2.08 per household could be financed from the carbon tax revenues, and as Figure 7.3 shows, this would be more than enough to compensate households in the bottom two quintiles (on average) for the carbon tax. A compensation package of this sort might include increases in state pensions, social security benefits and income tax allowances (Johnson, McKay and Smith, 1990), while leaving a healthy share for general expenditure.

Figure 7.3
Distributional Incidence of the Use of Carbon Tax Revenues, UK 1988



Note: The figure shows payments of the mixed carbon/energy tax predicted using the IFS Simulation Programme for Indirect Taxes, and the distribution of equivalent-revenue compensation (a) as an equal lump sum to all households, and (b) through an equal percentage reduction in the rates of income tax, National Insurance contributions, VAT and excise duties.

Higher taxes on energy use by industry could have a range of macroeconomic and structural effects on the European economy, including effects on output and employment in particular sectors and on average, and effects on the price level. These effects may differ in the short run, during the transitional phase of adjustment to new relative prices, from the effects in the long run, once all producers and consumers have fully adjusted to the new situation. They may also be affected by how the revenues from the additional energy taxes are used; effects on the price level, for example, could be broadly offset if the revenue was used to reduce the level of other indirect taxes.

Appendix 1: Forecasting the PSBR

This Appendix details the method used to estimate government revenues and spending for 1992-93 and 1993-94, and to forecast the public finances into the medium term.

Fiscal Year 1992-93

The current year is the fourth in succession to see a deterioration in the state of the public finances, and will be the fourth in succession when the outturn for the public sector borrowing requirement (PSBR) was worse than expected at the Budget at the beginning of the fiscal year. The Chancellor acknowledged the worsening situation in his Autumn Statement last November, when he announced an increase in the government's forecast of the PSBR from the £28bn predicted in last year's Budget to some £37bn. The eventual outturn for the PSBR in the current year will, as ever, be an important influence on the Budget package.

Although we have a lot of information regarding the current fiscal year, forecasts are still subject to a significant margin of error. The Treasury predictions for the current year published on Budget day, with 11 months of information, have on average over the last ten years shown an error of £1bn; our estimates, prepared three months earlier, have on average been £3bn out over the same period.

Table A.1 shows a selection of forecasts for the public finances for the current year. Government predictions from the Financial Statement and Budget Report or **FSBR** (April 1992) and the Chancellor's **Autumn Statement** (November 1992) are reproduced in the first two columns.

The third column uses the information already available to predict the outturn for the public finances for the whole year. We have data to December for three-quarters of revenues, and to October for the remainder. This **current receipts** method allows for expected seasonal fluctuation in revenues. Estimates from the Autumn Statement and the FSBR (indicated by AS and FSBR) are used for some expenditures and revenues where monthly figures are unavailable or the pattern is extremely erratic.

Model estimates are shown in the fourth column of Table A.1. These are derived from estimates of the change in the tax bases (for example, personal incomes for income tax, consumers' expenditure for VAT) coupled with information from IFS models as to the rate of change of revenues with respect to rates of change in the tax bases.

The **forecast** shown in the final column is a judgemental average of these predictions.

Table A.1. The Public Finances 1992-93

£bn	FSBR	Autumn Statement	Current Receipts	Modelled	IFS Forecast
Income tax	59.6	57.6	57.4	57.8	57.4
Corporation tax	16.8	14.8	14.9	15.8	14.6
Petroleum revenue tax	0.1		0.0	0.1 FSBR	0.1
Capital gains tax	1.1		0.6	1.1 FSBR	1.0
Inheritance tax	1.3		1.1	1.3 FSBR	1.2
Stamp duties	1.5		1.0	1.5 FSBR	1.4
Total Inland Revenue	80.4	76.2	75.1	77.5	75.7
VAT	40.0	37.8	37.9	38.7	37.8
Petrol	11.8		11.3	11.8	11.3
Tobacco	6.6		6.3	6.8	6.2
Alcohol	5.3		5.2	5.2	5.0
Betting and gaming	1.1		1.0	1.1	1.0
Car tax	0.7		0.8	0.6	0.3
Customs duties	1.9		1.7	1.9 FSBR	1.8
Agricultural levies	0.0		0.2	0.0 FSBR	0.0
Total Customs and Excise	67.4	63.7	64.4	66.2	63.4
Vehicle excise duties	3.2		3.3	3.3	3.2
Oil royalties	0.5		0.5 FSBR	0.5 FSBR	0.5
Rates	14.1		14.1 FSBR	14.1 FSBR	14.1
Other taxes and royalties	4.1		4.1 FSBR	4.1 FSBR	4.1
Total taxes and royalties	169.8			165.6	161.0
National Insurance contributions	38.7	37.9	37.3	37.7	37.5
Community charge	8.0		8.0 FSBR	8.0 FSBR	8.0
Interest and dividends	5.5	5.0	5.0 AS	5.0 AS	5.0
Other receipts	7.7	10.7	10.7 AS	10.7 AS	10.7
General government receipts	229.8	223.1	222.5	227.1	222.2
Central government own expenditure	157.2	158.7	158.7 AS	158.7 AS	158.7
Central government support for LAs	58.5	58.9	58.9 AS	58.9 AS	58.9
Local authority self-financed	9.5	10.9	10.9 AS	10.9 AS	10.9
Public corporations	3.4	3.4	3.4 AS	3.4 AS	3.4
Reserve/adjustment	4.0	0.1	0.1 AS	0.1 AS	0.1
New control total	232.6	232.0	232.0	232.0	232.0
Cyclical social security	11.5	13.0	13.0 AS	13.0 AS	13.0
Central government debt interest	17.6	17.7	17.7 AS	17.7 AS	17.7
Accounting adjustments	4.7	6.0	6.0 AS	6.0 AS	6.0
General government expenditure	266.5	268.8	268.7	268.7	268.7
Privatisation	-8.0	-8.0	-8.0 AS	-8.0 AS	-8.0
General government borrowing requirement	28.7	37.7	38.2	33.6	38.5
Public corporations borrowing requirement	-0.6	-0.7	-0.7 AS	-0.7 AS	-0.7
Public sector borrowing requirement	28.1	37.0	37.5	32.9	37.8

Current Receipts Forecasts

The current receipts method allows for expected seasonal variation in tax revenue accruals and spending patterns using the following formula:

$$1992-93 \text{ forecast} = \frac{\text{April-October 1992 outturn}}{\text{April-October 1991 outturn}} \times 1991-92 \text{ outturn}$$

These estimates are of course sensitive to one-off fluctuations, and so the accuracy of this method is reliant on the seasonal pattern of revenues remaining the same. An additional problem is that some taxes are collected in "lumps" and the proportion of annual revenues received by October from some sources is relatively low. Around half of total revenues accrue in the first seven months of the year for most taxes, but for some, such as capital gains tax, this proportion may be as low as one-fifth.

Modelled Revenue Forecasts

The modelled forecasts are based on a prediction of the change in the revenue base for each particular tax. The relevant bases are listed in Table A.2.

Table A.2. Tax Bases and Elasticities for Model Forecasts

Tax	Base	Elasticity
Income tax	Nominal wage bill	1.6
Corporation tax	Nominal gross profits	1.2
VAT	Nominal consumers' expenditure	1.0
National Insurance	Nominal wage bill	1.1
Petrol	Real consumers' expenditure	1.4
Tobacco	Real consumers' expenditure	0.3
Beer	Real consumers' expenditure	0.8
Wines	Real consumers' expenditure	1.5
Spirits	Real consumers' expenditure	0.9

The relationship between tax revenues and the change in the tax base varies for each tax. These are computed from detailed IFS models of different parts of the tax system.¹ The resulting relationships are described by the set of elasticities also shown in Table A.2.

Forecasts of the revenue bases for the different taxes are derived from the macroeconomic working assumptions in Table A.3.

¹The income tax forecast is based on the results of Paul Johnson and Peter Lambert, 'Measuring the responsiveness of income tax revenue to income growth: a review and some UK values', *Fiscal Studies*, vol. 10, no. 4, 1989. Corporation tax estimates use the IFS model described by Michael Devereux, 'The IFS model of the UK corporation tax', IFS Working Paper no. 84, 1986. Indirect taxes (VAT and excise duties) are forecast using the SPIT model discussed by Paul Baker, Steve McKay and Liz Symons, 'The simulation of indirect tax reforms: the IFS Simulation Program for Indirect Taxation', IFS Working Paper no. 90/11, 1990. National Insurance contributions are predicted using the results of Edward Whitehouse, 'Earnings growth and revenues from National Insurance contributions', mimeo, IFS.

Table A.3. Macroeconomic Assumptions for Model Forecasts

Percentage Growth	1992-93	1993-94
GDP	-0.3	1.8
Wages	5.4	4.2
Employment	-2.7	-1.8
Consumers' expenditure	0.8	1.5
Retail prices	3.5	2.5
Corporate profits (previous year)	0.4	3.5

The predictions for the growth in the revenue bases shown in Table A.2 are derived from the working assumptions in Table A.3. Combined with the elasticities from Table A.2, a forecast revenue growth rate is generated. However, this assumes that the tax system remains the same. We take account of the effect of the Budget package and changes achieved by the 1992 Autumn Statement on revenues for 1992-93 using government predictions of the cost or yield of the Budget measures which are published in the FSBR each year. These are principally the introduction of the 20% reduced rate band of income tax, the halving in the Budget and abolition in the Autumn Statement of car tax, the over-indexation of excise duties on leaded petrol and tobacco, and the extension of capital allowances announced in the Autumn Statement.

Sensitivity The modelled forecasts are naturally sensitive to the underlying economic assumptions about conditions in the whole of the current fiscal year. Table A.4 shows the impact on revenues of altering several of the assumptions.

Table A.4. Revenue Effect of 1% Change in Assumptions for 1992-93 Forecast

Variable	Revenue Change (£bn)
GDP	3.2
Wages	1.3
Employment	0.8
Consumer prices	0.3
Consumers' expenditure	0.5
Corporate profits	0.2

PSBR Forecast for Fiscal 1992-93

The economy Last year's Budget forecast GDP growth of 1% in 1992 and 3% in the first half of 1993; the outturn for 1992 seems likely to have been a further fall in output of 0.7%, and we now expect growth of just 0.7% in the first half of next year. Growth in consumer expenditure was predicted to be the

Green Budget 1993

same as GDP: 1 and 3% in 1992 and the first half of 1993, respectively. Consumer expenditure increased by just 1.5% in 1992, and is likely to grow by just 1.5% in the first half of this year. Unemployment has turned out worse than the working assumption of 2.4 million, putting pressure on tax receipts as well as on spending. The revised 1992 Autumn Statement assumed unemployment up to 2.74 million for the current year. Finally, inflation was slightly lower in 1992 than the 3.75% expected.

- Income tax** The Autumn Statement reduced the government's income tax forecast by some £2bn, reflecting lower levels of activity in the economy. Although receipts have been coming in at a slower rate, we expect that the outturn will be around that target at £57.5bn.
- Corporation tax** Corporation tax receipts have been severely hit by the recession, falling from a peak of £21.5bn in 1989-90. Again, the Autumn Statement revised down the revenue forecast made at the time of the Budget by some £2bn. Receipts so far this year point to a similar figure; the modelled forecast shows that revenues have fallen much faster than profits. Our estimates take account of the estimated £200m cost of enhanced capital allowances announced in the Autumn Statement.
- Stamp duties** Receipts were affected by the stamp duty "holiday" on property transactions which ended in August 1992. The abolition of stamp duty on share transactions, due to coincide with the introduction of the TAURUS paperless share-dealing system, has not yet been implemented. The fall in the number of property transactions to around 250,000 per quarter from over 500,000 in 1988 will continue to depress revenues.
- Indirect taxes** The consumer spending slowdown has hit indirect tax revenues, with receipts so far pointing to Customs and Excise collecting £3bn less than forecast at Budget time last year. The Autumn Statement reduced the VAT prediction by over £2bn, with £0.5bn less expected from other indirect taxes, including the impact of the abolition of car tax estimated to cost £100m this fiscal year. Overall, our forecast is for revenues slightly lower than the Autumn Statement target.
- National Insurance** Weaker activity is again responsible for a shortfall in National Insurance contributions, with current receipts some £1.5 lower than the Budget projection. But the £0.8bn reduction in target in the Autumn Statement was lower than that for income tax; we expect the outturn to be more in line with our current receipts and modelled forecasts at £37.5bn. Note that the introduction of employers' National Insurance on company cars came into effect in 1992-93, raising some £600m.
- Public expenditure** Whilst the new control total target was kept to at Autumn Statement time, there was an overshoot on general government spending of over £2bn, principally a result of extra expenditure on cyclical social security benefits as a result of unemployment being above its assumed level all year. Overspends are £1.5 bn each on local authority spending, cyclical social security and central government spending, although £4bn of this is met from the reserve. Our forecasts are predicated on the assumption that the government will achieve the Autumn Statement target.

Note the change in presentation of the spending targets, with the replacement of the planning total by the new control total. The principal difference between the two is that the new control total now excludes cyclical social security and includes local authorities, self-financed expenditure. Privatisation proceeds are excluded from both the control total and general government expenditure.

The PSBR The Autumn Statement added £8.7bn to the public sector borrowing target set in the last Budget. One-quarter of this increase was accounted for by a spending overshoot, three-quarters as a result of depressed revenues. In five out of the last six cases when the Autumn Statement increased the projection of the deficit, the forecast increase was subsequently found to be too small. We expect this historical precedent to be repeated this year, with an extra £1bn beyond the Autumn Statement and a PSBR of £38bn.

PSBR Forecast for Fiscal 1993-94

Receipts for 1993-94 are again estimated using a variety of IFS models, generating projected increases on the forecast outturn for the current year. Table A.3 shows the macroeconomic working assumptions, and the revenue elasticities and tax bases used by the models are shown in Table A.2.

Direct taxes We expect income tax revenues to remain depressed next year, with wage growth falling further towards 4% and employment continuing to decline. The full year effects of the introduction of the reduced rate band reduce income tax receipts by a further £600m. National Insurance is similarly affected by the economy. Corporation tax revenues are predicted to recover modestly, although enhanced capital allowances reduce revenues by £500m, compared with £200m in 1992-93.

Indirect taxes Following an increase of less than 1% in 1992-93, in the next fiscal year we expect consumer spending to rise by 1.5%, resulting in increased Customs and Excise receipts. Although we have allowed for the abolition of car tax, we have not allowed for the promised increase in other vehicle taxes to reflect the loss of revenue. An extra £750m is likely to be raised from an increase in Vehicle Excise Duty or petrol duties; to achieve £750m, the former would have to rise by £25 per annum for cars and light vans, the latter by 2p per litre. This will increase inflation (RPI) by around 0.2%.

Green Budget 1993

Table A.5. The Public Finances, 1992-93 and 1993-94

	1992-93	1993-94
Income tax	57.4	58.3
Corporation tax	14.6	15.0
Petroleum revenue tax	0.1	0.1
Capital gains tax	1.0	1.0
Inheritance tax	1.2	1.2
Stamp duties	1.4	1.4
Total Inland Revenue	75.7	77.1
VAT	37.8	39.3
Petrol	11.3	11.8
Tobacco	6.2	6.4
Alcohol	5.0	5.2
Betting and gaming	1.0	1.0
Car tax	0.3	0.0
Customs duties	1.8	1.8
Agricultural levies	0.0	0.0
Total Customs and Excise	63.4	65.5
Vehicle excise duties	3.2	3.2
Oil royalties	0.5	0.5
Rates	14.1	14.8
Other taxes and royalties	4.1	4.2
Total taxes and royalties	161.0	165.4
National Insurance contributions	37.5	39.1
Community charge	8.0	8.2
Interest and dividends	5.0	5.1
Other receipts	10.7	8.7
General government receipts	222.2	226.5
Central government own expenditure	158.7	166.1
Central government support for LAs	58.9	58.7
Local authority self-financed	10.9	11.1
Public corporations	3.4	3.9
Reserve	0.1	4.0
New control total	232.0	243.8
Cyclical social security	13.0	15.5
Central government debt interest	17.7	20.0
Accounting adjustments	6.0	7.5
General government expenditure	268.7	286.8
Privatisation	-8.0	-5.5
General government borrowing requirement	38.5	54.8
Public corporations borrowing requirement	-0.7	-1.0
Public sector borrowing requirement	37.8	53.8

Public expenditure We have again assumed that the government sticks to its Autumn Statement spending target of £287bn, a 7% increase on the current fiscal year. The target for total local authority spending is for no increase, with a 4.7% rise in central government expenditure. Cyclical social security is again predicted to rise substantially, and debt interest payments will rise as repeated borrowing requirements add to the stock of debt. Privatisation proceeds are projected to decline to £5.5bn.

Economic conditions There remains a good deal of uncertainty over economic conditions in the coming fiscal year, and the revenue forecast is very sensitive to these assumptions. Table A.6 shows the impact on the 1993-94 forecasts of changes in the economic working assumptions.

Table A.6. Revenue Effect of 1% Change in Assumptions for 1993-94 Forecast

Variable	Revenue Change (£bn)
GDP	3.3
Wages	1.3
Employment	0.9
Consumer prices	0.3
Consumers' expenditure	0.6
Corporate profits	0.2

The PSBR With spending rising at 7% next year, and tax revenues rising at only 2% due to weak activity, the PSBR is expected to rise further next year. Our base prediction is that this will rise to £54bn. This is well ahead of the £32bn target set in the 1992 Budget and £44bn estimate in the 1992 Autumn Statement.

The Public Finances in the Medium Term

In the short term, the recession means that the outlook for public revenues is bleak. What will the public finances look like in the medium term as the economy recovers?

Macroeconomic assumptions The main prerequisite for a projection of the public finances is a view of the likely path of the economy. Table A.7 gives our macroeconomic working assumptions. We expect real output at the end of the current fiscal year to be below the level at the beginning, with a modest recovery beginning next year. In the medium term, we have based our predictions on 3% growth per annum. Whilst this is above most estimates of trend growth, GDP level is so far below trend that a number of years above trend growth should be possible. We expect inflation to continue to fall to 2.5% in 1993-94, though rising to 3.5% by 1995-96. Unemployment will lag the cycle and continue to increase for a number of years yet. We do not expect employment to stop falling until 1995-96.

Table A.7. Alternative Macroeconomic Working Assumptions

Percentage Growth		1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
GDP	{	0.0	2.3	3.5	3.5	3.5	3.5
		-0.3	1.8	3.0	3.0	3.0	3.0
		-0.6	0.3	1.5	1.5	1.5	1.5
Wages	{	5.4	5.0	5.5	5.5	6.0	6.0
		5.4	4.2	4.5	4.5	4.5	4.5
		5.4	3.5	3.0	2.5	2.0	2.0
Employment	{	-2.5	-1.0	0.0	1.0	2.0	2.0
		-2.7	-1.8	-0.5	0.5	1.0	1.0
		-2.9	-2.5	-1.0	-1.0	-1.0	-1.0
Consumers' expenditure	{	1.1	2.5	3.0	3.0	3.0	3.0
		0.8	1.5	2.0	2.0	2.0	2.0
		0.5	0.5	1.0	1.0	1.0	1.0
RPI	{	3.5	3.0	4.0	4.5	5.0	5.0
		3.5	2.5	3.0	3.5	3.5	3.5
		3.5	2.0	2.0	1.5	1.0	1.0
Corporate profits (previous year)	{	0.7	7.0	15.0	15.0	15.0	15.0
		0.4	3.5	10.0	10.0	10.0	10.0
		0.4	0.0	4.0	4.0	4.0	4.0

Since medium-term projections of this sort are always hazardous, we look at the sensitivity of our baseline estimates to alternative economic scenarios. The pessimistic scenario is that medium-term growth is significantly below the baseline projection, by 1.5%. The optimistic assumption is that growth is 0.5% higher in the medium term.

Higher growth feeds through to higher inflation, rising to 5%, and more rapid earnings growth. The decline in employment stops sooner. In the pessimistic scenario, inflation is all but eliminated and wages growth is subdued as employment continues to decline.

The public finances Table A.8 summarises the key variables for the public finances in the medium term on the baseline assumptions. On the revenue side, we have used the model predictions based on the elasticities in Table A.2 and the macro assumptions in Table A.7. We have assumed annual revaluation of excise duties and indexation of income tax allowances and thresholds. Barring these uprating procedures, we have assumed that the structure of the system remains unchanged. However, we have taken account of the impact of the 1992 Budget and of the change to National Insurance contribution revenues from 1993-94 onwards due to adjustments in the rebates for "contracting out" of SERPS. Although the abolition of car tax is included, as discussed above, we have not taken account of the promise that other vehicle taxes will be raised to compensate for the revenue loss.

On the spending side, we have taken the Autumn Statement targets to 1995-96, and our own projections for 1996-97 and 1997-98. These show a steady decline in spending growth rates, for example, from 7% next year to 3.5% in 1997-98 for general government expenditure.

Privatisation was accelerated this year and last year, to increase proceeds to £8bn from the £5.5bn previously planned. The government predicts receipts will be £5.5bn next year and the year after, with two further instalments of £1bn each in the following two years. The principal assets remaining are a further instalment of payments for Scottish Electricity of some £0.8bn, 22% of British Telecom shares, worth approximately £5bn, 40% of the generating companies (National Power and PowerGen) worth £2bn, and around £2.5bn of debt. The planned privatisation of coal and rail are unlikely to generate substantial revenues.

Table A.8 shows government receipts increasing modestly next year, as the recovery remains fragile and some revenues are lost through tax cuts. Revenue growth in the following years is much stronger, at 8-9% as growth has its effect. The path of the PSBR is a straight one, with the deficit something over £50bn per annum from next year on the baseline assumptions. Without tax increases or spending changes, economic growth of the level we expect does not feed through to substantial improvements in the level of public borrowing.

What if growth turns out better or worse than we expect? Table A.9 shows the impact of the alternative pessimistic and optimistic growth scenarios on the PSBR, which is also shown as a percentage of GDP for clarity. Note that we have only taken into account the effect of economic variables

Green Budget 1993

Table A.8. The Public Finances in the Medium Term

£bn	1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
Inland Revenue	75.7	77.1	82.5	89.2	97.4	106.0
Customs and Excise	63.4	65.5	68.7	72.5	76.4	80.6
Total taxes and royalties	161.0	165.4	174.6	185.9	198.8	212.3
General government receipts	222.2	226.5	240.3	256.6	273.1	290.4
Control total	232.0	243.8	253.5	263.2	273.0	282.0
General government spending	268.7	286.8	303.0	316.7	330.0	342.0
Privatisation	-8.0	-5.5	-5.5	-1.0	-1.0	0.0
PSBR	37.8	53.8	56.2	58.1	54.9	50.6

on revenues; spending is assumed to remain the same in each forecast. In the pessimistic case, cyclical social security spending would be higher as unemployment was higher, but lower inflation would reduce pressure for spending on this and other programmes compared with the baseline case. The opposite is true in the optimistic regime.

In the optimistic case, the decline in the PSBR starts two years earlier than the baseline, although it is only in 1996-97 and 1997-98 that substantial reductions in borrowing occur. The pessimistic case is very gloomy, with borrowing rising inexorably to over £80bn per annum at the end of the forecast period, well over 10% of GDP. Table A.9 underlines an important albeit quite obvious point: the outcome for the public finances is critically dependent on economic performance. Table A.9 also shows that it is only with substantially more rapid growth sustained for a number of years that any improvement to the public finances occurs.

Table A.9. The PSBR in the Medium Term: Sensitivity Analysis

		1992-93	1993-94	1994-95	1995-96	1996-97	1997-98
PSBR (£bn)	optimistic	37	50	48	45	32	18
	baseline	38	54	56	58	55	51
	pessimistic	39	57	63	71	77	83
PSBR (% of GDP)	optimistic	6	8	7	6	4	2
	baseline	6.25	8.5	8.5	8	7.25	6.25
	pessimistic	6.5	9.25	10	10.5	11	11

Appendix 2: Tax Ready Reckoner

**Table A.10. Direct Effects of Illustrative Changes in Taxation
1993-94**

£m	Cost / Yield	
	Indexed Base	Non-Indexed Base
Income tax		
Change basic rate by 1p	1,400	1,400
Change lower rate by 1p	380	380
Change higher rate by 1p	180	180
Increase allowances and limits by 1%	250	250
Index allowances and limits	0	740
Increase lower rate band by £100	80	80
Freeze higher rate threshold	100	0
Freeze married couple's allowance	80	0
Corporation tax		
Change full rate by 1%	340	340
Change smaller companies' rate by 1%	65	65
Capital taxes		
Change inheritance tax rate by 1%	10	10
Index inheritance tax threshold	0	10
Index capital gains exempt amounts	0	0
Indirect taxes		
Revalorise excise duties	600	0
Change VAT rate by 1%	1680	1680
Alcohol duty up 1%	30	30
Cigarettes up 5p per packet	190	190
Petrol and DERV up 1p per litre	410	410
VED up £5	145	145

Notes: Neutral or "indexed" Budget would raise all allowances, thresholds and specific duties in line with inflation, using the year-on-year increase in the RPI in December 1992 of 2.6%.

Source: Autumn Statement 1992, Section 5.

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