The IFS Green Budget

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Economic prospects

The fears of recession that held sway at the time of last year's Green Budget have now given way to concerns that growth in the UK economy may be too strong to be consistent with the government's inflation target. Prospects are good for continued above-trend GDP growth in coming quarters. For 2000, we forecast GDP growth of 2.9%, but the economy will need to slow towards the trend rate during 2000 if the inflation target is not to be overshot in 2001. To achieve this, official interest rates have risen three times since September from 5% to 5.75%, and they may still need to rise a little further.

The Treasury has suggested that the trend growth rate may have risen to 2½% from 2¼%. We have sympathy with this view, but would agree with the Treasury that it is sensible for the government to continue to assume an underlying growth rate of 2¼% in its fiscal projections.

An audit of the public finances

We expect public sector net borrowing (PSNB) to be –£6.8 billion (0.8% of GDP) in 1999–00. This is £3.3 billion lower than the November 1999 Pre-Budget Report forecast. The improvement is due to lower levels of total spending, as unemployment has continued to fall and there has been no need to call on the £3.5 billion reserve. The government's fiscal rules will easily be met in 1999–00, and we expect a further increase in the surplus on current budget and a drop in the net debt ratio in 2000–01.

On unchanged policies, our medium-term borrowing forecasts are, on average, £7–8 billion a year lower than the Treasury's Pre-Budget Report forecasts. At the end of the forecast horizon, in 2004–05, the cyclically adjusted surplus on the current budget is running at 1½–1¾% of GDP and the net debt ratio falls to 28%.

The margins for error on these forecasts are large, so the Chancellor needs to aim for current budget surpluses if he is to be sure that his fiscal rules will continue to be met. Even so, the forecast surpluses in our central projection are large enough to allow some increases in public spending or reduction in taxation.

The Chancellor must balance three concerns. First, fiscal policy should support monetary policy. Second, he might want to prevent the tax burden from rising, which would require tax cuts in the Budget of around £3 billion. Third, he will not want to restrict his room for manœuvre in the Comprehensive Spending Review.

Feasible compromises exist. One example would be tax cuts of around £2 billion, to curtail the growth in the tax burden without working strongly against monetary policy. There would then be scope for the CSR to increase spending in 2001–02 by £3 billion and deliver average real increases in current spending of 2½% a year in the three years from April 2002. The surplus on

current budget would fall to 0.9% of GDP in 2004–05. Alternatively, the Chancellor could choose to reserve all his scope for loosening for the CSR, or to allocate more of it to tax reduction, reducing his room for manœuvre on spending. The mix he chooses will depend on the relative importance placed on the tax burden, the desire to support monetary policy, and demands for increases in public spending.

Public spending

As a result of the relatively low real increases in spending over the first two years of this parliament, public spending is likely to fall slightly as a share of GDP between 1996–97 and 2001–02. Public spending in the UK is low relative to most other EU members. Over the whole parliament, the real rate of growth in current spending, on present plans, will be lower than that seen under the Conservative government, while capital spending will grow more quickly.

NHS spending in this parliament will grow at the same real rate as achieved on average since 1953–54, but it is growing rather faster in the three years from April 1999. If the second CSR were to deliver real growth in spending on the NHS averaging 5% a year, the period from 1999 would see an unusually sustained growth in health spending. Whether such growth would achieve the much discussed EU average as a share of GDP depends critically on precisely what the target is. There is a need for a serious debate about the future structure of healthcare in the UK.

The government is also committed to raising education spending as a share of GDP, which it should achieve by the end of this parliament. This is in contrast to the previous 20 years, where education spending remained roughly constant as a share of GDP. A crucial question for the next few years is the extent to which the wide range of recent policies designed to improve school standards will succeed. Likewise, the full impact of recent reforms to student finance is as yet unclear.

Direct taxes on individuals

The government has already announced substantial and welcome changes to the structure of National Insurance contributions (NICs) for employees and employers, taking further the trend towards integration with income tax. The gap between the upper earnings limit for employee NICs and the starting-point for higher-rate income tax is falling substantially, and we consider ways of closing it completely.

We also discuss a number of issues related to the rate structure of income tax. The interaction of the taxation of savings and the new starting rate of income tax is problematic, and it seems likely that many individuals entitled to tax rebates on their savings income will not receive them. The future of the 10% tax rate is also discussed, including the attractions of moving towards substituting a zero-rate band for the 10p band.

Two areas where the government has sought to widen access to relatively tax-privileged activity are savings and charitable giving. The key feature of ISAs compared with the old scheme of TESSAs and PEPs is the absence of a

minimum holding period for cash, which makes ISAs more attractive to younger and poorer savers who may be reluctant to tie up their savings. The proposed changes to charities taxation are broadly welcome, since they allow more givers to donate tax-free, although the rationale for giving additional support to payroll giving but not to other schemes is unclear.

Welfare reform

Welfare reform is a central part of the government's programme. The Pre-Budget Report outlined possible directions for further reform, creating a new benefit — the integrated child credit (ICC) — to unify the many different mechanisms we currently use to support children. The ICC would be complemented by an employment tax credit (ETC), which would incorporate the work-related elements of the working families tax credit and extend such support to childless households. An ICC would expand the range of distributional goals that governments could achieve, and in particular would break some of the constraints imposed by the decision to move to independent income taxation in 1990. Closer examination of such schemes reveals a range of practical issues of considerable importance, which should be discussed further.

An ETC available to all would entail spending large amounts on young adults still living with their parents, suggesting that schemes that targeted specific groups might be more likely. One possibility would be an ETC with a substantially reduced rate for those under 25. Another possibility would be a scheme targeted on those previously unemployed, drawing on the experience of the New Deal. We review the evidence so far available on the New Deal, which suggests that there might have been small increases in employment. It is expected that a 're-engineered' New Deal will continue beyond 2001–02.

Excise duties

In the November 1999 Pre-Budget Report, the government announced the end of the automatic duty escalators on road fuel and tobacco, substantially reducing expected revenues. We discuss the evidence on the possibility that cutting excise duties on tobacco and alcohol might lead to increased revenue, and show that in the cases of tobacco, beer and wine, duty increases seem very likely to lead to increases in revenue, while in the case of spririts we seem to be close to the revenue-maximising tax rate.

In the context of threats to revenue from cross-border shopping and smuggling, we also discuss the taxation of gambling. The current structure is complex and seems to lack a coherent rationale, and there is a serious threat to revenue from both telephone and internet betting.

Taxes on business and enterprise

The Budget is likely to contain a range of measures intended to benefit smaller companies, including substantial tax reliefs for share options awarded to selected employees in small firms, reductions in capital gains tax on business assets, and a new R&D tax credit restricted to smaller firms. We discuss the

possible rationales for taxing smaller firms differently from larger firms, and examine the proposed measures. Tax reliefs limited to the small-firms sector are unlikely to have a large impact on total levels of investment and R&D spending.

The proposed new all-employee share ownership plan is the latest in a long line of tax-favoured schemes intended to encourage employees to hold shares in the firm that they work for. While greater employee involvement may be a good thing, the rationale for using the tax system to favour this arrangement has never been entirely clear.

Reductions in the corporation tax rates for small and large companies in recent Budgets should be considered within the broader context of falling corporate tax rates elsewhere in the world. Competition over tax rates on mobile activities raises questions about the balance of tax revenue from mobile and less mobile sources, and has led to international attempts at co-ordination. Some of the implications of these developments are discussed here.

2. Economic prospects

The fears of recession that held sway at the time of last year's Green Budget have now given way to concerns that growth in the UK economy may be too strong to be consistent with the government's inflation target. Prospects are good for continued above-trend GDP growth in coming quarters. In part, this is necessary to push inflation back up to the government's target. But the economy will need to slow towards the trend rate during 2000 if the inflation target is not to be overshot in 2001. To achieve this, official interest rates have risen since September from 5% to 5.75% and may still need to rise a little further.

Accompanying the government's Pre-Budget Report, the Treasury published a paper arguing that the trend rate of economic growth may have increased from 2¼% a year during the 1990s to 2½%.[1] We find some support for this view but for slightly different reasons from those proposed by the Treasury. But given the uncertainties attached to estimates of trend growth, particularly midway through an economic cycle, it seems sensible for the government to continue to assume an underlying growth rate of 2¼% a year in its fiscal projections.

2.1 Recession held at bay

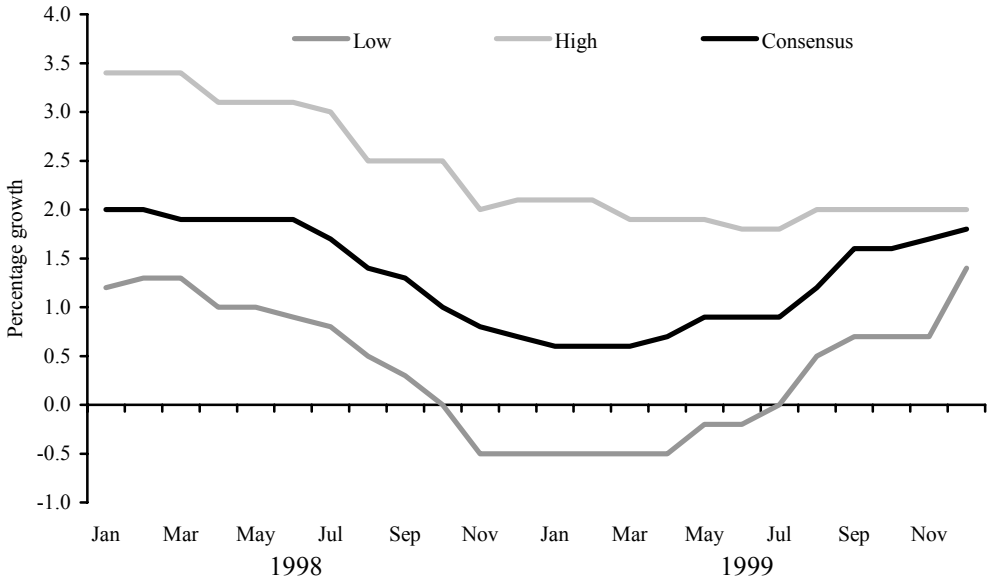
A year ago, there were widespread fears that the UK economy was about to slip into recession. The world economy was still in a vulnerable state after a second round of shocks from Asian economies the previous summer and from the threat to the financial system posed by the collapse of the hedge fund, Long-Term Capital Management. The situation in the UK at that time was compounded by a collapse in business confidence in the wake of the sharp tightening of monetary policy implemented by the Monetary Policy Committee (MPC) of the Bank of England in its first year of independence.

Last year's Green Budget argued that, with underlying retail price inflation (RPIX) running close to the government's 2½% target, it was reasonable to believe that the MPC would take whatever action was necessary to try to head off the threat of an outright recession. Without aggressive cuts in interest rates, there was a risk of a significant undershoot in the inflation target. In the end, interest rates were cut from a peak of 7½% in mid-1998 to 5% a year later.

This policy action was extremely successful. After stagnating at the end of 1998, the economy steadily gained momentum during 1999. GDP grew at an annualised rate of 1.5% in the first half of 1999 and at more than double this rate during the second half of the year. A year ago, the consensus view was that the economy would grow by ½% in 1999. The Chancellor's upbeat forecast of 1–1½% made in November 1998 and repeated in the March 1999 Budget was widely believed to be too optimistic. But the out-turn was almost 2%.

[1] HM Treasury, 'Trend growth: prospects and implications for policy', 1999.

Figure 2.1. Consensus expectations of GDP growth in 1999



Source: Goldman Sachs.

Two reasons can be identified for the stronger-than-expected performance. First, there has been a lot more growth in the world economy. During the course of last year, global growth forecasts were revised upwards by around 1 percentage point for 1999 and 1½ percentage points for 2000. As global economic activity picked up, the drag on the UK economy from net trade volumes eased. Second, recovery was aided by the persistent strength of final domestic demand. The slowdown in GDP growth during the second half of 1997 and 1998 was driven entirely by the drag from net trade. Final domestic demand has grown at an annualised rate of 3–4% throughout the past two years.

2.2 Favourable growth prospects in 2000

The growth prospects for the UK economy in the near term seem excellent. Consumer spending has been the main driving force behind economic activity over the past year and there is little reason to think that growth is about to slow significantly. Consumer confidence is running at historically high levels, reflecting very good fundamentals. For those in work and with a mortgage, real take-home pay has risen by an average of more than 4% over the past year. This will start to moderate as headline inflation picks up on the back of higher mortgage rates, but it will remain healthy. Employment has increased by around ½% over the past year and employment intentions are strengthening in business surveys. The housing market continues to perform strongly. House prices have risen around 13% over the past year, encouraging a pick-up in the amount of equity withdrawal from the housing market that is then available to finance additional consumer spending. Even so, equity withdrawal last year was running at around one-half of the levels reached in the late 1980s, suggesting that there is still scope for consumer spending growth to be boosted

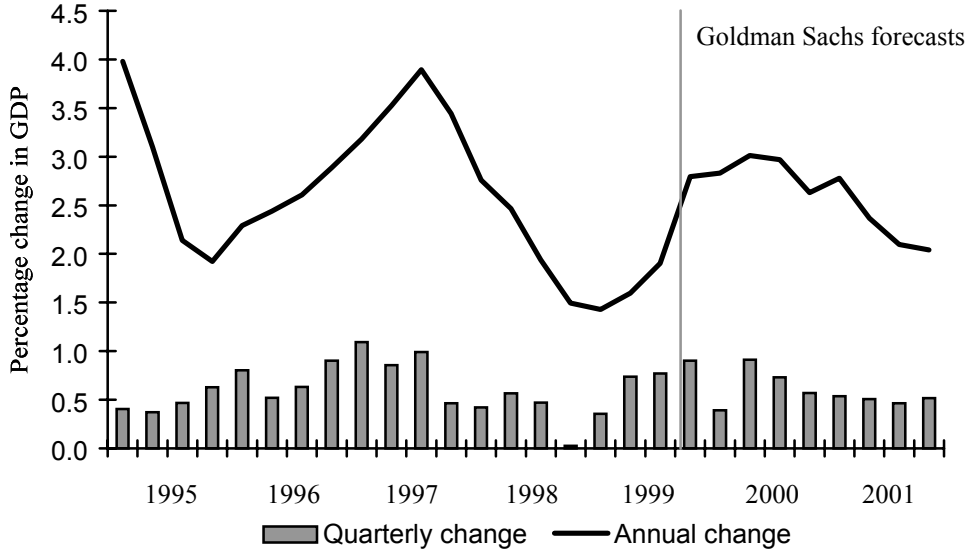
in 2000 from this source. In Goldman Sachs's latest forecasts, consumer spending growth is little changed between 1999 and 2000 at around 3½%.

Led by the US, the global economy still has considerable momentum. The Goldman Sachs forecast is for world GDP to grow faster than its trend rate of 3.5%, achieving a rate of 3.7% in 2000, up from 3.2% in 1999. This would be its fastest growth rate for three years. Business surveys have responded to these favourable developments in the world economy. Despite the persistent strength of the sterling exchange rate, export order books have recovered to their highest levels in more than two years according to the CBI Monthly Trends Enquiry. Stocks of finished goods are reported to be running below average, suggesting that the drag on the economy from inventories recorded in 1999 has come to an end. More generally, the strengthening in optimism reported in all business surveys is consistent with continued buoyancy in GDP growth.

Although the drag on GDP growth from net trade volumes has eased recently, this is likely to become a significant factor again in coming quarters, reflecting the twin effects of strong domestic demand growth and an overvalued exchange rate. The Goldman Sachs forecast is for net trade volumes to curb GDP growth by 1.0 percentage point in 2000 after 2.1 percentage points in 1998 and 1.3 percentage points in 1999.

With the possible exception of a small dip in economic activity around the turn of the year associated with the millennium date change, above-trend GDP growth is likely to be maintained in coming quarters. The central forecast in this publication is for GDP growth to strengthen from 1.9% in 1999 to 2.9% in 2000. This is in line with consensus expectations.

Figure 2.2. Annual and quarterly growth in GDP, 1996–2001



Source: Goldman Sachs.

2.3 How fast can the UK economy grow?

A key issue for policymakers is how fast the UK economy can grow without endangering the government's 2½% inflation target. This depends upon both where the economy is now relative to trend and the sustainable rate of economic growth. With the November 1999 Pre-Budget Report, the Treasury published a paper in which it argued that a neutral estimate of the UK's annual trend growth rate going forward is 2½%, up from its previous estimate of 2¼% in the 1990s.[2]

The implications for government policy of a ¼ percentage point rise in the trend rate of economic growth could be quite significant. If the trend rate of growth has risen, monetary conditions need not be as tight for a given growth rate of GDP to restrain inflation. The MPC would need to take this into account when setting monetary policy to avoid an undershoot of the inflation target.

There are also implications for fiscal policy. If the trend rate of growth is faster than assumed in the projections for the public finances, public borrowing will persistently be lower than expected. Consistent with the government's fiscal rules, discussed in Chapter 3, the government could spend more or cut taxes. Conversely, if the government were to mistake a cyclically determined pick-up in economic growth for an increase in the long-term trend, it could make a critical policy error by becoming too relaxed about taxation and spending, only to find itself in difficulty several years later when the economy turned down.

Conceptually, trend growth is determined essentially by three factors: the growth of the capital stock, the growth of the labour force, and the productivity of capital and labour. Unfortunately, there are many obstacles to measuring trend growth accurately. In particular, it is impossible to know with certainty at any given time the economy's trend level of GDP since it is unobservable. Statistical methods can provide relatively reliable estimates for complete cycles, but these methods are less reliable when considering developments in the most recent incomplete cycle.

There are three assumptions underlying the Treasury's upgrade of trend growth:

1. The working-age population is expected to grow somewhat faster in the next few years than during the 1990s (0.4% versus 0.3%), adding 0.1 percentage point a year to trend GDP growth.
2. The employment rate — the percentage of the working-age population in employment — is forecast to rise by 0.1 percentage point a year compared with a fall of 0.3 percentage point a year in the 1990s. This would add 0.4 percentage point a year to GDP growth.
3. Labour productivity growth is forecast to be slower than it was during the 1990s (2.0% versus 2.3%), reducing trend GDP growth by 0.3 percentage point.

[2] HM Treasury, 'Trend growth: prospects and implications for policy', 1999.

As Table 2.1 shows, the net effect of these three assumptions is to boost the estimate of trend GDP growth by around ¼ percentage point a year. We find support for this view, but for slightly different reasons from those proposed by the Treasury. In particular, the employment rate may not contribute as much to GDP growth but, offsetting this, labour productivity growth may be stronger.

Table 2.1. Contributions to changes in trend GDP growth

	HM Treasury	Goldman Sachs
Growth of working-age population	+0.1%	+0.1%
Employment rate	+0.4%	+0.2%
Labour productivity	–0.3%	–0.1%
Total	*+0.2%*	*+0.2%*

Note: Changes apply to between the 1990s and the forecast period.

Demographic factors could actually reduce the employment rate. Within the working-age population, different age-groups have different employment rates. If employment rates within the different age-groups are broadly constant, changes in the age composition of the population will affect the aggregate employment rate. Between now and 2005, the number of people in the 25–34 age-group, with a high employment rate of 79.5%, will shrink on average by 3% a year. The 55–59(female)/64(male) age-group, with a much lower employment rate of 66.2%, will grow by 4% a year.[3] The net effect of these demographic changes would be to reduce the employment rate by 0.1 percentage point a year.

To reach the Treasury's forecast, the government's labour market policy measures would need to raise the share of the working-age population in employment by 0.2 percentage point a year. It seems too early to make this assumption, particularly since the employment rate is already at a post-war high. We assume instead that the employment rate will fall by 0.1 percentage point a year. Since this is less than the 0.3 percentage point a year decline recorded in the 1980s, the underlying growth rate of GDP would be boosted by 0.2 percentage point a year.

If productivity growth were to decline, as the Treasury expects, then there would be no reason to revise up previous estimates of trend growth of 2¼% a year. Making judgements about future productivity trends is difficult. It is probably too early to assume any break from past trends caused by factors such as increased human capital, technology and a higher degree of economic stability. Initially, higher employment growth might be expected to curb productivity growth unless accompanied by commensurate increases in the capital stock. Business investment has been strong in recent years, making this less of a concern. In the absence of any solid reasons to expect future productivity growth to be different from its long-term average of 2.2% a year, this seems the most sensible central assumption. This would represent a 0.1 percentage point a year deceleration in productivity growth compared with the experience of the 1990s.

[3] Employment rates from Office for National Statistics, *Labour Market Trends*, November 1999. Population projections from Office for National Statistics, *Labour Market Trends*, June 1998.

As shown in Table 2.1, these factors taken together imply a 0.2 percentage point increase in the underlying growth rate of GDP. We therefore have sympathy with the view that trend growth may pick up marginally, but we would emphasise the uncertainty surrounding any such forecast.

Policy implications

There are two main implications for the present conduct of policy:

1. Given the uncertainties attached to estimates of trend growth, particularly midway through an economic cycle, it seems sensible for the government to continue to assume an underlying growth rate of 2¼% in its fiscal projections.
2. For monetary policy, even if the underlying growth rate has improved, it is difficult to believe that growth can be sustained at anything close to the 3½% pace seen during the second half of 1999 without generating inflationary pressure.

2.4 Inflation pressures remain subdued

The extent to which inflation pressures materialise is the critical factor determining how much further interest rates will have to rise to keep the economy growing at a sustainable rate. It is encouraging that, despite more than a doubling in oil prices, RPIX inflation, at 2.2% in November, remains below the government's 2½% target. In fact, adjusted for the timing of last year's Budget measures, RPIX has been below the government's target since February 1999. This suggests that a period of economic growth above the trend rate is required to push inflation back up to the target. Although the economy is now clearly growing above its long-term potential, there are none the less a number of factors that are likely to keep inflation on a downward path for the next few months.

Strong competition in certain parts of the economy: Competition in the retail sector has become relatively fierce. A good example of this is clothing and footwear, where prices have fallen by 3.0% over the past year.

Greater price transparency: The car market, which has recently seen substantial reductions for both new and second-hand cars, may be an example of a trend to greater price transparency. Greater use of the internet may be one force facilitating this.

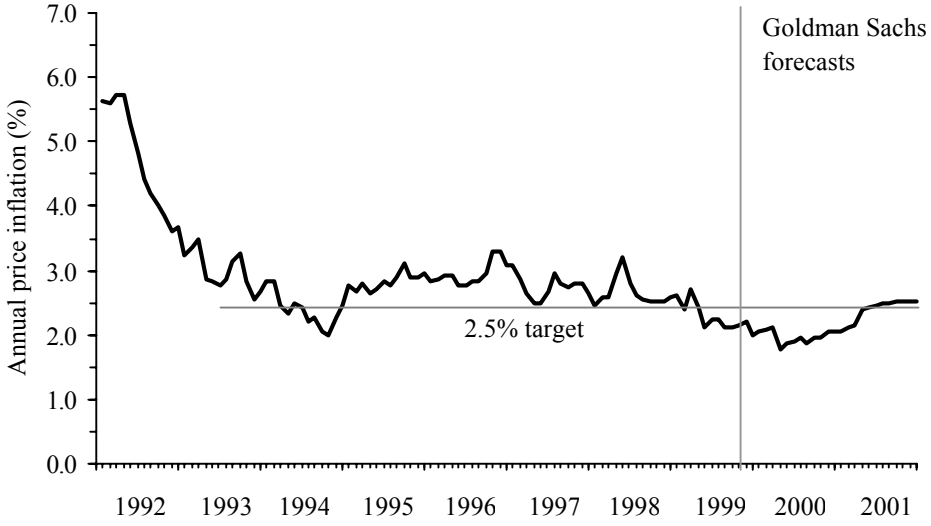
Lower utility charges and excise duties: Cuts in water and electricity charges next April will curb RPIX inflation by around ¼ percentage point. If the Chancellor uprates fuel and tobacco duties only in line with inflation, this will knock another ¼ percentage point off the annual inflation rate.

Strong exchange rate: The sterling trade-weighted exchange rate remains persistently stronger than assumed by the MPC in its central forecast for inflation. Sterling has appreciated by around 5% on a trade-weighted basis since the MPC first started raising rates on 8 September. This should help to dampen inflationary pressure.

These recent encouraging developments in retail price inflation need to be considered alongside several less favourable developments. First, cost increases are picking up steadily. Unit wage cost inflation is now running at around 3½%, higher than is consistent with the inflation target, although it has eased off from the 4¼% peak seen early last year. Total unit costs are rising by less than this but the gap is narrowing as import prices recover. Second, business surveys have recorded a deterioration in price expectations. Third, although RPIX inflation is still declining, there has been a worrying upward drift in services inflation to around 4%, the highest level since early 1994.

Given these various pressures, the most likely scenario is that RPIX inflation will continue to decline through the second quarter of 2000, reaching a trough around 1¾%. Declining inflation is fully consistent with stronger output growth for a time, particularly to the extent that there is increased competition in the economy. At some point later this year, the favourable effects outlined above may begin to be outweighed by the strength of economic growth and the associated strain this will place on resources. Underlying inflation is likely to start to rise slowly back towards the government's target, reaching 2.5% during the second half of 2001.

Figure 2.3. Retail price inflation (excluding mortgage payments), 1992–2001



Source: Goldman Sachs.

To prevent inflation from overshooting its target on a two-year view, it will probably be necessary for the economy to slow to around its trend rate of growth during 2000. Official interest rates have already risen by 0.75 percentage point since September to achieve this. As a rough rule of thumb, it generally takes a 1 percentage point rise in interest rates to reduce GDP growth by 1 percentage point. Thus if the economy needs to slow from a 4% annualised rate to a 2–2½% annualised rate, interest rates might need to rise from the low of 5% reached in June to 6½–7%. This is the consensus

expectation. If the recent strength in sterling is maintained, there may be scope for the peak in interest rates to be lower than this.

2.5 Risks

The greatest risks to these forecasts come from the global economy. These seem fairly evenly balanced. The world economy is clearly gaining momentum and growth could easily turn out stronger than expected. On the other hand, the US economy has built up fairly large financial imbalances that could eventually trigger a much sharper slowdown in global activity.

The domestic risks to these forecasts are on the upside but not dramatically so. Although the economy has plenty of momentum currently, an activist MPC may be inclined to raise interest rates more aggressively in the next few months to ensure that growth slows to a sustainable pace. Given uncertainties about the latter, it will be important to monitor the labour market for signs of supply-side price pressures.

A summary of Goldman Sachs's main economic forecasts is shown in Tables 2.2 and 2.3.

Table 2.2. Growth prospects (%)

	Out-turn 1998	Forecasts 1999	2000	2001
Household consumption				
HM Treasury		4	2½–2¾	2–2½
Goldman Sachs	3.2	3.5	3.4	2.3
Consensus		4.1	3.4	2.7
Fixed investment				
HM Treasury		4¼	2¼–2½	2½–3
Goldman Sachs	11.2	4.4	4.4	4.9
Consensus		4.4	2.8	3.3
Exports of goods and services				
HM Treasury		2¼	6½–6¾	5–5½
Goldman Sachs	2.4	3.3	6.5	6.3
Consensus		1.6	6.3	5.4
Imports of goods and services				
HM Treasury		6¼	6–6½	4½–5
Goldman Sachs	8.8	6.7	8.6	7.5
Consensus		6.2	6.9	5.6
Real GDP				
HM Treasury		1¾	2½–3	2¼–2¾
Goldman Sachs	2.2	1.9	2.9	2.3
Consensus		1.8	3.0	2.6

Source: HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999; Goldman Sachs, *The UK Economics Analyst,* January/February 2000; HM Treasury, *Forecasts for the UK economy: a comparison of independent forecasts,* No.153, January 2000.

Table 2.3. Other key indicators

	Out-turn 1998Q4	Forecasts 1999Q4	2000Q4	2001Q4
Price inflation (%)[a]				
HM Treasury		2	2½	2½
Goldman Sachs	2.5	2.1	2.0	2.5
Consensus		2.1	2.2	2.4
Unemployment (million)				
Goldman Sachs	1.32	1.18	1.07	1.00
Consensus		1.21	1.11	1.07
Current account (£bn)	**1998**	**1999**	**2000**	**2001**
HM Treasury		–12¼	–10¼	–11¼
Goldman Sachs	–0.5	–12.0	–19.0	–25.9
Consensus		–11.9	–14.0	-14.9

[a] Retail prices excluding mortgage interest payments.

Source: HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999; Goldman Sachs, *The UK Economics Analyst,* January/February 2000; HM Treasury, *Forecasts for the UK economy: a comparison of independent forecasts,* No.153, January 2000.

3. An audit of the public finances

The public finances are in a much healthier state than expected at the time of last year's Green Budget and the March 1999 Budget. This chapter examines the reasons for the better-than-expected performance in, and the prospects for, borrowing in the next few years on unchanged policies. The scope for tax cuts and/or spending increases between now and the general election is considered in the context of the government's strict fiscal rules. The main conclusions are:

1. We expect public sector net borrowing (excluding the windfall tax and associated spending) to improve from –£2.6 billion (i.e. a surplus of 0.3% of GDP) in 1998–99 to –£6.8 billion (0.8% of GDP) in 1999–00. This is £3.3 billion lower than the November 1999 Pre-Budget Report forecast and is due entirely to lower levels of spending. With unemployment continuing to fall, there should be no need to use any of the £3.5 billion reserve this year.
2. The government has two fiscal rules that are judged over the economic cycle: (i) to keep the current budget in balance or surplus and (ii) to stabilise the ratio of public sector net debt to GDP at or below 40%. These rules will be met easily in 1999–00. A further increase in the current surplus and drop in the net debt ratio are likely in 2000–01.
3. Our medium-term forecasts assume GDP growth averaging 2¼% a year, real growth in current spending averaging 2¼% a year, and that net public investment will stabilise at 1½% of GDP. On these assumptions, our medium-term borrowing forecasts are, on average, £7–8 billion a year lower than the Treasury's Pre-Budget Report forecasts. By the end of the forecast horizon in 2004–05, the cyclically adjusted surplus on current budget is forecast to be 1½–1¾% of GDP. The net debt ratio falls to around 28% of GDP.
4. There are large margins of error on these forecasts. This means that the Chancellor will need to aim for current budget surpluses if he is to ensure that the fiscal rules continue to be met. The forecast surpluses in our central projections are sufficiently large to allow the Chancellor some fiscal loosening in coming Budgets and the forthcoming second Comprehensive Spending Review.
5. In this Budget, the Chancellor has to balance several competing objectives. First, if fiscal policy is to support monetary policy, the fiscal stance should remain broadly neutral. Second, if the Chancellor wants to stop the tax burden from rising as a share of GDP, then taxes will need to be cut by around £3 billion. Third, he will not want to restrict the room for manœuvre in this summer's Comprehensive Spending Review.
6. Feasible compromises do exist. Tax cuts of around £2 billion would curtail the growth in the tax burden. The fiscal stance would be left unchanged in 2000–01, leaving in place the larger-than-expected 0.6% of GDP tightening in 1999–00. There would still be scope for the Comprehensive

Spending Review (CSR) to deliver an additional £3 billion of spending in 2001–02 and increases in current spending averaging 2½% a year in the three years starting from April 2002. On these assumptions, the surplus on current budget would fall to 0.9% of GDP in 2004–05 and it would average 1% of GDP a year from 1997–98. The net debt ratio would fall to just under 31% of GDP in 2004–05. Alternatively, the Chancellor could decide to cut taxes by around £7 billion and restrict future real spending growth to no more than 2¼% a year; or he could choose not to loosen the fiscal stance at all in the Budget, allowing the CSR scope for real spending increases of up to 3% a year. Which option he chooses will depend on the relative importance placed on the size of the tax burden, the desire to support monetary policy, and demands for further increases in public spending.

3.1 The fiscal framework

Government policy is for the level of public borrowing, assessed over the economic cycle, to meet two strict rules:[1]

- The 'golden rule' requires the government to finance all current spending from taxes and to borrow only to invest. This is judged by whether, over the economic cycle, the current budget is, on average, in balance or in surplus.
- The 'sustainable investment rule' requires the level of public debt as a share of national income to be set at a 'stable and prudent' level. The government has stated that this should be no more than 40% of GDP, again averaged over the economic cycle.

The key indicator for assessing the overall fiscal impact is the change in public sector net borrowing (PSNB). Changes in PSNB can be decomposed into two parts:

- that due to cyclical variation in the economy through the operation of the automatic stabilisers. Stronger economic activity will automatically reduce net borrowing by both boosting tax receipts and reducing spending on unemployment benefits.
- that due to changes in the fiscal stance, equivalent to changes in cyclically adjusted PSNB. The fiscal stance can change as a result of discretionary Budget measures as well as non-discretionary factors. The latter may be anticipated, such as the effects of a change in the oil price on tax revenues, or unanticipated, such as the effects of an unexpected change in spending habits on VAT receipts.

As events unfold, the actual fiscal stance may evolve differently from that intended in the Budget. In the following Budget, the Chancellor must therefore reassess the appropriate fiscal stance needed to meet the government's fiscal rules. The Budget judgement must also take into account the desirability of

[1] For a more detailed discussion of the government's framework of fiscal policy, see HM Treasury, 'Analysing UK fiscal policy', November 1999.

'effective co-ordination between fiscal and monetary policy', as stressed by the Chancellor in his recent Mais lecture.[2] Once these factors are determined, the Chancellor announces discretionary measures in the Budget to the extent that these are necessary to deliver the appropriate fiscal stance. This will need to take into account all known non-discretionary factors that affect the baseline fiscal projections, including measures announced previously that are yet to come in.

3.2 Current and historic borrowing levels

In order to meet both the golden rule and the sustainable investment rule, the current government has, since coming to power in May 1997, continued the fiscal tightening that has occurred since 1993–94. This has led to public sector net borrowing being reduced from £50.8 billion (7.9% of GDP) in 1993–94 to £27.7 billion (3.6% of GDP) in 1996–97, and then to a surplus of £2.6 billion (0.3% of GDP) in 1998–99.[3] Figure 3.1 shows that, in the first two years of this parliament, the tightening has been due to a combination of increases in taxes and reductions in public spending as a share of national income. The three years from April 1999 are forecast to show a different pattern, with spending and taxes both rising slightly as a share of national income. This is due to the increases in spending announced in the Comprehensive Spending Review, which require increases in the level of taxes in order to ensure that the Chancellor's rules for public borrowing are met. While the planned spending increases announced in the CSR in July 1998 are clearly more generous than those seen in the first two years of the parliament, they are not sufficient to raise spending as a share of GDP to the level seen in 1996–97. A detailed discussion of recent trends in public spending can be found in Chapter 4.

A closer inspection of the projections for government spending from the Pre-Budget Report suggests that spending over the next two years might, in fact, be lower than the current Treasury forecasts suggest. This is due to the fact that the funds held in the annually managed expenditure (AME) margin for the next two years might not be needed. This fund is for spending on unforeseen events — a recent example was the spending on the BSE crisis. With such a fund, the government is able to allocate additional funds without having to increase total borrowing. Conventionally, in the Pre-Budget Report, AME is left unchanged. Any changes in the components of AME, such as debt interest payments, are offset by a corresponding change in the AME margin. In July 1998, the Comprehensive Spending Review set the AME margin at £1 billion in 1999–00, £2 billion in 2000–01 and £3 billion in 2001–02, as shown in Table 3.1. Four months later, the margin grew quite substantially as forecasts for spending on other areas, in particular social security spending, had fallen. The March 1999 Budget decided that the resulting downward revisions to

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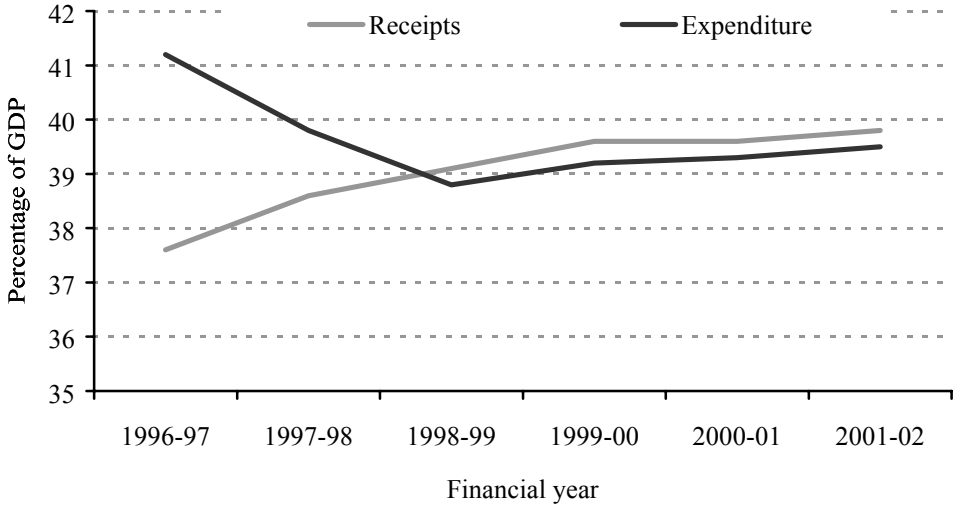
[2] HM Treasury, 'The Mais lecture by the Chancellor Gordon Brown', News Release 168/99, 19 October 1999.

[3] This excludes the windfall tax and associated spending. Sources: HM Treasury, *Public Finances Databank*, 8 December 1999, Table A1 (p. 7); Office for National Statistics press release, 'Public sector accounts, 3rd quarter 1999', ONS(99)457, 22 December 1999.

social security spending were prudent and that the reserve could be returned to its previous level. Between the March 1999 Budget and the November 1999 Pre-Budget Report, the Treasury's forecast for elements of AME fell once again, leading to an increase in the size of the reserve.

Figure 3.1. Government receipts and spending as a percentage of GDP, 1996–97 to 2001–02



Notes: Excludes windfall tax and associated spending. Government receipts measured by total current receipts on an ESA95 basis. Spending is equal to current plus capital spending. The difference between the two is equal to public sector net borrowing. Figures for 1999–00 onwards are HM Treasury and not IFS / Goldman Sachs forecasts.
Source: HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999. Figures taken from Tables B5, B20 and B21 (pp. 147, 166 and 167).

Table 3.1. The size of the AME margin, 1999–00 to 2001–02 (£bn)

	1999–00	**2000–01**	**2001–02**
Comprehensive Spending Review, July 1998	1.0	2.0	3.0
Pre-Budget Report, November 1998	3.0	4.5	6.0
Budget, March 1999	1.0	2.0	3.0
Pre-Budget Report, November 1999	3.5	3.9	6.4
IFS / Goldman Sachs forecast	*0*	*1.0*	*2.0*
Reduction in spending arising from unused margin	*3.5*	*2.9*	*4.4*

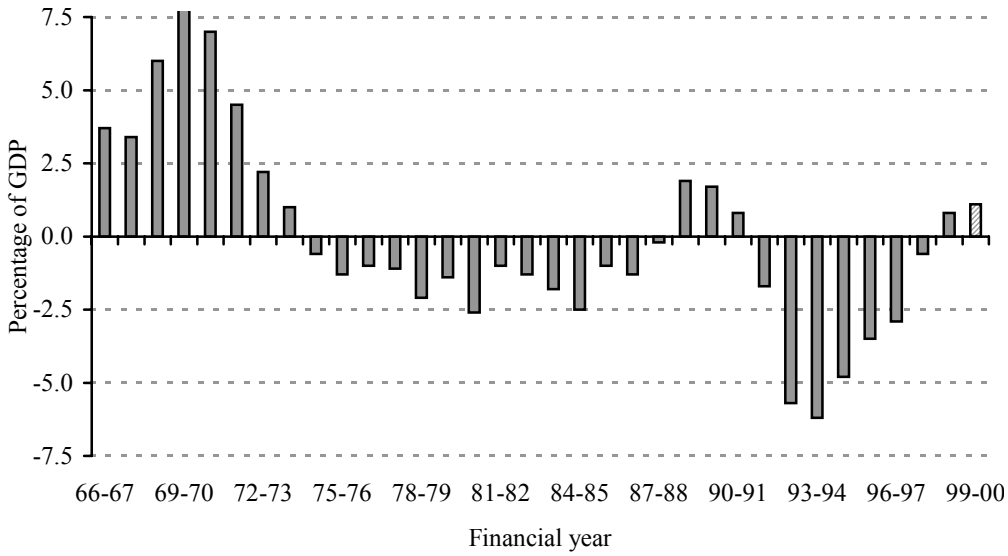
Sources: HM Treasury, *Comprehensive Spending Review*, Cm. 4011, July 1998; HM Treasury, *Pre-Budget Report*, Cm. 4076, November 1998; HM Treasury, *Financial Statement and Budget Report*, Hc298, March 1999; HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999.

If the Chancellor decides in the March Budget that these reductions in spending still seem reasonable, then the margin can be returned to its CSR levels. Given that unemployment has continued to fall since the Pre-Budget Report, this seems quite likely. In addition — in the absence of any unanticipated spending demands — the margin could be reduced further since this year's fund may not be spent, and subsequent years revised downwards as the degree of uncertainty is reduced. This would lead to total reductions in

spending of £3.5 billion in 1999–00, £2.9 billion in 2000–01 and £4.4 billion in 2001–02.

The combination of tax increases and spending control over the last two-and-a-half years has ensured that the Chancellor is on course to meet both of his rules for public borrowing. If the government succeeds in meeting the golden rule in future, this implies levels of borrowing that are very low, at least on an historical basis. Figure 3.2 shows that the current budget has clearly not been balanced over any economic cycle for over 20 years. Failure to meet the golden rule over previous cycles has not left the UK with levels of debt that would be deemed unsustainable. Due to difficulties in distinguishing between current and capital spending, and also whether it is necessarily the case that it is undesirable to redistribute between generations, meeting the golden rule should be considered no more than a rule of thumb.[4]

Figure 3.2. Current budget surpluses and deficits as a percentage of GDP, 1966–67 to 1999–00



Notes: Treasury forecast used for 1999–00. Excludes windfall tax and associated spending.
Source: HM Treasury, *Public Finances Databank*, December 1999, Table A2.

3.3 Borrowing in 1999–00

The public finances are in a much healthier state than expected at the time of last year's Green Budget and the March 1999 Budget. This was recognised in the government's Pre-Budget Report last November. The out-turn in 1999–00 is likely to be even better than the Pre-Budget Report forecast.

Public sector net borrowing was in a surplus of £0.3 billion in the first nine months of 1999–00 compared with a deficit of £2.7 billion in the same period

[4] For a further discussion, see L. Chennells and A. Dilnot, *The IFS Green Budget: January 1999*, Commentary no. 76, Institute for Fiscal Studies, London, 1999.

last year. Continuing this trend over the remainder of the financial year would imply a much better outturn than forecast in either the March 1999 Budget or the November 1999 Pre-Budget Report.

Compared with the Pre-Budget Report, the improvement in public borrowing has been due mainly to lower spending. In the first nine months of 1999–00, central government receipts were 5.5% higher than in the corresponding period last year. The Pre-Budget Report forecast growth in central government receipts of 5.0% for the year as a whole. Current spending by central government, including depreciation, has so far grown by 4.3% compared with the latest Treasury forecast of 5.5%.[5]

We expect these trends to persist in the remainder of the financial year. The IFS / Goldman Sachs forecasts for public borrowing in 1999–00 are shown in Table 3.2 alongside Treasury forecasts from March and November 1999. For the current financial year, we forecast receipts of £351.7 billion, just £0.4 billion lower than forecast by the Treasury in November but £6.8 billion higher than expected in last year's Budget. A more detailed breakdown of receipts is given in Table 3.5.

Table 3.2. Comparison of Green Budget and HM Treasury forecasts for government borrowing, 1999–00 (£bn)

	Budget, Mar. 99	Pre-Budget Report, Nov. 99	Green Budget, Jan. 00	Differences in Green Budget forecast relative to:	
				Budget	PBR
Current receipts	345.0	352.1	351.7	6.8	–0.4
Total managed expenditure	349.2	349.9	346.3	–2.9	–3.6
of which:					
Departmental expenditure limits	179.2	179.9	179.9	0.7	0.0
Annually managed expenditure	170.0	170.0	166.4	–3.6	–3.6
PSNB (including WTAS)	4.3	–2.1	–5.4	–9.6	–3.3
Windfall tax and associated spending	–1.5	–1.4	–1.4	0.1	0.0
Public sector net borrowing[a]	2.8	–3.5	–6.8	–9.6	–3.3
Net investment[a]	5.2	6.1	6.1	0.9	0.0
Surplus on current budget[a]	2.4	9.5	12.8	10.4	3.3
Public sector net debt (% of GDP)	40.6%	38.2%	37.9%	–2.7 ppts	–0.3 ppt

[a] Excluding windfall tax and associated spending.
Note: ppt = percentage point.
Source: Treasury forecasts from HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999, and HM Treasury, *Financial Statement and Budget Report*, Hc298, March 1999.

On the spending side, we forecast total managed expenditure (TME) of £346.3 billion, £2.9 billion less than the Budget forecast and £3.6 billion less than the Pre-Budget Report forecast. Between the Budget and Pre-Budget Report, departmental expenditure limits (DELs) were revised up by £0.7 billion in 1999–00 as the previous year's undershoot was carried forward. We assume that the DELs will be kept to. In the event of another undershoot, this will be

[5] Latest figures from ONS Press Release ONS(2000) 23, *First Release: Public Sector Finances, December 1999*, 21 January 2000. Treasury forecasts from HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999.

added to the existing DELs in 2000–01. Looking at annually managed expenditure, between the Budget and Pre-Budget Report, the AME margin was raised from £1 billion to £3.5 billion. This mainly reflected a drop in social security benefits associated with declining unemployment. With unemployment continuing to fall, we expect no demands on the AME margin this year, and the out-turn for TME this year to be lower than the Pre-Budget Report forecast by at least this amount.

Taking both sides of the accounts together, we expect PSNB, excluding the windfall tax and associated spending, to improve from –£2.6 billion (0.3% of GDP) in 1998–99 to –£6.8 billion (0.8% of GDP) in 1999–00.

The government's fiscal rules will be met easily in 1999–00. We expect the surplus on current budget, excluding the windfall tax and associated spending, to rise from £7.3 billion (0.8% of GDP) in 1998–99 to £12.8 billion (1.4% of GDP) in 1999–00. This is £10.4 billion higher than the Treasury forecast in last year's Budget and £3.3 billion higher than the Pre-Budget Report forecast. Public sector net debt is forecast to fall from 39.9% of GDP in 1998–99 to 37.9% of GDP in 1999–00.

Why has borrowing been lower than expected?

There are several reasons why borrowing has been lower than expected in 1999–00.

1. The out-turn in 1998–99 was better than expected. Public sector net borrowing, including the windfall tax and associated spending, was –£4.6 billion, £1.8 billion lower than the Budget had forecast. In particular, current receipts were £1.7 billion higher, which raised the baseline for 1999–00 and future years.
2. GDP growth has been stronger than expected. The Treasury assumed GDP growth of 1% in 1999–00 in the fiscal projections made in the last Budget. The out-turn is likely to be 2¼%, in line with the Pre-Budget Report forecast. Stronger growth leads to higher levels of wages, employment and profits, which boost tax receipts and cut spending on cyclical social security.
3. Not only has GDP growth been stronger than expected but the composition of that growth has been favourable to the public finances, raising the tax base relative to that expected in last year's Budget.

Furthermore, any public finance forecast is subject to a large degree of error. The average absolute error in forecasting PSNB one year ahead over the period 1985–86 to 1997–98 was 1.2% of GDP. In 1999–00, this corresponds to an average error of £11 billion. Even if economic growth had been correctly forecast, the average forecast error one year ahead would still be 1% of GDP, or £9 billion in 1999–00. Forecasting further into the future is subject to even larger degrees of error.[6] When analysing any change in forecasts, it is important to remember that these changes are usually well within the range of past errors in forecasting.

[6] HM Treasury, *Pre-Budget Report*, Cm. 4076, November 1998, Table B13.

The fiscal stance in 1999–00

In last year's Budget, the Chancellor announced discretionary Budget measures to prevent the fiscal stance from tightening. On the Treasury's estimates, cyclically adjusted PSNB was planned to ease by 0.1% of GDP. Even allowing for stronger economic growth, PSNB has improved by much more than expected. On our estimates, the fiscal stance will actually have tightened by 0.6% of GDP in 1999–00. In this year's Budget, the Chancellor will need to decide how much, if any, of this tightening should be offset in 2000–01 and future years.

3.4 Prospects for borrowing in 2000–01

The Pre-Budget Report contained an implicit decision to offset some of this year's fiscal tightening. The Chancellor announced the ending of the automatic escalators on tobacco and road fuel duties. He also extended the 10p starting rate of income tax to savings income and abolished the TV licence fee for the over-75s. Table 3.3 shows that the amount of revenue forgone in a full year from these changes could be as much as £2.2 billion. In fact, the revenue forgone is likely to be less than this since the tobacco and road fuel escalators have not raised as much revenue as expected when they were introduced. The Pre-Budget Report estimates that the revenue lost from these two escalators could be as little as £1¼ billion, compared with the £1¾ billion it was thought that they could raise.

Table 3.3. Full-year costing of the measures announced in the Pre-Budget Report (£bn)

	Full-year costing (£bn)
Automatic tobacco escalator ended[a]	–0.360
Automatic road fuel escalator ended[a]	–1.425
10p starting rate of income tax extended to savings income[b]	–0.075
Abolition of the TV licence fee for the over 75s	–0.300
Total	*–2.160*

[a] The full-year costing for the escalators is for one year only. Removing the escalator for more years clearly increases this figure.

[b] The Pre-Budget Report states that 2.5 million people will gain an average of £30. Due to many individuals being unlikely to claim back small refunds, the overall costing may in fact be much lower. See Chapter 5 for more details.

Source: HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999.

Even with the measures announced in the Pre-Budget Report and those announced in last year's Budget, there will still be a net discretionary increase in taxes over the parliament, as shown in Table 3.4. In 2000–01, the measures from the Pre-Budget Report and the March 1999 Budget will reduce revenues by £3.5 billion, which is less than the increase in revenues of £11.8 billion from measures announced in previous Budgets. While the tobacco and road fuel escalators have not raised as much revenue as anticipated at the time they were announced, it is clear that there has been a net revenue increase. In fact,

the figures here understate the discretionary increase in taxes made, since they have been reduced by any spending announcements made in Budgets.

Table 3.4. Revenue implications of measures made in previous Budgets over this parliament (£bn)

	2000–01	**2001–02**
Pre-Budget Report, November 1999	–2.010	–3.870
Measures announced in March 1999 Budget	–1.450	–3.575
Measures announced in March 1998 Budget	0.950	0.975
Measures announced in July 1997 Budget	4.130	4.235
Impact of tobacco escalators	1.260	1.640
Impact of road fuel escalators	5.500	6.830
Total	*8.380*	*6.235*

Note: Measures announced in each Budget exclude the impact of the tobacco and road fuel escalators which are included separately. Those measures announced since the previous Budget are also included. In fact, some spending increases announced in these Budgets have been netted off these figures — correct accounting of these would leave a larger increase.
Sources: HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999; HM Treasury, *Financial Statement and Budget Report*, various years; IFS / Goldman Sachs calculations.

In line with the Pre-Budget Report, the IFS / Goldman Sachs forecasts take account of these pre-announced tax changes. As shown in Table 3.5, in 2000–01 our forecast is that current receipts will be about £4 billion higher than forecast by the Treasury in the Pre-Budget Report (£373.9 billion compared with £370.0 billion). This is due to a more optimistic forecast for economic growth in 2000–01. We expect GDP to grow by 2¾%, ½ a percentage point higher than the Treasury forecast. This results in higher forecasts for income tax, excise duties and social security contributions in particular.

We have a lower forecast for current spending than in the Pre-Budget Report (£356.7 billion compared with £360.4 billion). This is as a result of a number of additional factors that have been taken into account. Spending is expected to be higher because:

- A recent ruling by the European Court of Justice extended the winter fuel payment to men aged between 60 and 65. This is forecast to cost an additional £85 million a year. We assume that back payments of £125 million are met from other savings.[7]
- We have allocated the remainder of the revenues raised by the windfall tax to the welfare-to-work spending programme between 2000–01 and 2001–02. This boosts spending by an additional £0.2 billion in 2000–01.

Offsetting these are the following factors:

- Spending on cyclical social security is £0.8 billion lower as a result of a further decline in unemployment.

[7] Source: Department of Social Security Press Release 99/321, 16 November 1999.

Table 3.5. Comparison of Green Budget and HM Treasury forecasts for government borrowing, 1999–00 and 2000–01 (£bn)

	1999–00		2000–01	
	Pre-Budget Report Nov. 1999	*Gr. Budget forecast Jan. 2000*	*Pre-Budget Report Nov. 1999*	*Gr. Budget forecast Jan. 2000*
Inland Revenue				
Income tax[a]	90.7	92.5	95.4	97.5
Corporation tax[b]	33.5	32.0	32.5	32.4
Petroleum revenue tax	0.8	0.5	0.7	0.5
Capital gains tax	2.4	2.1	3.0	2.4
Inheritance tax	2.0	2.0	2.2	2.0
Stamp duties	6.1	6.1	6.2	6.5
Total Inland Revenue (net of tax credits)	**135.5**	**135.2**	**139.7**	**141.4**
Customs and Excise				
Value added tax (VAT)	55.7	55.5	58.0	58.5
Road fuel duties	22.5	23.0	23.5	24.2
Tobacco duties	5.7	5.7	7.1	8.0
Spirit duties	1.7	1.7	1.8	1.8
Wine duties	1.6	1.6	1.7	1.7
Beer and cider duties	3.0	3.0	3.0	3.1
Betting and gaming duties	1.5	1.5	1.5	1.6
Air passenger duty	0.9	0.9	1.0	0.9
Insurance premium tax	1.4	1.4	1.6	1.6
Landfill tax	0.4	0.4	0.4	0.5
Customs duties and levies	2.0	2.0	2.0	2.0
Total Customs and Excise	**96.4**	**96.7**	**101.7**	**104.0**
Vehicle excise duties	4.9	4.9	5.1	5.2
Oil royalties	0.4	0.3	0.4	0.3
Business rates[c]	15.7	15.7	16.7	16.0
Social security contributions	56.2	56.0	58.9	59.7
Council tax	12.8	12.8	13.7	13.4
Other taxes and royalties[d]	7.5	7.5	7.6	7.7
Total taxes and social security contribns[e]	**329.3**	**329.0**	**343.9**	**347.7**
Accruals adjustments on taxes	3.7	3.7	2.9	2.9
less Own resources contribution to EU	–5.9	–5.9	–5.4	–5.4
less PC corporation tax payments	–0.4	–0.4	–0.4	–0.4
Income tax credits[f]	3.3	3.3	5.0	5.0
Interest and dividends	3.6	3.6	4.0	4.0
Gross trading surplus and rent	18.4	18.4	20.1	20.1
Current receipts	**352.1**	**351.7**	**370.0**	**373.9**
Current spending[g]	**343.5**	**339.9**	**360.4**	**356.7**
Windfall tax and associated current sp.	1.0	1.0	1.0	1.2
Current balance[h]	**9.5**	**12.8**	**10.6**	**18.4**
Net investment	6.4	6.4	8.4	8.4
Windfall tax and associated capital sp.	0.3	0.3	0.3	0.3
Public sector net borrowing[h]	**–3.5**	**–6.8**	**–2.5**	**–10.3**

[a]Net of tax credits. [b]Includes advance corporation tax (net of repayments); also includes North Sea corporation tax after ACT set-off, and corporation tax on gains. [c]Includes district council rates in Northern Ireland. [d]Includes money paid into the National Lottery Distribution Fund. [e]Includes VAT and 'traditional own resources' contributions to EU budget; net of income tax credits; cash basis. [f]Excludes children's tax credit, which counts as a tax repayment in the National Accounts. [g]In line with the National Accounts, depreciation has been counted as current spending. [h]Excludes windfall tax and associated spending.

Note: For more details of the IFS / Goldman Sachs central economic forecast, see Table A.3 in Appendix A.

Source: Treasury forecasts from HM Treasury, *Pre-Budget Report*, Cm. 4479, November 1999; this table is equivalent to Table B9 (p. 154). IFS / Goldman Sachs calculations.

- Debt interest payments are £0.2 billion lower as a result of a larger-than-expected debt repayment in 1999–00.
- The AME margin for 2000–01 is assumed to be reduced from £3.9 billion to £1.0 billion.

Without any further discretionary measures announced by the Chancellor in this year's Budget, the surplus on current budget, excluding the windfall tax and associated spending, rises to £18.4 billion (1.9% of GDP). This compares with the Treasury Pre-Budget Report forecast of £10.6 billion (1.2% of GDP).

In the absence of any additional information, we take the Treasury's forecasts for net capital spending. These imply public sector net borrowing, excluding the windfall tax and associated spending, of –£10.3 billion (1.1% of GDP) in 2000–01, i.e. a larger repayment than the Pre-Budget Report forecast of –£2.5 billion (0.3% of GDP). Public sector net debt falls to 35.4% of GDP.

The fiscal stance in 2000–01

Allowing for the measures announced in the Pre-Budget Report, cyclically adjusted PSNB improves by 0.2% of GDP on our forecasts. This would help to support monetary policy, which has moved into a renewed tightening phase. However, the fiscal stance would be tighter than intended in last year's Budget. Between 1998–99 and 2000–01, the cumulative fiscal tightening will be 0.8% of GDP compared with the expected 0.3% of GDP in last year's Budget. We discuss the scope for fiscal easing in the context of the government's fiscal rules in Section 3.6.

3.5 The medium-term outlook for public borrowing

Table 3.6 shows the main economic assumptions that underpin the IFS / Goldman Sachs central forecast for the public finances. We expect stronger economic growth than the Treasury in 2000–01 but slower growth in the two following years. Differences in economic growth translate into differences in our forecasts for employment and wage growth. Over the entire forecast horizon, GDP growth averages 2¼% a year in both the IFS / Goldman Sachs and Treasury forecasts.

The government has published detailed public spending plans only up to 2001–02. These will be reviewed in the summer when the government conducts its second Comprehensive Spending Review (CSR). In our central forecast, we assume that current spending grows by 2¼% a year in real terms from 2002–03 onwards, in line with planned growth in current spending from 1999–00 to 2001–02. We also assume that public sector net investment stabilises at 1½% of GDP. Variations in these assumptions are considered in Section 3.6.

Based on these assumptions, the IFS / Goldman Sachs borrowing forecasts for the medium term are presented in Table 3.7. Despite slower economic growth in 2001–02 and 2002–03, we expect the surplus on current budget to remain

close to the level forecast for 2000–01. PSNB moves gradually back towards balance as public sector net investment picks up. Our medium-term forecasts for public borrowing are, on average, about £7–8 billion a year lower than the Treasury's Pre-Budget Report forecasts, on unchanged policies.

Table 3.6. Comparison of the Treasury's and our main economic assumptions

	1999–00	2000–01	2001–02	2002–03	2003–04	2004–05
Output (GDP— % growth)						
HM Treasury PBR	2¼	2¼	2¼	2¼	2¼	2¼
IFS / Goldman Sachs	2¼	2¾	2	2	2¼	2¼
GDP deflator (% growth)						
HM Treasury PBR	2¼	2½	2½	2½	2½	2½
IFS / Goldman Sachs	2½	2½	2½	2½	2½	2½
Money GDP (% growth)						
HM Treasury PBR	4½	4¾	4¾	4¾	4¾	4¾
IFS / Goldman Sachs	5	5¼	4¾	4½	4¾	4¾
Money GDP (£bn)						
HM Treasury PBR	890	934	978	1,024	1,073	1,124
IFS / Goldman Sachs	899	946	991	1,037	1,086	1,137

Note: For more details of the IFS / Goldman Sachs central economic forecast, see Table A.3 in Appendix A.

Sources: Treasury economic forecasts from HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999; this table is equivalent to Table B4 (p. 145). IFS / Goldman Sachs calculations.

Table 3.7. Medium-term public finances forecasts, based on our central macroeconomic assumptions (£bn)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Current budget						
Current receipts	351.7	373.9	390	407	426	446
Current expenditure[a]	339.9	356.7	371	389	407	427
Windfall tax & ass. curr. sp.[b]	1.0	1.2	1	0	0	0
Surplus on current budget[c]	12.8	18.4	21	18	19	20
Capital budget						
Net investment	6.4	8.4	10	13	16	17
Windfall tax & ass. cap. sp.[b]	0.3	0.3	0	0	0	0
Public sector net borrowing[c]	–6.8	–10.3	–11	–6	–3	–3
HM Treasury forecasts						
Surplus on current budget[c]	9.5	10.6	13	13	12	11
Public sector net borrowing[c]	–3.5	–2.5	–3	1	4	6

[a] In line with the National Accounts, depreciation has been included as current expenditure.
[b] Removes receipts from the windfall tax and associated spending.
[c] Excludes windfall tax and associated spending.

Note: For more details of the IFS / Goldman Sachs forecast, see Table A.3 in Appendix A.

Source: Treasury forecasts from HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999; this table is equivalent to Table B5 (p. 147). IFS / Goldman Sachs calculations.

Fiscal rules met comfortably

The IFS / Goldman Sachs forecasts imply that the government will comfortably meet its two rules for public borrowing over the economic cycle. This is shown in Table 3.8. The current budget balance has improved from a deficit of almost 3% of GDP in 1996–97, the year before Labour came to office, to a surplus averaging 1.4% of GDP a year between 1997–98 and 2004–05. The cyclically adjusted current budget is forecast to be slightly lower, reflecting the fact that the economy has been operating slightly above trend since 1997–98 and is expected to continue to do so. Even so, on our estimates, the cyclically adjusted surplus on current budget will average 1.0% a year between 1997–98 and 2004–05. By the end of the forecast horizon, the cyclically adjusted surplus on current budget is expected to be around 1½–1¾% of GDP.

Table 3.8. Compliance with the fiscal rules: the current balance and net public sector debt ratio under our central forecast, as a percentage of GDP[a]

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Fiscal balances								
Surplus on current budget	–0.6	0.8	1.4	1.9	2.1	1.8	1.7	1.7
Average surplus since 1997–98	–0.6	0.1	0.6	0.9	1.2	1.3	1.3	1.4
PSNB	1.2	–0.3	–0.8	–1.1	–1.1	–0.5	–0.3	–0.2
Public sector net debt	42.1	39.9	37.9	35.4	33.2	31.3	29.7	28.2
Cyclically-adjusted fiscal balances								
Surplus on current budget	–1.0	0.4	1.1	1.5	1.6	1.5	1.6	1.7
PSNB	1.5	0.2	–0.4	–0.6	–0.6	–0.2	–0.2	–0.2
Note: Output gap[b]	1.0	0.5	0.4	0.9	0.6	0.3	0.1	0.0

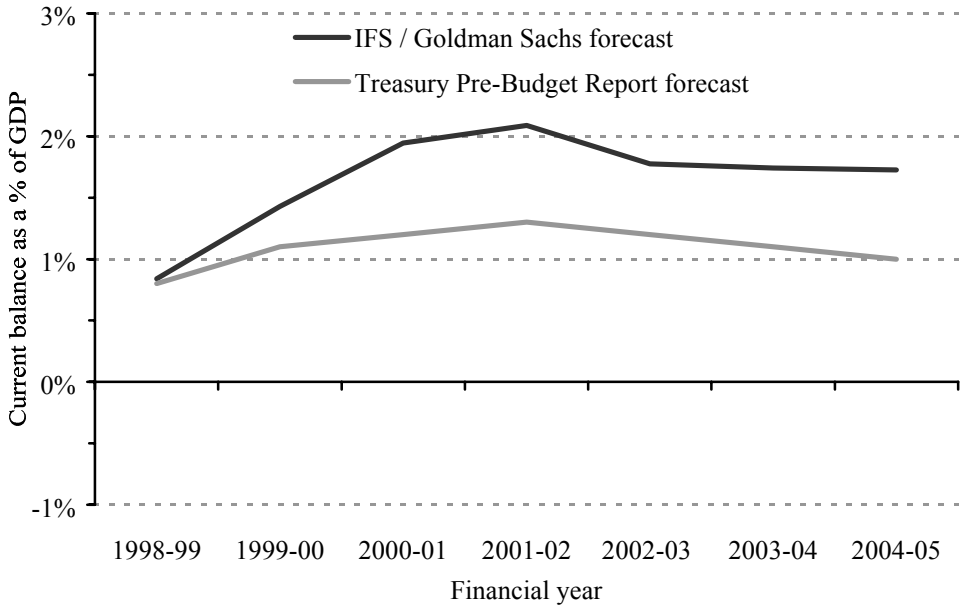
[a] Excluding windfall tax and associated spending. This table is equivalent to HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999, Table B1 (p. 141). For more information on cyclical adjustments, see HM Treasury, *Fiscal Policy: Public Finances and the Cycle*, 1999.

[b] Positive numbers for the output gap indicate that output is above trend.

Source: IFS / Goldman Sachs calculations.

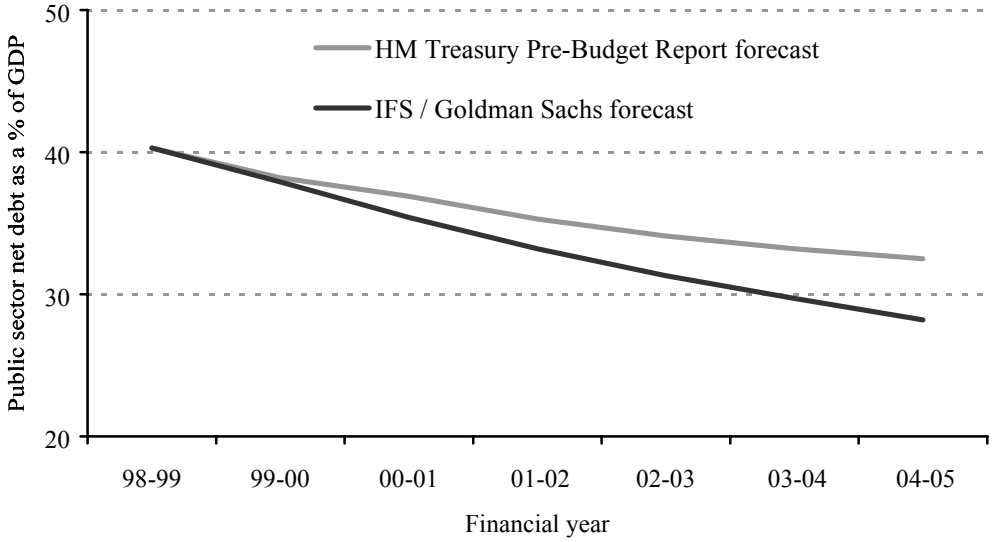
The central government net cash requirement is projected to remain in slight surplus over the next few years. The approximate counterpart to the net cash requirement, when measured as a cumulated stock rather than an annual flow, is public sector net debt. The stock of net debt will fall gradually over the next five years, which, combined with steady GDP growth, reduces the debt/GDP ratio considerably. The debt ratio falls from just under 40% at the end of March 1999 to just over 28% by March 2005. It was briefly lower than this, at 27.0% of GDP, in March 1990 at the tail-end of the unsustainable boom of the 1980s. Between 1997–98 and 2004–05, the net debt ratio is forecast to average just under 35%. Figures 3.3 and 3.4 provide a comparison of the IFS / Goldman Sachs medium-term forecasts and the Treasury's in the Pre-Budget Report.

Figure 3.3. Current budget surplus forecasts as a percentage of GDP, 1998–99 to 2004–05



Sources: Treasury forecast from *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999; IFS / Goldman Sachs calculations.

Figure 3.4. Public sector net debt as percentage of GDP, 1998–99 to 2004–05



Note: Treasury forecast used for 1999–00. Excludes windfall tax and associated spending.
Sources: HM Treasury, *Public Finances Databank*, December 1999, Table A7.

3.6 Is there scope to loosen fiscal policy?

Since coming to office, the Chancellor has eschewed any opportunity to loosen the fiscal stance significantly. There are several reasons why adopting a cautious approach is sensible:

1. Any forecasts for public borrowing are subject to large margins of error. The average absolute forecasting error four years in advance is just over 4% of GDP.[8] If the government is serious about a commitment not to run a current budget deficit over the economic cycle, it would need to build in some surpluses. Otherwise, even relatively small errors in the forecasts could lead to targets being missed.
2. There is great uncertainty about the precise cyclical position of the economy. Unemployment has fallen to a 20-year low and there are emerging signs of labour shortages. Although inflation is currently below the government's target, this tells us little about where inflation will be in one or two years' time. If the improvement in the public finances is purely cyclical, stronger growth now must translate into slower growth in future. This means that budget surpluses built up for cyclical reasons should not be spent on a fiscal loosening — the inevitable slowdown would reduce future revenues and increase future spending. For instance, if output were currently 2% above trend, the true cyclically adjusted surplus on current budget would actually be close to zero and would remain close to zero over the next five years.
3. It is often much harder, politically, to cut public spending or raise taxes than it is to raise public spending or cut taxes.

There are also arguments against being too cautious.

1. As discussed in Chapter 2, there is tentative evidence that the trend rate of growth over the next few years might be 2½% rather than 2¼%. If maintained for five or six years, there could be a sustained drop in public borrowing of close to 1% of GDP.
2. As each year passes, the average fiscal position over the economic cycle will get better and better if the Chancellor is too cautious. If the current budget is persistently in surplus, the current generation of taxpayers will be unnecessarily forgoing consumption in favour of future generations. If the economy is currently quite close to trend, there is no need to run a sizeable current budget surplus.

Risks

Previous UK policy experience, when a cyclical improvement in the economy was mistaken for a structural one in the late 1980s, suggests that it is sensible to wait until firm evidence has been established before adjusting assessments of the trend rate of growth. Whether this type of error has been made systematically in the past, or whether this was simply a period where the

[8] HM Treasury, *Pre-Budget Report*, Cm. 4076, November 1998, Table B13 (p. 122).

evidence appeared (wrongly) to indicate that trend growth had increased, is not really that important. It is important that similar mistakes are avoided in future. Table 3.9 shows the damaging effect that much lower economic growth than expected had on the accuracy of the government's forecasts for the public sector net cash requirement (PSNCR, known then as the public sector borrowing requirement). Future borrowing levels were substantially underestimated. For example, the March 1989 FSBR forecast that borrowing would be some 3.2% of GDP less than it actually turned out in 1991–92. Any fiscal loosening should occur only if it is compatible with more conservative estimates of trend growth, until concrete evidence of a stronger underlying economy can be established.

Table 3.9. Previous errors in forecasts of government borrowing

	Five-year annualised GDP growth		PSNCR forecasting error (% of GDP)		
	Forecast	Actual	2-year	3-year	4-year
FSBR March 1988	3	1	1.2	0.1	–2.3
FSBR March 1989	2½	¾	–1.6	–3.2	–6.1
FSBR March 1990	2	1¼	–3.4	–6.1	–6.7
FSBR March 1991	2	1¾	–3.7	–5.7	–5.1

Note: Negative values signify an underestimate of borrowing. Borrowing calculated as a percentage of GDP using out-turn rather than forecast GDP (on an ESA95 basis).
Sources: HM Treasury, *Financial Statement and Budget Report*, various years; GDP out-turn from Office for National Statistics website; IFS / Goldman Sachs calculations.

In order to highlight the effect of lower-than-forecast economic growth on our projections, Table 3.10 compares our central scenario with two alternatives:

1. a pessimistic case, where output is 2% 'too high', thus curbing GDP growth by ½ percentage point in each of the next four years relative to our central forecast;
2. an optimistic case, in which the sustainable growth rate is ¼ percentage point a year higher.

Table 3.10. Medium-term public finances forecasts under alternative scenarios, as a percentage of GDP, 1999–00 to 2004–05

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Output 2% 'too high'						
Current budget	1.4	1.8	1.6	1.0	0.6	0.3
Public sector net debt	37.9	35.7	34.2	33.2	32.8	32.8
Trend growth ¼ ppt higher						
Current budget	1.4	2.0	2.3	2.1	2.2	2.3
Public sector net debt	37.9	35.2	32.8	30.5	28.4	26.3
IFS / Goldman Sachs forecast						
Current budget	1.4	1.9	2.1	1.8	1.7	1.7
Public sector net debt	37.9	35.4	33.2	31.3	29.7	28.2
HM Treasury PBR forecast						
Current budget	1.1	1.2	1.3	1.2	1.1	1.0
Public sector net debt	38.2	36.9	35.3	34.1	33.2	32.5

Note: Current budget figures exclude windfall tax and associated spending.
Source: Treasury forecasts from HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999; IFS / Goldman Sachs calculations.

In the pessimistic case, the government would still meet its fiscal rules. By 2004–05, the surplus on current budget declines to 0.3% of GDP while net debt stabilises at around 33% of GDP. In the more optimistic case, the surplus on current budget rises to 2.3% of GDP by the end of the forecast horizon, and the net debt ratio falls to just over 26%.

The scope for fiscal easing

In the central scenario set out in Table 3.7 and in our cyclically adjusted estimates in Table 3.8, the Chancellor appears to have some scope to loosen fiscal policy in coming years. An important consideration for the Chancellor will be that, in addition to running a surplus on the current budget on average over the current economic cycle, surpluses towards the end of the planning period are sufficiently large to meet the golden rule over future cycles. The last Budget forecast current budget surpluses of 1% of GDP at the end of the planning period. This could now be achieved with a fiscal loosening of around £7 billion. This would be in addition to measures announced in the Pre-Budget Report which reduced planned revenues in 2004–05 by around £8 billion relative to the previous Budget. A loosening of this magnitude in this year's Budget would be hard to justify, given the government's other stated objectives, such as the desirability of supporting monetary policy and the fact that it would limit the resources available in the forthcoming Comprehensive Spending Review.

There are other considerations. The government has been criticised for raising the burden of taxation since coming to office. Taxes were increased to help eliminate a deficit on the current budget of almost 3% of GDP in 1996–97. In fact, the burden of adjustment fell more heavily on public spending than on taxation. Between 1996–97 and 1999–00, the share of current receipts in GDP has risen by 1.6 percentage points, while the share of total managed expenditure in GDP has fallen by 2.8 percentage points. On our forecasts, the share of current receipts in GDP will rise further in 2000–01. It is conceivable that the Chancellor may wish to stabilise the tax/GDP ratio — in which case taxes would need to be cut in the Budget by around £3 billion (over and above the £2 billion tax cut announced in the Pre-Budget Report).

Any discretionary changes in taxation announced in the Budget will have implications for the amount of spending available to be allocated in the second Comprehensive Spending Review, this summer. Given the pressures for additional spending in the government's priority areas of health and education, as discussed in Chapter 4, the government might decide that increases in current spending greater than 2¼% a year will be necessary to meet its objectives. One option would be for the government not to loosen the fiscal stance in the Budget at all. This would allow the CSR to raise current spending by 3% a year in real terms for the three years from April 2002, and the Chancellor still to be left with a surplus on current budget of 1% of GDP in 2004–05.

3.7 The Budget judgement

The Chancellor is in the fortunate position of having to deal with a very healthy fiscal position. To a large extent, this reflects the government's commitment to put the public finances on a sustainable footing in its first Budget in July 1997.

The Chancellor has to balance several competing objectives in this Budget:

1. If fiscal policy is to support monetary policy, the fiscal stance should remain broadly neutral.
2. If the Chancellor wants to prevent the tax burden from continuing to rise, he needs to cut taxes by around £3 billion.
3. He will not want to restrict the room for manœuvre in this summer's CSR.

Feasible compromises exist. The Chancellor could announce tax cuts of around £2 billion in the Budget, curtailing the growth in the tax burden. The fiscal stance would be left unchanged in 2000–01, leaving in place the larger-than-expected 0.6% of GDP tightening in 1999–00. (The Pre-Budget Report forecast a neutral stance in 2000–01 after a tightening of 0.2% of GDP in 1999–00.) There would still be scope for the second CSR to deliver an additional £3 billion of spending in 2001–02, bringing the average increase in current spending over the three years covered by the first CSR up to 2.1%, close to the 2¼% originally intended. The Chancellor would also have room to increase current spending by an average 2½% a year in the three years from April 2002. On these assumptions, the surplus on the current budget would fall to 0.9% of GDP in 2004–05 and it would average 1% of GDP a year from 1997–98, as shown in Table 3.11. The net debt ratio would fall to just under 31% of GDP in 2004–05.

Table 3.11. The current balance and net public sector debt ratio after a possible package of reforms, as a percentage of GDP, 1997–98 to 2004–05[a]

	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Fiscal balances								
Surplus on current budget	–0.6	0.8	1.4	1.7	1.6	1.2	1.0	0.9
Average surplus since 1997–98	–0.6	0.1	0.6	0.8	1.0	1.0	1.0	1.0
Public sector net borrowing	1.2	–0.3	–0.8	–0.9	–0.6	0.1	0.4	0.6
Public sector net debt	42.1	39.9	37.9	35.6	33.9	32.6	31.6	30.8

[a] Excluding windfall tax and associated spending.
Source: IFS / Goldman Sachs calculations.

The Chancellor does have other options. Should he decide to put less weight on the need to support monetary policy and the demands for additional public spending, he could loosen the fiscal stance by more than £3 billion in the Budget. Alternatively, he could decide that supporting monetary policy and providing the Comprehensive Spending Review with more scope for higher public spending were more important than any concerns with the tax burden, and that the fiscal stance should be left to tighten slightly by the Budget.

4. Issues in public spending

This chapter looks in detail at the government's spending plans for the rest of this parliament, which were announced in the July 1998 Comprehensive Spending Review (CSR). It starts by looking at how the level of spending planned over this parliament compares with that of previous administrations. Given that the government will be conducting its second CSR in the summer, we study the pressures for additional spending in the government's stated priority areas — the National Health Service and education.

4.1 Aggregate public spending

On coming to power in May 1997, the Labour government committed itself to keeping to the spending plans of the previous Conservative administration in both 1997–98 and 1998–99. This implied levels of spending growth that were extremely low by historical standards. For the remainder of this parliament, spending was determined in the July 1998 CSR. This gave government departments fixed spending allocations for the financial years 1999–00, 2000–01 and 2001–02. These departmental expenditure limits (DELs) make up about half of government spending, with the remainder — annually managed expenditure (AME) — being set, as its name suggests, on an annual basis. AME includes the spending items that are more difficult to plan ahead over several years, such as spending on debt interest and social security.

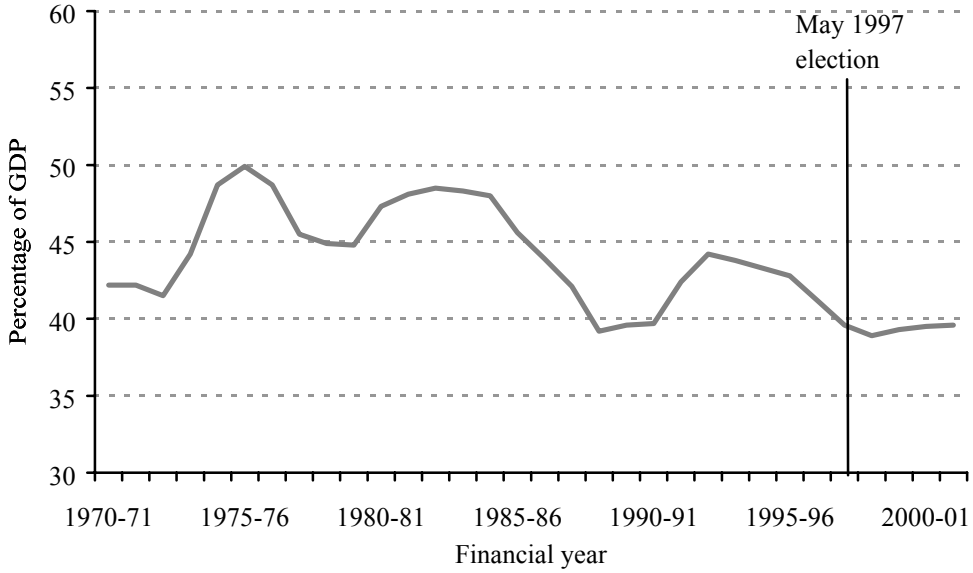
The second CSR is planned for this summer. This is expected to consider the spending plans for 2001–02 in the light of any developments since the last review, and also set fixed spending levels for the three following years. Any measures in the forthcoming Budget will influence the outcome of the CSR, since they will affect the total amount of resources available to be allocated between departments.

Spending over this parliament

As a result of the relatively low real increases in spending over the first two years of this parliament, public spending will actually fall slightly as a share of GDP between 1996–97 and 2001–02, as shown in Figure 4.1. The trend in the level of spending as a share of GDP appears to have been falling since 1975–76. There have been cyclical variations over the period, as spending as a share of GDP tends to increase during periods of slow economic growth, such as the early 1980s and the early 1990s. This is mainly due to underlying fluctuations in GDP and also increases in spending on social security elements, such as unemployment benefits, and debt interest. During the first two years of this parliament, spending fell from 41.2% of GDP in 1996–97 to 38.9% in 1998–99. This was caused by a combination of a real cut in spending levels and an increase in national income. As a result of the CSR, spending is planned to rise slightly between now and the end of the parliament to 39.6% of GDP in 2001–

02. This increase is not enough to push spending back up to the level seen prior to the 1997 election.

Figure 4.1. Total government spending as a percentage of GDP, 1970–71 to 2001–02



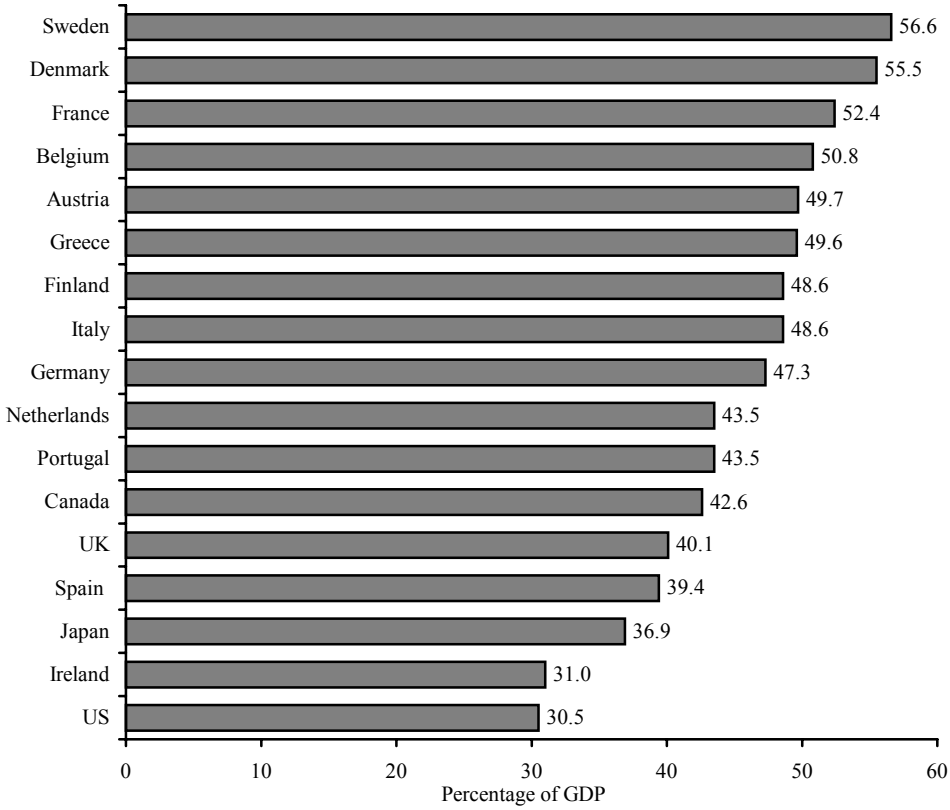
Note: Government spending refers to total managed expenditure (TME).
Source: HM Treasury, *Public Finances Databank*, December 1999, Table B1.

Spending over this parliament will average just 39.4% of GDP, compared with 43.0% over the last Conservative administration of 1992–97 and 44.0% over the period 1979–97. But this is not concrete evidence that the current government is a particularly low spender, for three main reasons. First, the role of government has changed over time. As a result of privatisation, many items of spending previously carried out by the government are now carried out by the private sector — private spending on pensions is one example. Second, comparisons of spending as a share of GDP should be made with caution, due to the impact of the economic cycle. An important reason why spending as a share of national income will not be as high over this parliament as in previous ones is that economic growth is forecast to remain high over the whole period. Third, the distinction between some items of government spending and reductions in taxation is not always clear. Obvious examples of this include mortgage interest tax relief and the working families tax credit.

International comparisons of government spending

It is interesting to compare the share of national income spent publicly in the UK with that in other countries. Figure 4.2 shows that, on an OECD definition of public spending, the UK government spent 40.1% of GDP in 1998, which was much lower than most OECD countries, with the notable exceptions of the US and the Republic of Ireland. The average across the EU (excluding Luxemburg) was 46.9%. The highest shares of public spending are for Sweden and Denmark, which spent 56.6% and 55.5% of GDP respectively.

Figure 4.2. Government spending as a percentage of GDP, 1998



Note: The graph gives figures for total government outlays, which equal current outlays plus net capital outlays. The figure for Japan would be 5.4 percentage points higher if account were taken of the debt of the Japan Railway Settlement Corporation and the National Forest Special Account. The figure for Germany includes the outlays of the German Railways Fund and the Inherited Debt Fund.
Source: OECD, *Economic Outlook*, December 1999, Annex Table 28.

Current and capital spending

Total spending growth over the current parliament is expected to average 1.5% a year in real terms. This is similar to the average level of growth seen over the 18 years of Conservative rule, but less than that in the previous parliament, when spending grew on average by 2.0% a year. The increases in total spending over this and previous parliaments are shown in Table 4.1. A more marked difference between the spending priorities of the present government and previous Conservative governments can be seen in the allocation of additional resources between current and capital spending. Over this parliament, additional funds are being focused on capital spending, which is forecast to grow at an average of 12.1% a year in real terms. The growth in current spending is much lower — averaging just 1.2% a year. This contrasts starkly with the last Conservative administration, which cut the capital spending budget by an average of 16.9% per year and increased current spending by 2.7% a year. Some of the slower growth in spending is a result of economic growth being forecast to remain strong throughout this parliament. This reduces spending on social security and debt interest. Once this is considered, we estimate that real discretionary current spending is growing at

2.0% a year under the current government, which is higher than the 1.5% annual real increase under the last government.[1]

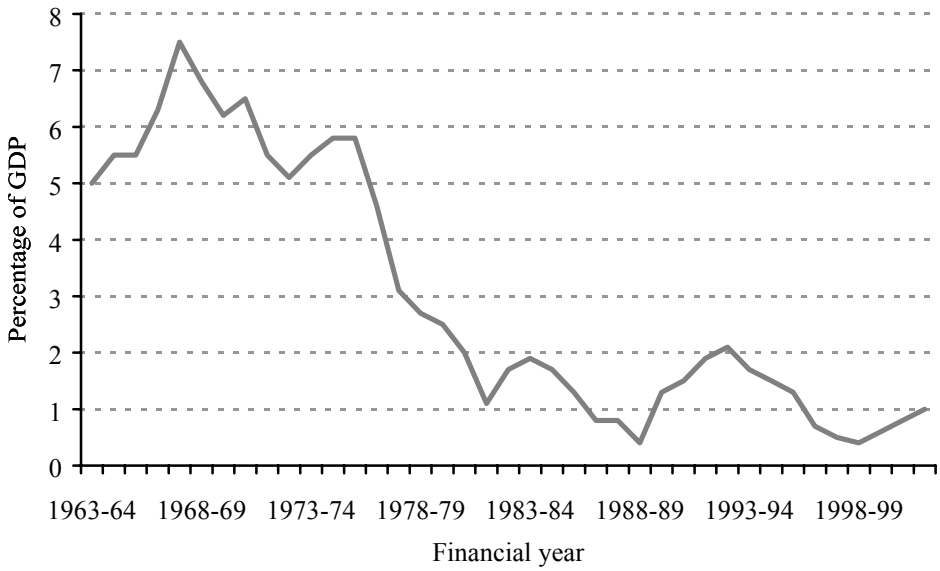
Table 4.1. Average annual real public spending increases, under Conservative and Labour governments

	Conservative		Labour		
	Entire period from April 1979	Last government from April 1992	Current government from April 1997 to 2001	First two years from April 1997 to March 1999	Three CSR years from April 1999
Current spending	1.9	2.7	1.2	–0.6	2.4
Capital spending	–5.4	–16.9	12.1	–4.7	24.8
Total spending	1.6	2.0	1.5	–0.6	2.9

Note: Figures are for annual average real increase. In line with the National Accounts, current spending includes depreciation.
Sources: HM Treasury, *Public Finances Databank*, December 1999, Table B1; HM Treasury, *Public Expenditure Statistical Analysis 1999–00*, Cm. 4201, March 1999; HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999.

The table also shows the contrast between the first two years of the current parliament, i.e. 1997–98 and 1998–99, when current spending actually decreased in real terms, with the three years from April 1999 onwards, when it is planned to increase at an average of 2.4% a year. An even greater difference is seen in capital spending, which was cut by 4.7% a year over the first two years of the parliament but is planned to increase by some 24.8% a year over the three years covered by the CSR. Nevertheless, even by the end of this period, capital spending makes up less than 3% of total spending.

Figure 4.3. Public sector net investment as a percentage of GDP, 1963–64 to 2001–02



Source: HM Treasury, *Public Expenditure Statistical Analyses 1999–00*; HM Treasury, *Public Finances Databank*, December 1999.

[1] Based on IFS / Goldman Sachs calculations.

As a result of the cuts in capital spending over the last 20 years, total public sector investment as a share of GDP has fallen sharply. This is shown in Figure 4.3. This has largely been due to the changing role of government, as investment in the utilities and the railways is now predominately carried out by the private sector and far fewer council houses are built. While the CSR will more than double public sector capital spending, from 0.4% of GDP in 1998–99 to 1.0% of GDP in 2001–02, it will still be at a lower level than the 2.1% of GDP invested by the public sector in 1992–93.

The Private Finance Initiative

In addition to direct spending on capital projects, the government also purchases the use of capital stock that has been financed by the private sector. This is done through the Private Finance Initiative (PFI), which has been used in various areas of government activity, including the building of prisons, roads, schools and hospitals. The current government has already allocated far larger real increases to capital spending than governments in the recent past. In addition, it is making increased use of the PFI. Net investment by the government in 1999–00 is planned to be £6.4 billion, with the private sector planned to finance a further £3.8 billion of investment. The level of private involvement is growing over time, investing £1.5 billion in 1997–98 and £2.2 billion in 1998–99.[2]

One issue raised by the increasing use of the PFI is that future governments will be committed to honouring any contracts signed. To a large extent, this applies to any capital spending by governments, since these assets will depreciate over time, implying a long-term commitment to the costs of their maintenance. Conventional public-sector-financed projects are likely to be more flexible, since future governments can choose to dispose of any unwanted assets. PFI investment implies a commitment to spending for the use of services over and above any maintenance costs. Under the PFI, future governments will have to pay for the use of, for example, new hospitals from the private sector. These future payments are already large and are set to rise further, as shown in Figure 4.4. Currently, the government has agreed to pay more than £3.5 billion to the private sector in every year from 2004–05 to 2012–13. These payments are also rising very quickly. In March 1998, contracts already signed committed the government to paying £3 billion to the private sector in 2010–11. By the March 1999 Budget, this had increased by £500 million to £3.5 billion.

The size of the expected payments under the PFI, relative to the amount of capital that is being provided, suggests that a large proportion of these are for current spending rather than capital spending — for example, the daily maintenance of a hospital in addition to the hospital building. This might be desirable if the private sector is more efficient at providing these services, but it does mean that future governments are increasingly committed to spending on current services in this way.

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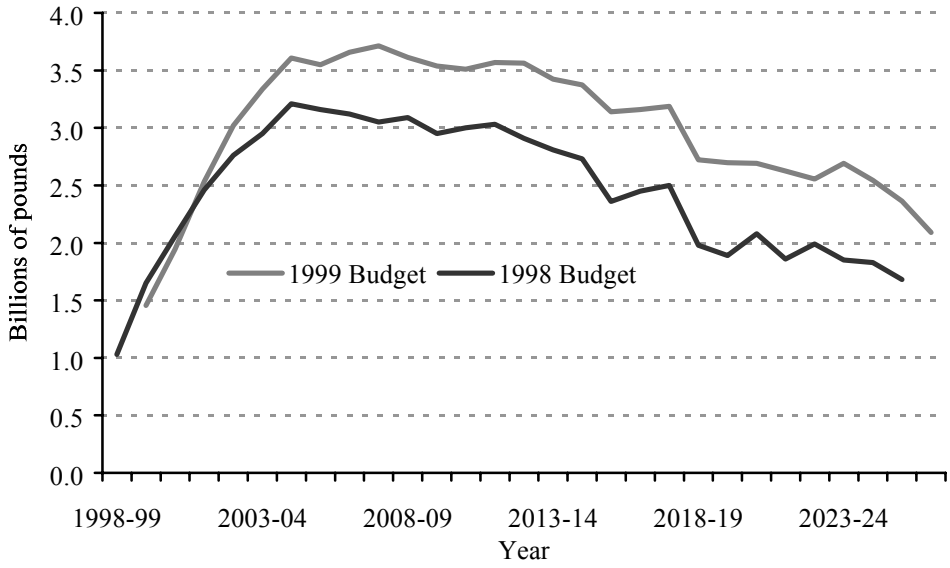
[2] HM Treasury, *Financial Statement and Budget Report*, Hc620, March 1998, Table B15 (p. 125); HM Treasury, *Financial Statement and Budget Report*, Hc298, March 1999, Table B16 (p. 162).

Figure 4.4. Estimated future payments under Private Finance Initiative contracts, 1998–99 to 2026–27



Sources: HM Treasury, *Financial Statement and Budget Report*, Hc620, March 1998, Table B16 (p. 126); HM Treasury, *Financial Statement and Budget Report*, Hc298, March 1999, Table B17 (p. 163).

Each payment made under the PFI to the private sector can be divided into three elements. First, there is the repayment of the capital used, and an associated interest payment which will be set at market interest rates. These interest payments will always cost more under the PFI than under conventional government finance, since the government is able to borrow more cheaply than the private sector. Second, there is a payment for any current spending carried out by the private sector — for example, cleaning or maintenance charges. It is likely that the private sector can deliver certain spending items more efficiently than the public sector. Third, there is a payment for any risk to future revenue streams that has been taken on by the private sector. Some of these risks will be better managed by the private sector, although some, such as those associated with future government policies, would be better handled by the public sector.[3]

Whether a PFI project offers good value for money depends crucially on whether any efficiency gains from having the private sector manage and supply a service outweigh the loss from increased interest payments. This will depend on a range of factors, including the interest rate faced by PFI contractors, the interest rate that the government would pay on its bonds (gilts) and the relative efficiency of the private sector. Clearly, UK investment should be financed by conventional government borrowing unless the private sector is able to offer efficiency savings that outweigh its higher costs of borrowing. These savings will vary on a project-by-project basis. The fall in the rate of interest paid on long-term gilts relative to corporate bonds, combined with the

[3] For a discussion of these risks see, for example, J. Hall, 'Private opportunity, public benefit?', *Fiscal Studies*, vol. 19, no. 2, pp. 121–40, 1998.

low levels of borrowing forecast by the government in the future, suggests that — in the absence of continued efficiency improvements in the private sector — any PFI project will now be offering less good value for money than previously was the case.

Challenges for the next Comprehensive Spending Review

The success of the first CSR largely depends on the precise aims of the Ministers who conducted it. If the main objective was to ensure that additional spending from economic growth was allocated to the government's priorities of health and education, it clearly succeeded. Over three-quarters of the real discretionary increase in spending between 1998–99 and 2001–02 is to be spent on the NHS and education, despite the fact that spending on these two items makes up just under half of total departmental expenditure limits (DELs).

If the objective of the first CSR was to identify areas of government spending that were no longer necessary, in order to release additional resources for the government's priorities, it appears to have been less successful. Figure 4.5 shows the allocation of total DELs between departments in 1993–94 (the earliest available year), 1998–99 (the last year before the CSR) and 2001–02 (the last year of the current planning period). This shows that the change in departmental allocations achieved by the CSR was very small. For example, the share allocated to the Department of Health, which is one of the government's priority areas, increased from 22.3% to 23.1%. This increase was smaller than that achieved over the period 1993–94 to 1998–99 (19.1% to 22.3%), although over a shorter period of time (three years rather than five). The largest savings found by the CSR were in the Ministry of Agriculture, where spending on the BSE crisis was reduced, and in the Ministry of Defence, which has seen real cuts to its budget almost year-on-year since 1985–86.[4] Other savings were also easily found outside the departmental limits, from spending on debt interest as real interest rates, expected inflation and also the government's borrowing requirement fell.

It is not particularly surprising that the first CSR could not find large savings — a similar exercise had been conducted by the last Conservative government after the 1992 election. The Fundamental Expenditure Review, under the then Chief Secretary to the Treasury Michael Portillo, also failed to find any substantial savings. This strongly suggests that the second CSR may again find it very difficult to make any dramatic reallocations. In the absence of resources released from savings made in the budgets of other departments, the amount of extra spending that can be allocated to the government's priority areas, including health and education, will depend heavily on the measures included in the Budget. Any tax cuts will reduce the extent to which increases in aggregate spending are possible, given the government's targets for public borrowing (see Chapter 3 for further discussion). Pressures for additional spending on health and education will clearly be an important consideration and are examined in the following two sections.

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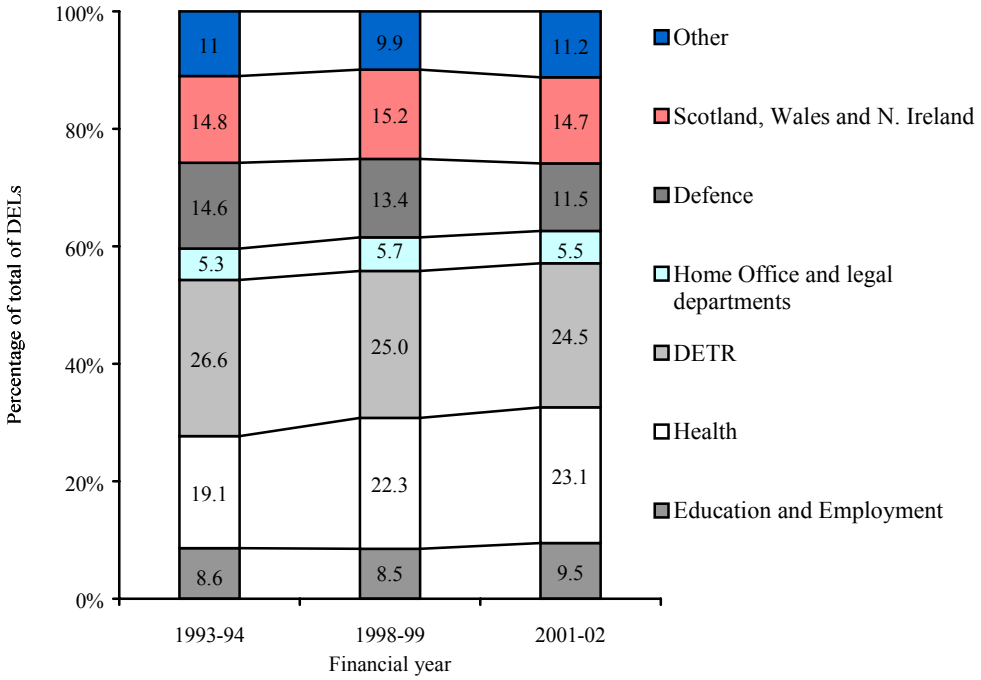
[4] See, for example, A. Dilnot and C. Giles (eds), *The IFS Green Budget: January 1998*, Commentary no. 67, Institute for Fiscal Studies, London, 1998.

Figure 4.5. Departmental expenditure limits as a percentage of total DELs, 1993–94, 1998–99 and 2001–02



Note: Spending by department differs from that by function since, for example, education spending falls with the Department for Education and Employment, the Department of the Environment, Transport and the Regions and also the Scottish, Welsh and Northern Ireland Departments.
Source: HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999, Table B17 (p. 162); 1999; HM Treasury, *Public Expenditure Statistical Analysis 1999–00*, Table 1.2.

4.2 Health spending

The July 1998 Comprehensive Spending Review (CSR) promised what the government described as the 'biggest cash increase ever announced for the NHS',[5] reputedly attracting comment from NHS managers that the settlement was 'beyond our wildest dreams'. Even so, as this year's CSR funding to the NHS has become available, the familiar picture of an NHS in serious financial crisis and failing to cope with ever-increasing demands is still painted across the press and remains strongly implanted in the public mind.[6]

This section attempts to shed some light on the debate over health spending by looking at the spending plans in context. How generous are these plans in comparison with the spending record of recent years and previous

[5] Department of Health Press Release 98/294, 'Biggest programme of renewal and modernisation since NHS was founded — Dobson', 16 July 1998.

[6] For example, see 'NHS boost evaporates', *The Guardian*, 13 November 1999; 'The health deficit', *The Sunday Times*, 19 December 1999.

governments? How does Britain's spending on healthcare compare internationally? How will changing demographics affect the resources required to fund the NHS, and what role are changing technology and rising incomes likely to play? Some indicators of NHS quality such as waiting-lists are discussed, and the growth of the private healthcare sector in the UK is examined.

Finally, this section looks to the future of the NHS and discusses the likely implications of growing future demands on the system as a whole.

Health spending plans: the context

The health spending plans set out in the July 1998 CSR represented a marked increase in NHS funding both compared with the first two years of this parliament and compared with much of the parliament that preceded it. As a result of the first two years of relatively slow growth, over this parliament as a whole the growth in health spending will be closer to the average for the history of the NHS, and somewhat higher than the average over the previous 18 years.

This can be seen in Table 4.2, which shows that the CSR plans imply an average increase in real terms across the UK of 4.7% a year, over the three-year planning period. Although this increase is well above the average for longer time periods, shown for comparison in the table, it is far from clear that these plans truly represent a break from the past as far as funding the NHS is concerned.

Table 4.2. Real increases in NHS spending

	Annualised average real increase (%)
CSR period: *April 1999 to March 2002*	4.7
This parliament: *April 1997 to March 2002*	3.7
Last parliament: *April 1992 to March 1997*	2.6
Conservative years: *April 1979 to March 1997*	3.1
Highest 3-year period of growth since 1979–80: *1989–90 to 1992–93*	5.4
Last 45 years: *1953–54 to 1998–99*	3.7
History of NHS: *1949–50 to 1998–99*	3.4

Note: Health spending is defined here as UK National Health Service expenditure, net of NHS charges and receipts. All spending figures from the CSR have been updated to take account of subsequent changes in spending totals and GDP deflators as set out in the Department of Health Departmental Report 1999–2000 and the Pre-Budget Report, November 1999. Further revisions to the UK figures have been provided by the Department of Health.
Sources: Department of Health, *The Government's Expenditure Plans, 1999–2000*, Cm. 4203, Figure C1, and subsequently revised by the Department of Health; Department of Health Departmental Reports 1997–98 and 1998–99; Office of Health Economics, *Compendium of Health Statistics* (1949–50 to 1990–91).

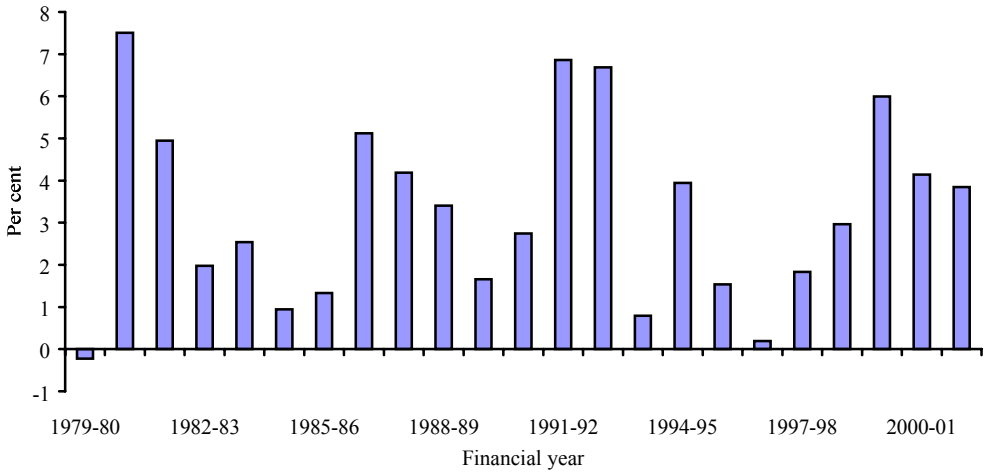
Together with the first two years of this parliament, the plans imply that this government will achieve average annual growth over the parliament as a whole of 3.7% in real terms. This is much closer to the long-term growth in NHS spending than the growth rates under the CSR. For example, it is the same average growth as that over the whole of the NHS, excluding its first

five years, when health funding was actually cut back quite sharply. Two out of the four Conservative parliaments since 1979 also saw growth at a very similar rate, although the average for those 'Conservative years' put together is lower, at 3.1%.

Although the plans might have appeared very generous when they were announced, in fact the NHS has often seen real funding increases of this magnitude before. The highest three-year period of health spending growth since 1979 was the period 1989–90 to 1992–93, when health spending rose in real terms by an average of 5.4% a year, with annual real spending growth at 6.9% in 1991–92 and 6.7% in 1992–93.[7] During much of the 1960s and 1970s, annual real growth in health spending of 6% or more was not uncommon.

Such relatively high spending growth has rarely been sustained over a number of years. This can be seen in Figure 4.6, which shows that health funding is often erratic, with periods of relatively high spending growth often followed by years of much slower growth in funding, reducing the average growth measured over a number of years. The middle of the last decade saw real health spending growth as low as 0.2% (1996–97) and 0.8% (1993–94), so that despite the spending boom at the start of the last parliament, the record of growth over the parliament as a whole was significantly below average.

Figure 4.6. Annual real increases in NHS spending, 1979–80 to 2001–02



Source: As Table 4.2.

The test of whether the relatively generous funding increases of the first CSR mark a break from the past and will be sustained, or whether they simply form part of the more erratic pattern of funding to which the NHS has become accustomed, will be in the health plans announced later this summer in the second CSR. The Prime Minister recently stated that, subject to continued strong economic growth, the next CSR could deliver 'real-term rises in the

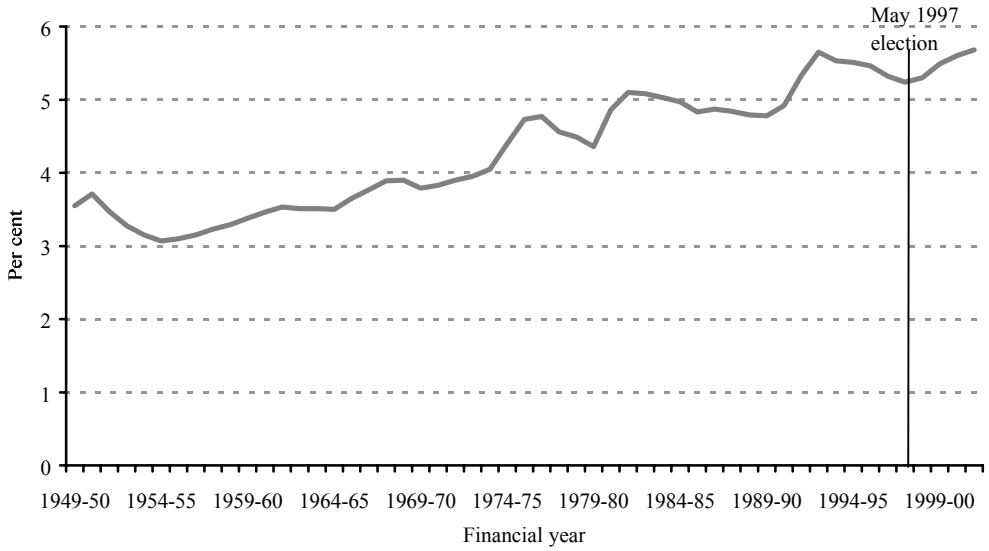
[7] Although some of these increases were swallowed up by the large costs associated with the internal market reforms taking place at this time.

Health Service of almost 5 per cent'.[8] If the next CSR did announce real spending increases of this magnitude, it would be clear that the period from April 1999 will represent at least six years of real increases in NHS spending that were substantially higher than the average over the previous 45 years.

How much do we spend on health?

There has been a gradual increase in the share of national income taken up by government health spending over the last 50 years, growing from roughly 3.5% of the economy when the NHS was established, to about 5.3% of GDP today. This is shown in Figure 4.7. For much of the 1980s, the ratio of NHS spending to GDP was about 5% or slightly under, but it jumped sharply in the early part of the 1990s, peaking at about 5.7%, when some very sharp real increases in NHS funding coincided with falling GDP. Figure 4.7 also shows how this ratio is projected to rise on current spending plans, from an estimated 5.3% in 1998–99, reaching 5.7% of GDP again by 2001–02.

Figure 4.7. NHS spending as a percentage of GDP, 1949–50 to 2001–02



Note: Projections forward from 1999–00 to 2001–02 are based on GDP forecasts adopted in the November 1999 Pre-Budget Report.
Source: As Table 4.2.

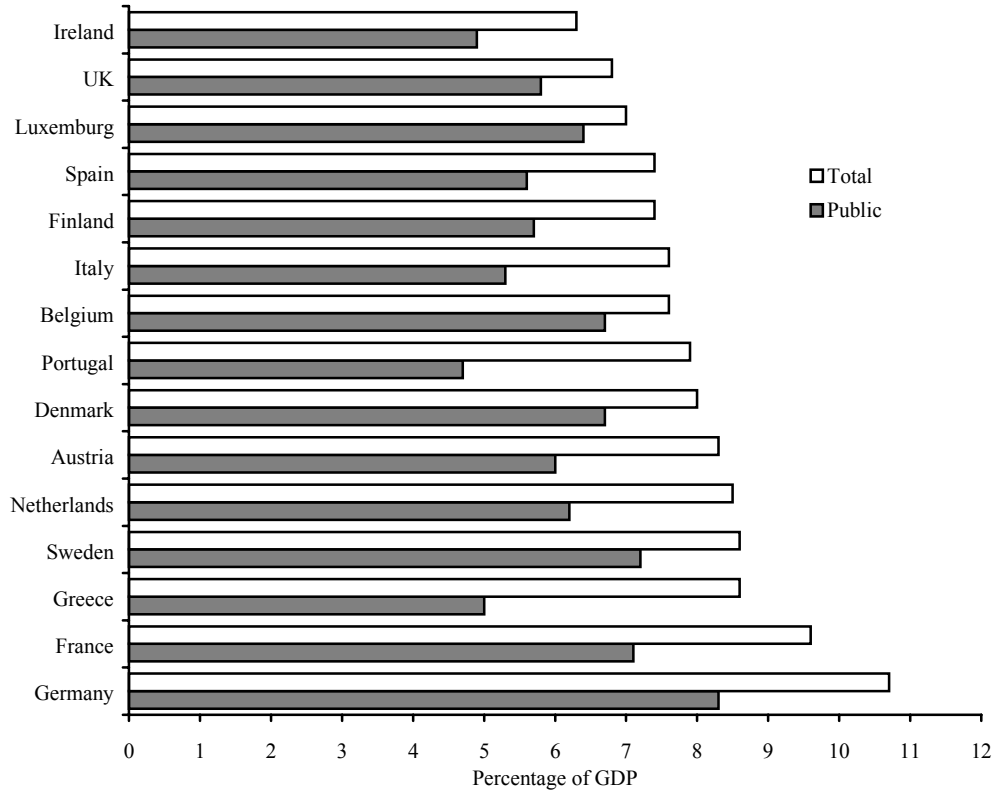
International comparisons

This country devotes a relatively low share of its resources to health by international standards. Figure 4.8 shows OECD estimates of the share of national income taken by public health spending and total health spending (i.e. the public and private sectors combined) in the European Union countries. These figures are for spending in 1997, which is the latest year for which data are available, and are calculated on a slightly different basis from the public

[8] *BBC Breakfast with Frost*, 16 January 2000, repeated in *Hansard*, 19 January 2000, column 837.

spending figures quoted above. At 6.8%, the UK's healthcare sector as a whole takes the second smallest share of GDP of all the EU countries, with only Ireland devoting a smaller share of its resources to healthcare. Germany and France have the largest healthcare sectors of the EU countries, taking up 10.7% and 9.6% of their GDP respectively. Looking elsewhere, the US is an even bigger health spender, with almost 14% of its GDP going to healthcare.

Figure 4.8. Public and total health expenditure in EU countries, as a percentage of GDP, 1997



Source: Copyright OECD Health Data 99.

Over the EU as a whole, the average size of the healthcare sector is 8% of GDP if the share of health spending to GDP in each country is given equal weight. This is a less meaningful average than one that has been weighted by the size of each country's GDP, so that large countries such as Germany, France and the UK account for a greater share in calculating the average than small countries such as Austria, Finland and Luxemburg. On a weighted basis, average EU health spending is 8.7% of GDP, higher than the unweighted 8%.[9] This is because relatively big health spenders such as France and Germany are given more weight in the calculations.

[9] The weighted average uses the average daily exchange rate for 1997 as calculated by the International Monetary Fund. An alternative methodology using Eurostat purchasing power parities would give average EU spending of 8.6% rather than 8.7%; see Kings Fund Press Release, 19 January 2000.

In the wake of the Prime Minister's recent interview on the NHS,[10] there has been much speculation as to the amount of extra spending that would be required to bring health spending in the UK to the average seen across the EU. The figures available above suggest that, in 1997, there was a gap of 1.2 percentage points of GDP between total UK spending on health and the unweighted EU average. The gap between the UK and the more meaningful weighted average was 1.9 percentage points. The amount of resources that would be required to fill this gap over the next five years depends on a number of factors, including how the gap has evolved between 1997 and today, and how the UK and other European economies will move in the future. It also depends on how much the private sector in healthcare in this country grows over the next five years.

Making a number of assumptions about these factors, Table 4.3 shows the real increases that the next CSR would have to allocate to health in order for UK spending to reach average EU levels in 2004–05. The first row shows these spending calculations if it is assumed that the EU average has remained the same since the latest available figures in 1997, whilst the UK's health spending has been growing. In this case, the UK has already gone some way towards closing the gap, since public health spending has risen as a proportion of GDP in this country over the last two years, and is planned to continue to rise over the next two years covered by the first CSR. Allowing for the spending allocation for 2001–02 to be reassessed in the next CSR, NHS spending would have to grow by 5.7% in real terms each year from April 2001 to March 2005 to close the gap of 1.2% of GDP by the end of the period (i.e. using the unweighted measure of average EU health spending). For UK spending to reach the weighted EU average, health spending would have to grow by 8.5% in real terms in each year covered by the next CSR.

Table 4.3. Real annual percentage increases in NHS spending required for total UK health spending as a percentage of GDP to match the 'EU average' in 2004–05

Path of gap since 1997	Average targeted	
	Unweighted EU average	Weighted EU average
Gap has been closing since 1997	5.7	8.5
Gap same in 1999–00 as in 1997	6.7	9.4

Note: These calculations assume that the UK private sector grows in line with GDP over this period, and that GDP growth will be 2¼% a year from 1999–00 onwards. Higher levels of GDP growth would lead to larger real increases in spending being required. It is also assumed that, regardless of its path since 1997 to today, average EU healthcare spending will remain the same from this year until 2004–05.
Source: IFS calculations.

The second row of Table 4.3 covers the scenario where the gap between the UK's health spending and the EU average is the same in 1999–00 as it was in 1997. In this case, the amount of real resources needed to go to health would be considerably more. Despite the growth in health spending planned in the first CSR, the next CSR would have to deliver 6.7% real growth each year to

[10] *BBC Breakfast with Frost*, op. cit.

the NHS in order to bring the UK up to the unweighted EU average, or 9.4% a year for it to match the weighted average.

In either of these scenarios, the level of funding growth required would be considerably above that seen in the first CSR, which was already high by historical standards. For these calculations, it has been assumed that the private healthcare sector grows in line with GDP throughout the period. Faster growth in the private health sector in this country, or a fall in the EU health spending ratio, would make the target easier to achieve. Of course, increases in NHS funding of this magnitude would, assuming that they led to individuals being more satisfied with the standard of service provided, make continued growth in the size of the private sector less likely to occur.

The gap between the UK's health spending and the EU average is smaller when considering public sector health spending alone, disregarding the role of the private sector. The gap between the UK's public spending on health and the weighted EU average was just 0.9% of GDP in 1997. On the assumption that this gap has been closing since 1997 and will continue to close over the next year of the current spending plans, the second CSR would need to deliver real spending growth of 4.7% a year in order for the UK to match the EU average by 2004–05. This is exactly the same average health spending growth as set out in the first CSR.

Despite the political focus on how health spending in the UK compares with the rest of the European Union, it should be noted that a lower share of GDP spent on health compared with other countries should not necessarily be taken to imply a lower, or in some way less adequate, standard of healthcare. Cross-country comparisons are complicated because technologies of production differ between countries, with some producing the same outputs more efficiently than others.[11] Countries also face different patterns of morbidity and mortality due to a large number of factors, including the age profile of the population, living standards[12] and other possible influences such as the climate, dietary habits and genetic factors.

Differences in health spending levels may also simply reflect different preferences between countries: each population makes a choice, either through the action of individuals or collectively through the political process, of how much it wishes to spend on healthcare compared with other goods and services, and cross-country differences may be a reflection of this. Different preferences between countries may also manifest themselves in more cultural differences, such as the frequency with which different populations visit the doctor or the level of services expected during a hospital stay.

If the second CSR does announce real increases in NHS spending of a similar magnitude to those of the first CSR, they would not be sufficient to increase

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[11] Such an argument is often made about the UK, which achieves better infant mortality and life expectancy results than the US, although these comparisons are often fraught with difficulties too. See, for example, O. Morgan, *A Cue for Change: Global Comparisons in Health Care*, Social Market Foundation Paper no. 41, 1999.

[12] There is also a wide debate over the extent to which the degree of inequality in living standards affects health outcomes; for example, see R. Wilkinson, *Unhealthy Societies: The Afflictions of Inequality*, Routledge, London, 1996.

total UK spending on healthcare to the EU average, in the absence of large growth in the private sector or cuts elsewhere in Europe. Nevertheless, increases in NHS spending of the magnitude in the first CSR would still represent six years of funding increases that were substantially higher than the average increase over the history of the NHS.

Future spending pressures

There has been growing concern in recent years that, despite relatively generous funding increases seen in the NHS over recent decades (and those set to continue over the remainder of the CSR), over the longer term the combination of an ageing population, expensive new technologies and rising incomes will mean that the NHS will cease to be able to perform its role as comprehensive provider of the quality healthcare the public expects. Both the last government and the current one have been at pains to suggest that such fears are exaggerated.[13] Each of these areas is examined in turn.

Demographics

Much of the policy debate surrounding the future prospects for pensions, long-term care and healthcare has focused on the financial implications of an ageing population. The number of people over 65 is expected to grow from about 9 million today to over 14 million by the year 2050. The composition of this elderly population is also projected to change, with those aged over 85 expected to make up about one in five of the pensioner population by 2050, compared with about 1 in 9 today.[14]

Typical healthcare needs vary enormously across the life cycle, but the elderly are particularly expensive. Figure 4.9 shows how average spending per head on hospital treatments varies by age-group of the population. Births are costly; through much of childhood and adult life, average costs are relatively low; but they rise sharply above the age of 65 and in each age-group thereafter.

While it is clear that there will be some future pressure on health spending as a result of growth in the elderly population, it is important not to overstate costs. There is an important distinction to be drawn between the ageing of the population expected because of increases in life expectancy (mostly reflected in the greater numbers of over-85s in the pensioner population) and that which is a result of previous high birth rates feeding through across the decades.

Although more research is required on this in the UK context, there is some evidence to suggest that the projected growth in the older population due to increases in life expectancy is not an issue of serious concern for future health spending. This is because it is not the costs of old age *per se* but the costs of healthcare in the last six months to a year of life that are particularly high.[15]

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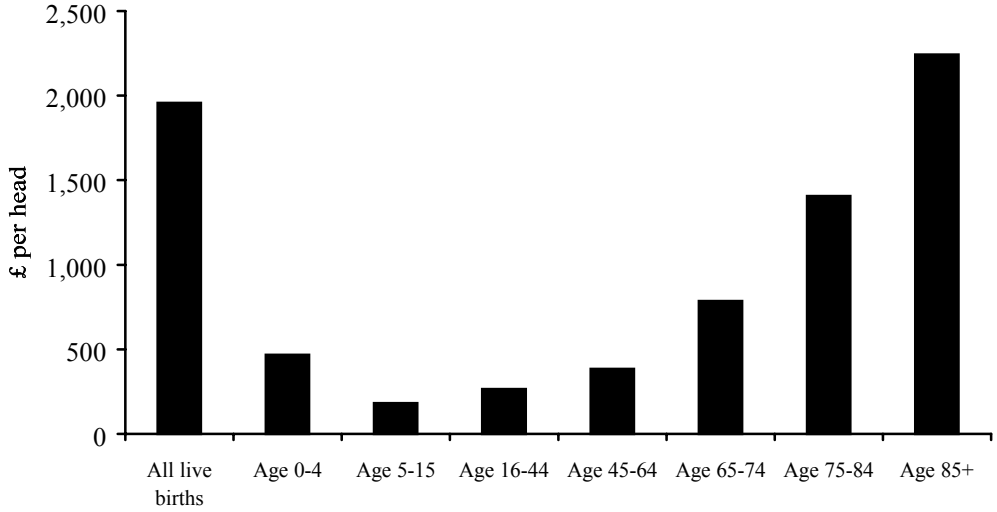
[13] See the government White Papers: *The National Health Service: A Service with Ambitions*, Cm. 3425, 1996, and *The New NHS, Modern Dependable*, Cm. 3807, 1997.

[14] Government Actuary's Quinquennial Review of the National Insurance Fund, July 1999, Appendix C.

[15] For example for an analysis of this issue in Switzerland, see P. Zweifel, S. Felder and M. Meiers, 'Ageing of population and health expenditure: a red herring?', *Health Economics*, vol. 8, pp. 485–96, 1999.

Unless there is a marked change in the patterns of morbidity amongst old people who live longer (i.e. people start to live longer, sicker lives), an older population caused by people living longer should not be of major concern for health policy in the future.

Figure 4.9. The cost of health services by age-group: hospital and community health services gross current expenditure per head, 1996–97



Note: Figures are estimated and provisional.
Source: Department of Health, *The Government's Expenditure Plans 1999–2000*, Cm. 4203.

Large demands will be placed on the health service when there are many more people in the final stages of life at any one time, as a result of previous 'baby-boomers' reaching old age. Birth rates were relatively low during most of the 1920s and 1930s, so the expected demographic pressures on the health service over the next 10 years are expected to be less than those dealt with over the last decade. The post-war baby-boomers born in the late 1940s will be reaching their retirement around 2010, placing additional demands on the system in the decades after that. Birth rates also bulged for a 15-year period between the mid-1950s and the early 1970s; the effects of this on the health system will be felt into the 2020s and beyond.

Technology

Another important factor in the future costs of the health service will be technological change. Again, the picture of how this will affect future health spending is not straightforward.

Many point to the role of technology in the development of expensive new treatments and drugs, which place additional costs on the NHS. The most well-publicised recent example was the introduction of Viagra onto the market as a treatment for male impotence. Fears that the costs to the NHS of prescribing this drug would escalate led the government initially to ban and eventually to restrict the prescription of this drug on the NHS. The recent establishment of the National Institute for Clinical Excellence (NICE) has been designed to take such decisions out of the political arena. Regardless of

how these decisions are made, it is clear that, as more new treatments become available, the pressures on the public purse will grow.

On the other hand the future cost of new treatments is likely to be offset by technological advances that make existing treatments cheaper to carry out or that replace them with cheaper or more effective alternatives.[16] Major cost savings have already been brought into the NHS by the development of new techniques — for example, those that allow day surgery for many procedures.

The cost of existing drug treatments also tends to fall over time, since patents on these drugs expire usually after 20 years, and the prescription costs of their generic equivalents are a small fraction of the costs of the original brands.

The overall picture of how new technology will affect future spending is therefore not clear.

Rising incomes

The combination of new treatments being introduced together with rising incomes does provide a powerful reason to expect future health spending demands to rise. Although low incomes and poor health are closely related,[17] there is reason to believe that, as society as a whole grows richer, it will tend to devote more resources to healthcare.

In the first instance, this is because the healthcare sector is a labour-intensive one. As much as two-thirds of hospital spending is taken up by wage costs. As the economy grows, the level of real wages in the economy will also tend to rise;[18] although public sector and private sector wages do not always move in tandem with one another, large discrepancies in public and private sector pay rates that are unrelated to productivity and skill differences are unlikely to persist over the longer term.[19] This means that an increasing level of funding will be required for the system to pay its wage costs and simply stand still.

Second, a growing economy will tend to mean a higher share of resources is allocated to health because of the very nature of healthcare itself. It is a superior good, namely one to which people choose to devote a higher proportion of their incomes as their incomes rise.

Even though a higher income may alter or reduce an individual's experience of ill health, it will also tend to raise that person's expectations regarding the level and quality of healthcare that they require; this is brought out clearly in the evidence below on private health insurance coverage in the UK, which shows that coverage rises sharply with income.

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[16] See, for example, D. Cutler, M. McClellan, J. Newhouse and D. Remler, 'Are medical prices declining? An analysis of heart attacks', *Quarterly Journal of Economics*, forthcoming.

[17] For example, see the Independent Inquiry into Inequalities in Health (Chairman: Sir Donald Acheson), Stationery Office, 1998.

[18] Although the rewards going to different sorts of workers may well vary — for a discussion of the experience of male workers in the UK, see A. Gosling, S. Machin and C. Meghir, 'What has happened to men's wages since the mid-1960s?', *Fiscal Studies*, vol. 15, no. 4, pp. 63–87, 1994.

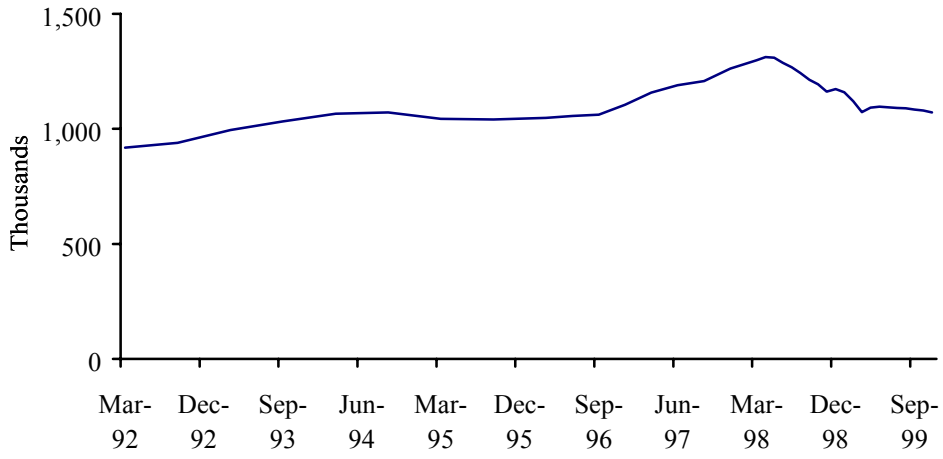
[19] See R. Disney, A. Goodman, A. Gosling and C. Trinder, *Public Pay in Britain in the 1990s*, Commentary no. 72, Institute for Fiscal Studies, London, 1998.

Indicators of service quality

In recognition of the fact that the public has expectations not only of the level of healthcare but also of the quality of the care received, the government has also focused on indicators of service quality, in particular hospital waiting-lists, as a major part of its health policy.

In its election manifesto, the government promised to cut NHS in-patient waiting-lists by 100,000 by the end of the parliament. The number of people waiting to be admitted to NHS hospitals in England (the government's preferred measure) actually rose by over 150,000 during the first year of the parliament — a much faster rate of growth than had been seen over the past decade, as shown in Figure 4.10. The signs are now that the target will be achieved. By November 1999, the number waiting to be admitted was 1.071 million, a drop of 87,000 since March 1997.[20]

Figure 4.10. Number of patients waiting to be admitted to NHS hospitals in England, 1992–99



Note: Hospital-based waiting-lists.
Source: *Hospital Waiting Lists and Waiting Times*, House of Commons Research Paper 99/60, 1999; Department of Health Press Releases 1999/0707, 1999/0524.

There has been much criticism levelled at the choice of this target as an indicator of service quality at all. It is not a good measure of the number of people waiting to be treated on the NHS, as it excludes people waiting for outpatient appointments following referral from their GP. Available evidence suggests that these numbers are growing.[21] Additionally, it may be waiting times that matter to the individual, not the number of people waiting; again, evidence suggests that waiting times have risen.[22] The number of people

[20] Department of Health Press Release 2000/0021, 'NHS waiting list figures 30th November 1999', 14 January 2000.

[21] The number of patients in England who had waited more than 13 weeks after referral from their GP before being seen by a hospital consultant on an outpatient basis rose by 136,000, from 320,000 to 456,000, between March 1997 and September 1999.

[22] The percentage of people on inpatient waiting-lists in England who have been waiting for more than one year has grown from 2.7% in March 1997 to 4.7% in November 1999.

waiting may also be a less relevant indicator of the work being carried out within the NHS. One measure of this is activity rates, which have been rising even while waiting-lists have been going up. Waiting-lists simply indicate that there is some form of rationing of treatment taking place, which is to be expected in a system where services are free at the point of use and the overall budget is set centrally.

The aggressive focus on this one target is also likely to have led to a distortion of clinical priorities within the health service — for example, between the priority given to treating inpatients rather than outpatients, and between more and less easily treatable conditions. These distortions are not likely to be justifiable on clinical grounds.

Perhaps in recognition of these points, there has been a clear shift in recent months in the government's own statements on waiting-lists; although the government had argued that reducing the size of the lists would in itself cut waiting times, there is now more of an emphasis on waiting times directly.[23] There has also been more emphasis placed upon performance targets for specific illnesses, in particular for coronary heart disease and stroke, cancer and mental health.

Private healthcare in the UK

Despite the fact that the NHS aims to offer universal healthcare, free at the point of use, the number of individuals using private alternatives is significant and has been growing over recent years.

In 1996, 6.2 million individuals possessed private medical insurance,[24] with around half being employer-provided. Further, use of private medical facilities is not restricted to those who are insured, as it is estimated that around 20% of patients in the private sector are not insured but pay for the treatment themselves.[25] Individuals with private health insurance are typically still reliant on the NHS for primary and emergency care, although private providers have recently moved further into the primary-care market by offering GP services in the private sector.

Use of private health services has increased greatly over the last 20 years, with the number of insured individuals more than doubling in that period from around 2.5 million in 1979 to over 6 million today. As a proportion of total health spending, spending by individuals on private medical services has increased from 8.8% in 1979–80 to 15% in 1995–96.[26] These figures underestimate total private health spending as they exclude many indirect items such as prescriptions.

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[23] For example, see Department of Health Press Release 1999/0696, 'Rise in outpatient waiting times slows as more patients are seen', 25 November 1999.

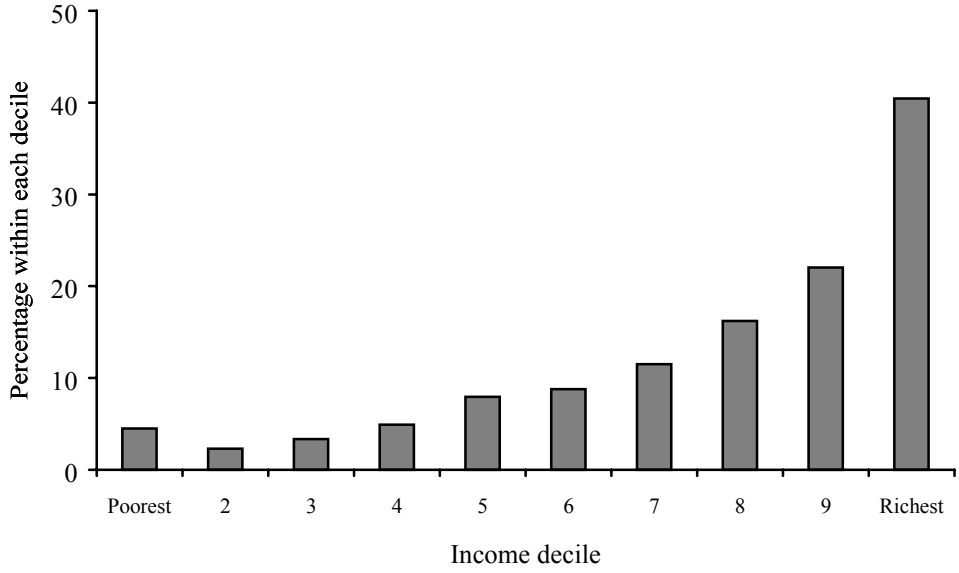
[24] Laing and Buisson, *Laing's Review of Private Health Care*, Laing and Buisson, London, 1996.

[25] Office of Fair Trading, *Health Insurance*, OFT, 1996.

[26] T. Burchardt, *Boundaries between Public and Private Welfare: A Typology and Map of Services*, CASE Paper CASE/2, Centre for the Analysis of Social Exclusion, London School of Economics, London, 1997.

The coverage of private health insurance is strongly related to income. Figure 4.11 shows the percentage of individuals with private medical insurance, divided into household income deciles. Overall, 12.1% of individuals have private medical insurance. Wealthier households have a much higher proportion of individuals with private medical insurance than poorer households. Thus 40% of people in the top income decile are privately insured, compared with under 5% of those in the bottom four deciles. Only the very bottom decile does not fit the pattern completely, but many individuals in that category are likely to have low income only temporarily.

Figure 4.11. Percentage of individuals with private medical insurance, by income decile



Note: Individuals are ranked on the basis of equivalised household income before housing costs. The bottom decile contains individuals whose income is the equivalent of a couple with combined income of up to £130 a week, while the top decile contains individuals whose income is the equivalent of a couple with over £530 a week.
Source: Family Resources Survey 1997–98.

The situation, then, is one of increasing use of private alternatives to the NHS, particularly among higher-income households. The causes and implications of this trend away from public medicine are clearly important from a public policy point of view. When considering why individuals might choose to buy health insurance, it is interesting that those with private medical insurance are more likely to be dissatisfied with the NHS than those without it.[27] Specifically, there is evidence that longer waiting-lists for NHS treatment are associated with greater purchase of private health insurance. This could be an indication that waiting-lists are a particular concern or alternatively that they are used as a barometer for NHS performance.[28] The fact that the public tend

[27] M. Calnan, S. Cant and J. Gabe, *Going Private: Why People Pay for their Health Care*, Oxford University Press, Oxford, 1996.

[28] T. Besley, J. Hall and I. Preston, *Private Health Insurance and the State of the NHS*, Commentary no. 52, Institute for Fiscal Studies, London, 1996.

to highlight waiting-lists is perhaps not surprising, given the degree to which the media and political parties have focused on them.

The implications for the NHS of increasing use of private medical facilities could work in either direction. Increased use of such facilities eases the pressure on the NHS by freeing resources that would otherwise have been spent on those who have opted out. But those with private medical insurance are less likely to support increases in public health spending, even after their other characteristics are taken into account.[29] This finding suggests that continued growth in private sector healthcare would have implications for the level of support for an NHS that is provided universally free at the point of use. From a policy perspective, it is important to be aware that substantial increases in NHS funding, which brought about a significant improvement in the performance of the NHS, could lead to some individuals with private health insurance increasing their demand for NHS services.

The future of the NHS

The NHS has grown enormously since its inception, but despite the large funding increases year after year, it is constantly perceived to be a system in crisis, unable to keep pace with the demands placed on it.

In part, such a perception is unavoidable. As pointed out by Nicholas Timmins in his history of the welfare state, 'virtually every day since 1948 the NHS has been said to be in crisis'.[30] The recent news stories surrounding how the NHS has coped with the large 'flu outbreak are one more example.

There is no easy solution to the problem of rationing within the NHS. As long as the NHS remains predominately free at the point of use, rationing will occur through individuals waiting for treatment. The alternative is to increase the use of charges, or private provision, which is simply rationing by an individual's ability and willingness to pay. While the NHS model has tended to lead to large waiting-lists, it can be argued that the alternative is less desirable in terms of equity and also, potentially, efficiency.[31]

Is the problem of financing the NHS a growing one? The debate will continue as to whether the spending pressures highlighted above are indeed the time bomb they sometimes appear to be. Certainly, demographic pressures are likely to ease a little for the next decade before picking up again, and technological advances might bring cost savings as well as new expenses. What does seem clear is that the problem is becoming less tolerated by the

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[29] This is found by L. Brook, J. Hall and I. Preston, 'What drives support for higher public spending?', Institute for Fiscal Studies Working Paper no. W97/16, 1997. There is also evidence that actual use of the NHS is likely to reduce support for the principles of the NHS. See T. Burchardt and C. Propper, 'Does the UK have a private welfare class?', *Journal of Social Policy*, vol. 28, 1999, for more details.

[30] N. Timmins, *The Five Giants: A Biography of the Welfare State*, Harper Collins, London, 1995.

[31] There is a wide literature on the economic arguments for government intervention in the healthcare market. For a good general discussion, see N. Barr, *The Economics of the Welfare State*, third edition, Oxford University Press, Oxford, 1998.

public as time goes on. This is apparent both from opinions expressed in attitudinal surveys, and from the rapid growth of the private sector, particularly amongst those with higher incomes.

What can be done to accommodate such pressures within the NHS? One obvious response is for the government to spend more out of increases in general taxation. Recent government policy has attempted to provide more public health spending within these constraints — for example, by hypothecation of tax revenues (see Chapter 7, which discusses the earmarking of the proceeds of any rises in tobacco tax to health), by prioritising the NHS over other government budgets and by deferring public expenditure commitments through PFI-financed hospital-building.

More private money has also been directed into the NHS through various policies: for example, lottery-financed spending of £116 million will be channelled into cancer services in the NHS over the next three years. Insurance companies are now required to pay for road traffic accident injuries, which is expected to raise over £100 million each year. Ultimately, the bill for this is paid by motorists through higher insurance premiums.

Although these all represent incremental means of boosting NHS funds without recourse to increases to general taxation, the money involved is very small compared with the size of the overall health budget, and the scope for paying for major new health programmes in this way will be limited. Similarly, internal market reforms and other performance targets may release some resources, but they will not represent a dramatic change of the magnitude needed if the NHS is to keep pace with the demands placed upon it.

In the absence of any remedial action, the result is likely to be further rationing within the NHS, either on the basis of clinical need, by more user charges, or by queue. Alan Milburn recently became the first Secretary of State for Health to publicly use the term 'rationing' in the context of healthcare,[32] and it is increasingly recognised by the public that rationing does take place in the health service. An ICM survey conducted for the Social Market Foundation reported that 67% of those interviewed expect to see rationing either stay the same or increase over the next 10 years.[33] This is likely to lead to a further growth of the private sector, with those who could afford to buy more healthcare for themselves choosing to do so. One possible scenario is that of an NHS continuing to provide a basic core of treatments, with the private sector providing all the rest.

In recognition of this prospect, there appears to be a gathering momentum for a radical rethink of the way that the NHS is financed. Public discussion of the option of introducing more user charges, for example for GP visits, has given

[32] Speech to the National Institute for Clinical Excellence, 8 December 1999, as quoted in *The Guardian*, 'Minister warns of drug bans as NHS priorities change', 9 December 1999.

[33] See S. Pollard and K. Raymond, *A Question of Choice*, Social Market Foundation Paper no. 43, 1999.

way to calls for the harnessing of private insurance payments to NHS provision of services.[34]

Recent years have seen the private sector playing an increasing role in both the financing and the provision of healthcare in the UK. This has been through an increase in user charges, private health insurance and the direct purchasing of private healthcare. Each of these could be increased further in future and it is clear that they all have attractions. It is important to consider the impact they are likely to have on the efficient allocation of resources and also the distributional ends that society desires. It is widely recognised that the private market for healthcare is fraught with market failures which the NHS goes some way to correct. The NHS is also generally considered to deliver a more equitable distribution of healthcare than an unfettered private market, operating solely on the basis of ability to pay, could possibly achieve.

But the NHS has not been without its problems and it is also fairly unusual — the majority of other countries have used different models for the delivery of healthcare. Neither of these facts implies that other systems would necessarily have dealt with the changes over the last 50 years any better than the NHS or that they are better suited to the challenges that lie ahead. Other countries may operate different models from that of the NHS purely because they have different distributional objectives. The public appears to be prepared to spend even more on healthcare. The main choice for policymakers therefore is how much of that will be spent on the NHS through taxation and how much will be spent privately both on the NHS and on private institutions. The experience of the last 20 years suggests that, in the absence of real increases in spending greater than that seen over this parliament, the future will see further growth in private sector health provision. Whether or not this is desirable is one of the most important questions that the second Comprehensive Spending Review should address.

4.3 Education spending

The 1997 Labour manifesto claimed that ‘education will be our number one priority, and we will increase the share of national income spent on education over the course of this parliament as we decrease it on the bills of economic and social failure’. The first section of this overview looks at whether the government is likely to meet its manifesto commitment. It discusses recent trends in overall education spending and how that spending is divided up, as well as looking at trends in measures of school quality. The next section examines the economics of education spending, discussing the rationale for government involvement in the education system and the returns to education. The final sections focus on the higher education sector more closely, and also other interesting recent areas of education policy and future directions the education debate might take.

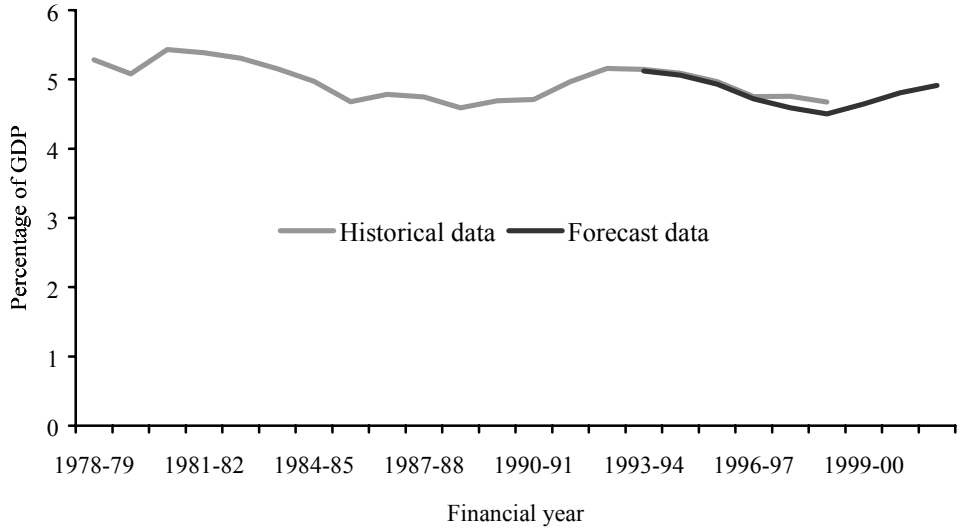
[34] For example, see ‘The health deficit’, *The Sunday Times*, 19 December 1999; ‘The NHS in intensive care’, *The Evening Standard*, 6 January 2000.

Recent trends in education spending

Overall spending

Overall spending on education in the UK as a share of national income has fluctuated between 4.5% and 5.4% since 1978–79. This is shown in Figure 4.12, which gives the proportion of GDP spent on education by the public sector over the last 20 years. While education spending accounted for 5.3% of GDP in 1978–79, by 1996–97 it had fallen to 4.7%. After two years of the current government, it was slightly lower, at just under 4.6%.

Figure 4.12. Education spending as a percentage of GDP, 1978–79 to 2001–02



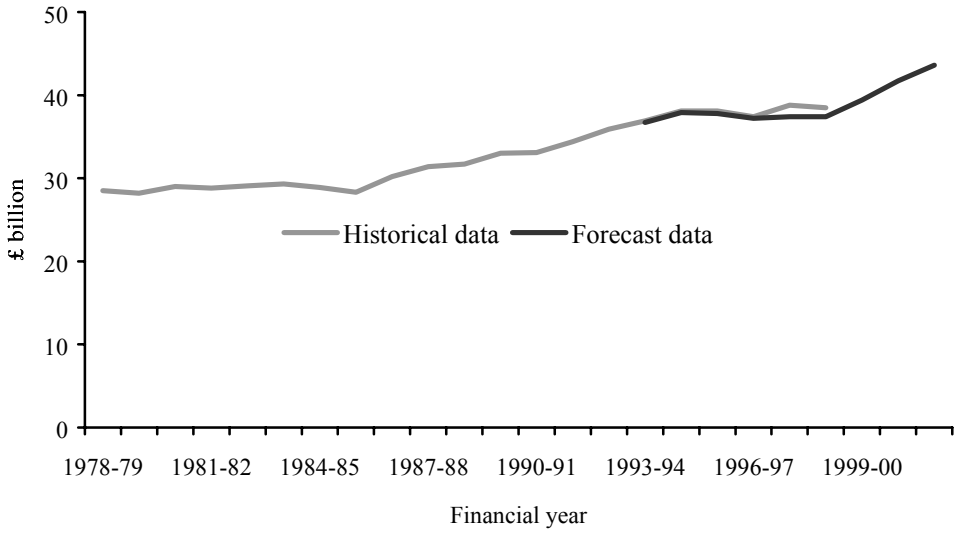
Note: Both the historical data and the forecast data are based on total education spending in the UK. The historical data refer to *Public Expenditure Statistical Analyses* (various years), constructed in order to be consistent with previously published figures derived from spending by function. The forecast data refer to *Public Expenditure Statistical Analyses 1999–00*, Table 1.2, constructed from government plans for education spending.
Source: HM Treasury, *Public Expenditure Statistical Analyses,* various years.

As Figure 4.12 shows, education spending rose as a proportion of GDP in the recessions of 1979–82 and the early 1990s and fell during the booms of 1982–89 and post-1992. Although there have been changes in real spending on education during those periods, this pattern largely reflects movements in GDP over the business cycle. From 1985 onwards, there was an increase in the level of real resources spent on education, as shown in Figure 4.13. This trend continued into the mid-1990s, after which spending remained constant in real terms for several years. The government's forecasts for education spending over the next two years imply an increase in spending, both in real terms and as a share of GDP.

The first two years of the new Labour government have also been years of sustained economic growth, so that a substantial increase in the level of real resources spent on education is necessary in order to meet the pledge to increase the share of national income spent on education. If the forecasts for

spending increases in future years are realised, the percentage of GDP spent on education at the end of this parliament should reach 4.9%, which is higher than the 4.7% spent at the start.

Figure 4.13. Government spending on education, 1997–98 prices, 1978–79 to 2001–02



Note: Both the historical data and the forecast data are based on total education spending in the UK. The historical data refer to *Public Expenditure Statistical Analyses* (various years), constructed in order to be consistent with previously published figures derived from spending by function. The forecast data refer to *Public Expenditure Statistical Analyses 1999–00*, Table 1.2, constructed from government plans for education spending.
Source: HM Treasury, *Public Expenditure Statistical Analyses,* various years.

Table 4.4. Real increases in education spending

	Annualised average real increase (%)
CSR period: *April 1999 to March 2002*	5.2
First two years of current government: *April 1997 to March 1999*	0.3
This parliament: *April 1997 to March 2002*	3.2
Last parliament: *April 1992 to March 1997*	1.6
Conservative years: *April 1979 to March 1997*	1.5

Sources: HM Treasury*, Public Expenditure Statistical Analyses*, various years from 1994–95 to 1999–00; HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999.

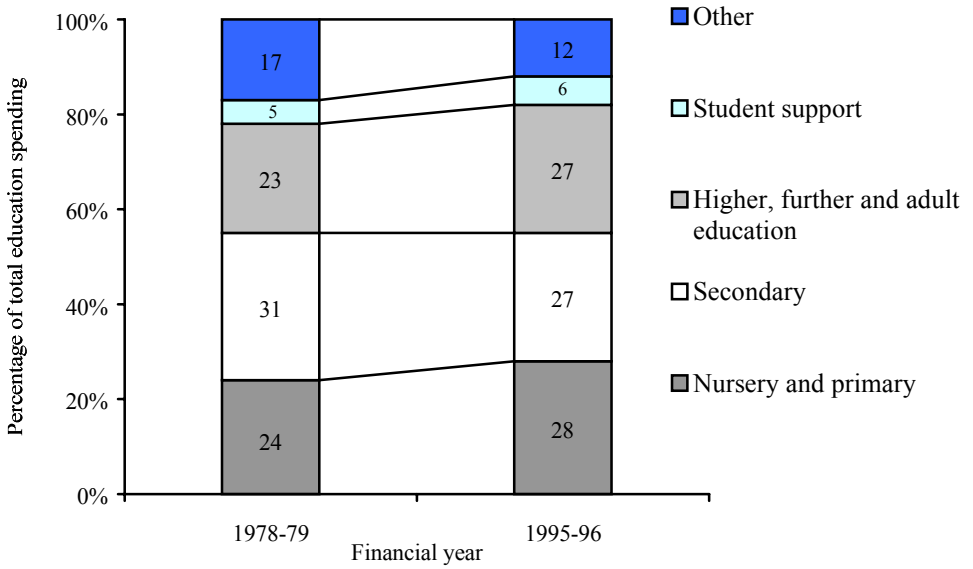
How does the growth in education spending achieved by the new government compare with that of its predecessors? Table 4.4 shows the average rate of change in real education spending for the current government and the previous Conservative governments. By 2002, Labour will have achieved an annualised average real increase in education spending of 3.2%, double that of the last administration and more than twice that of the Conservatives over their entire term of office from 1979 to 1997. However, this large increase will be driven

by the spending increases following the Comprehensive Spending Review in the period 1999–2002 — the first two years of the current government were marked by a very low real increase of 0.3% a year on average. This failure to increase education spending for the first two years of the parliament means that average spending as a share of national income over this parliament, at around 4.7% of GDP, will be lower than that under the 1992–97 Conservative administration, which averaged about 5.0% of GDP.

The composition of education spending

Figure 4.14 shows how overall education spending is allocated between different sectors for 1978–79 and 1995–96. There has been an increase in the share of education spending going to primary and nursery schools, from 24% in 1978–79 to 28% in 1995–96, and a corresponding decrease in the share of resources spent on secondary schools, which fell from 31% to 27%. Spending on post-compulsory education has increased, rising from 23% to 27% over the period. There has been surprisingly little change in the share of education spending going to student support, despite large increases in the number of students in higher education in this period, as will be discussed later in this section.

Figure 4.14. Education spending by sector, 1978–79 and 1995–96



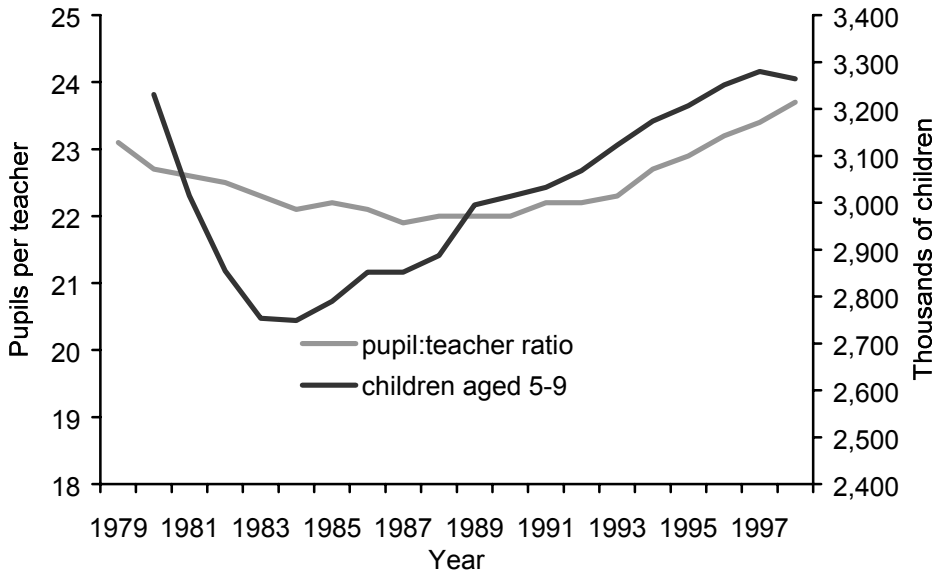
Note: 'Other' includes special schools, school welfare, meals and milk, youth service and physical training, transport of pupils, continuing education and miscellaneous.
Source: Office for National Statistics, *Annual Abstract of Statistics*, 1991 and 1999.

The biggest change in the make-up of education spending has been the drop in spending in other areas, which fell from 17% of all education spending in 1978–79 to 12% in 1995–96. This decrease is largely due to a change in the provision of free school meals, which is now entirely at the discretion of individual local education authorities and therefore no longer measured as part of education spending.

Changes in educational inputs

School quality has come to the forefront of policy debate in recent years due to widespread concern about deteriorating school standards, which has led governments to introduce a number of measures aimed at improving quality, such as assessment tests and league tables. School quality is difficult to measure with any single statistic; one of the most readily available statistics is the ratio of pupils to teachers. Figure 4.15 shows the pupil:teacher ratio in maintained primary schools in England for the years 1979–98 and the number of children aged 5–9. There has been a steady decline in the number of pupils per teacher, from 23 in 1979 to 22 in 1987. This trend reversed, and the number of pupils per teacher reached 23.5 by 1998.

Figure 4.15. Pupil:teacher ratio and number of children aged 5–9 in England, 1979–98



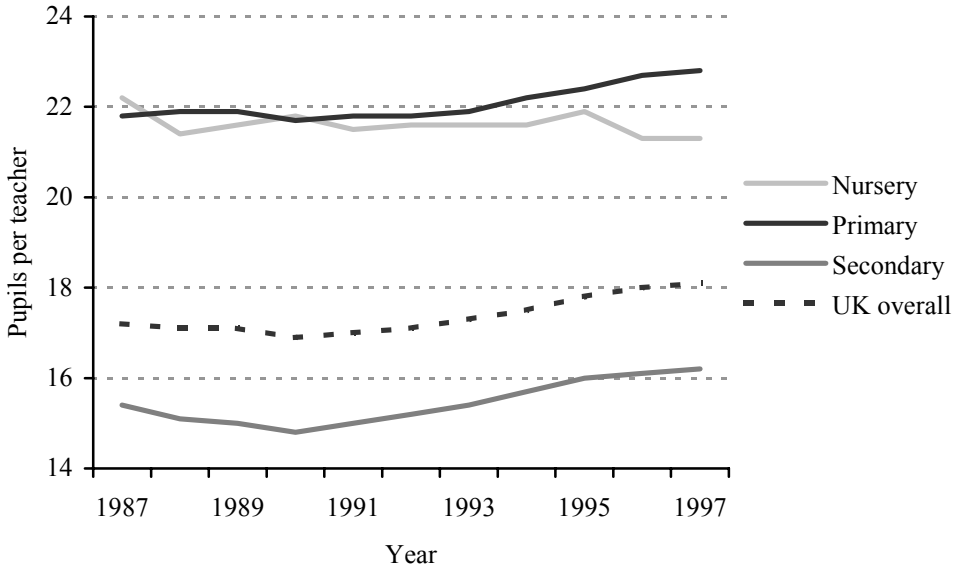
Sources: *Hansard*, written answers 26-3-1999; Government Statistical Service, *Monthly Digest of Statistics*, issues from 1982–99.

The ratio of pupils to teachers is affected by, amongst other things, levels of government spending on education and changes in the numbers of school-age children in the population. Despite rising numbers of children aged 5–9 from 1984 to 1991, there was no significant increase in the pupil:teacher ratio in maintained primary schools. During these years, real spending on education began to rise and the share of GDP spent on education remained roughly stable, despite rising GDP.

The pupil:teacher ratio varies dramatically according to the stage of schooling looked at — secondary schools tend to have lower numbers of pupils per teacher than nursery and primary schools. Figure 4.16 shows this split by type of school for the whole of the UK from 1987 to 1997. As with English primary schools, the pupil:teacher ratio has increased since 1980, except in nursery schools. While there were an average of 17.2 pupils to every teacher in 1987, falling to 16.9 in 1990, by 1997 this had risen to 18.1. Since the mid-1980s,

there have been increases in the pupil:teacher ratio for most groups of pupils, and these may be at least partially responsible for the perception that school quality has been declining. However, whether this slight increase is a conclusive sign of deterioration in school standards is debatable. Much of the recent empirical evidence suggests that the impact of 'headline' measures of school quality, such as the pupil:teacher ratio, on educational attainment and wages is small and often statistically insignificant.[35]

Figure 4.16. Pupils per teacher in the UK, 1987–97



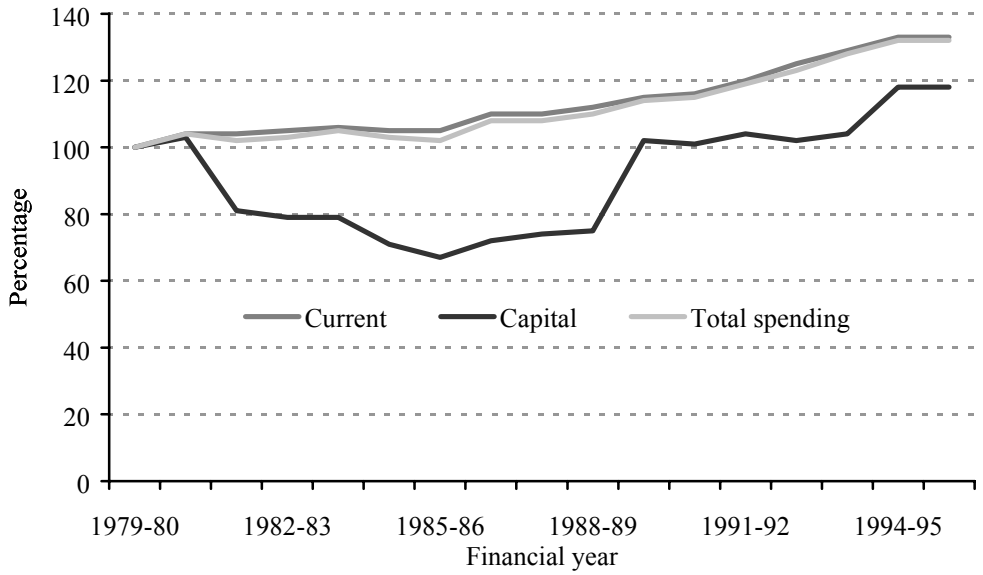
Source: Office for National Statistics, *Annual Abstract of Statistics 1999*.

Capital and current spending

Total spending on education is made up of capital and current spending. Capital spending is spending on infrastructure (such as school buildings and equipment), whilst current spending covers day-to-day running costs such as teachers' salaries. Figure 4.17 shows how current, capital and total real spending on education have changed by comparison with their 1979 levels. Current spending makes up over 90% of total spending on education, and so movements in total spending largely reflect the growth of current spending over the period. Current spending on education was over 30% higher than its 1979 level by 1995–96. Capital spending fell by around 30% between 1980–81 and 1985–86, before increasing again to return to its 1979 level in 1989–90. Since then, movements in capital spending have tracked current spending more closely.

[35] L. Dearden, J. Ferri and C. Meghir, 'The effect of school quality on educational attainment and ages', Institute for Fiscal Studies Working Paper no. W98/3, 1998; E. Hanushek, S. Rivkin and L. Taylor (1996), 'Aggregation and the estimated effects of school resources', *Review of Economics and Statistics*, vol. 78, pp. 611–27, 1996.

Figure 4.17. Current and capital education spending in real terms, 1979=100



Note: The figures for total spending do not include VAT refunds to local authorities after 1987–88. There is a break in the two series between 1986–87 and 1987–88.
Sources: Office for National Statistics, *Annual Abstract of Statistics*, 1991 and 1999; deflators from the UK National Accounts 1999.

There have been changes in the last 20 years in the proportion of GDP spent on education, in the composition of spending and in the pupil:teacher ratio. The next section places these figures within an economic framework, examining what the benefits of education are, and how government intervention helps to realise those benefits. We then go on to discuss recent government policies in higher education and other areas in the light of this framework.

The economics of state education

The government has committed itself to spending more on education. This section briefly examines the reasons why governments choose to provide education rather than leaving it to the private sector, and discusses what the benefits of state provision, both to the individual and to society as a whole, might be.

Most economists agree that individual decisions to undertake education are best analysed within a 'human capital' framework, which treats education primarily as an investment decision conferring skills on the person being educated.[36] In the human capital approach, people undertake education now in order to reap the benefits later — in the same way that someone might invest

[36] It should be noted that there are alternative theories of the role of education in the literature; in particular, the 'screening' or 'signalling' hypothesis argues that education is used mainly as a sorting device so that employers can identify the ability of potential employees, rather than increasing the skills of those being educated directly.

money now in order to earn a return on that investment in a future period. The 'return' to the educational investment can take many forms and may not necessarily be financial. Broadly speaking, these returns fall into two groups: private returns and social returns.

The private returns to education

Private returns to education are those that accrue to the individual undertaking the education. The most easily measurable form of return is the financial return — increased wages and a better chance of employment. There is a large volume of literature on the returns to education that suggests that the financial pay-offs are significant. For example, a recent review of the literature suggests that each extra year of schooling undertaken by someone in the UK and other developed economies increases their hourly wage rate by an average of between 5 and 10%.[37] There may also be private returns to education that are difficult to measure financially, such as the chance to do more interesting work, work in a better environment, speak a foreign language or play a musical instrument.

The social returns to education

It is possible that social returns to education also exist. These might take several forms, and all rest on some form of externality. An externality arises when the costs or benefits of a transaction fall on people other than the buyer and seller. In the case of education, the transaction is an investment in human capital. An externality to education would arise if there were benefits to people other than those actually being educated. Some examples of social returns to education are:

- *Innovation and technological spillovers*: a firm innovating and producing new technology can provide a potential spillover to the rest of the economy, because other firms can exploit the new invention without having to re-invent it, provided they have a suitably well-educated work-force to duplicate that knowledge. Highly educated individuals might be more likely to generate innovations.
- *Team-working externalities*: in many firms and plants, labour in the production process is organised into teams. In a team, the performance of one member of the team is likely to affect the others — particularly in the case of a manager or supervisor. An educated team member might pass on knowledge to other members of the team.
- *Health*: the link between some types of education and better health may have several aspects, including better nutrition and fitness, awareness of diseases and how they are transmitted, safety on roads and at work, and so on. Many of these benefits will have social spillovers (e.g. minimising the risk of transmission of contagious diseases).
- *Social cohesion*: many basic attributes that most or all citizens need to possess in a modern democratic society in order for that society to function

[37] R. Blundell, L. Dearden, C. Meghir and B. Sianesi, 'Human capital investment: the returns from education and training to the individual, the firm and the economy', *Fiscal Studies*, vol. 20, pp. 1–23, 1999.

effectively are likely to be acquired through education. These include basic numeracy and literacy, as well as the ability to evaluate competing options rationally and make informed choices.

In theory, there are a number of possible types of social return, but whether these are important in practice is another question. Attempts to measure whether social returns exist, and, if so, how large they are, have so far failed to provide a firm consensus. This is largely because the mechanisms by which social returns operate, if they operate, are difficult or impossible to identify. Research into this question is often forced to rely on indirect techniques, such as measuring the private returns of education, subtracting this from the overall macroeconomic growth of the economy and taking the difference to be the 'social return'.[38] There is no firm consensus yet on whether social returns exist, let alone how large they are, and there is much work still to do in this area.

Explaining government intervention in education

The government intervenes in all aspects of the market for education: the majority of full-time education for children up to the age of 18 is financed and provided by the state, whilst higher education is also mainly provided by the public sector. If the social returns discussed in the last section exist, they provide some rationale for government funding for education, to correct for the underprovision that would occur if education funding were entirely determined by the public sector. There are a number of other reasons why, in the absence of government intervention, the level of investment in education might be too low. These include:

- *lack of resources in poor households,* making it difficult or impossible to finance children's education out of current income;
- *borrowing constraints,* where financial institutions are unwilling to lend money on the basis of future earnings from investment in education;
- *lack of knowledge of the returns to investment in education,* either through lack of information about the returns to people of given levels of ability or through underestimating a child's ability;
- *aversion to risk,* where people require a high rate of return to be induced to undertake a risky investment, such as education;
- *paternalism,* where the government believes that not all children will receive the amount of education necessary for their best long-term interests, perhaps because of suboptimal decisions made by their parents.

The form of government intervention

There are many credible arguments for government involvement in the market for education, and clearly the government intervenes substantially. The current structure of the UK education system is that primary and secondary education

[38] For a review of recent empirical work on the social returns to education, see N. Gemmell, 'Externalities to higher education: a review of the new growth literature', Report 8 in National Committee of Inquiry into Higher Education, *Higher Education in the Learning Society* (the Dearing Report), HMSO, London, 1997.

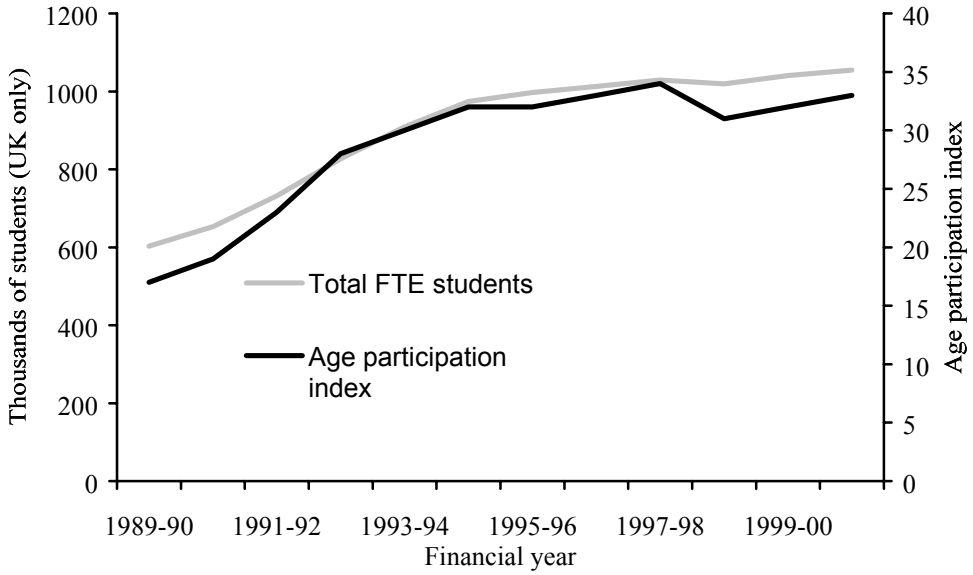
is provided and funded mainly through the public sector, which coexists with a small private sector (around 6–7% of pupils are educated in the private sector). Higher education is mainly provided by the state, whilst funding is shared between the state (which pays part of the tuition fees for domestic undergraduates) and the student or the student's parents (who pay maintenance costs and some of the tuition fees).

Government funding of education does not necessarily imply government provision of education, and vice versa. For example, the Assisted Places Scheme (introduced by the Conservative government in the 1980s but abolished by the current government) gave financial assistance from the government to children from relatively poor families going to private schools. The present arrangements for higher education funding operate the other way round: higher education is financed privately in part, but is mostly provided by public sector institutions. The last decade has seen a variety of changes to the structure of education provision. The next sections discuss these changes in detail.

Higher education

Higher education is an area of the education system that has seen large changes in the last decade, particularly in the numbers of students in the system and the way it is funded. Below, we examine these changes by looking at the system as it stood prior to the introduction of student loans in 1990, the impact of the loans scheme and the implications of the most recent reforms to student finance, in 1998, which introduced tuition fees.

Figure 4.18. Participation in higher education, 1989–90 to 2000–01



Note: The age participation index is the number of home-domiciled entrants into higher education aged under 21, as a percentage of the average 18- to 19-year-old population of Great Britain. Figures for the years 1999–2001 are government projections.
Source: Department for Education and Employment, Departmental Reports, 1995 and 1999.

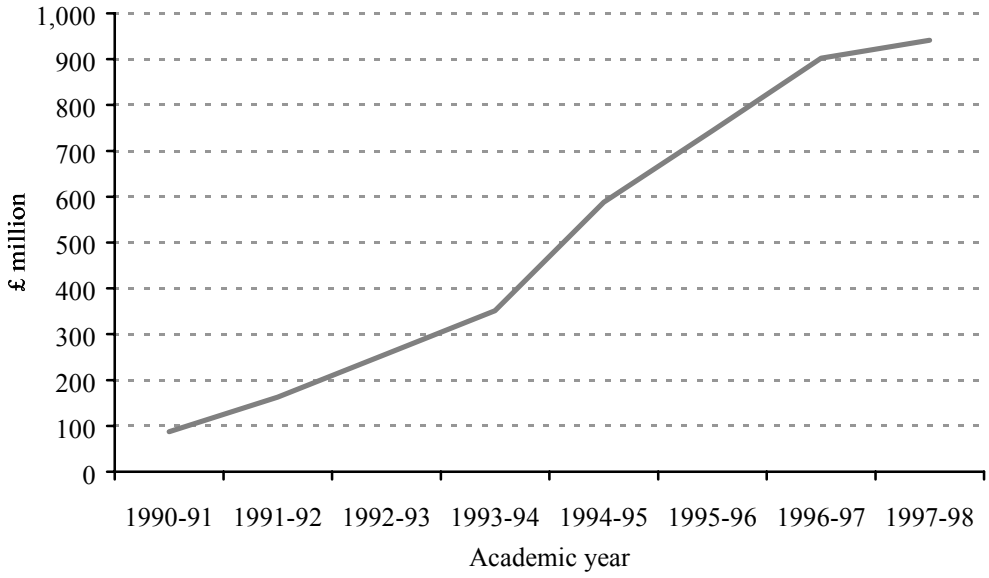
Higher education in the UK has undergone a dramatic expansion in the last 10 years. Figure 4.18 illustrates that the number of full-time-equivalent domestic undergraduate and postgraduate students rose from 600,000 in 1989–90 to 1 million in 1995–96. The proportion of 18- to 21-year-olds participating in higher education (the age participation index) also rose significantly, from 17% in 1989–90 to about one-third by 1997–98. This is an increase that began in the late 1980s; prior to this, the age participation index had been reasonably steady at around 12% for two decades. The number of mature students (the over-21 age-group) also increased over this period.

Whilst the numbers of students in higher education have increased over the last decade, public spending on higher education has increased at a slower rate. As a consequence, spending per student has dropped sharply. In 1989, public funding per student was about 80% of its 1976 level in real terms; by 1995, this had dropped to less than 60%.[39] This has led to concerns that the quality of higher education may be at risk. At the same time, there have been changes in the structure of government support for student living expenses and tuition costs.

The student loans scheme

Prior to the 1990s, domestic undergraduate students had their tuition fees paid in full. A maintenance grant was available to meet living costs; this was means-tested against parents' income, so if a student's parents' total income was above a certain level, the grant payment was reduced or eliminated and accompanied or replaced by a recommended parental contribution.

Figure 4.19. Value of student loans in 1997–98 prices



Sources: Department for Education and Employment, Departmental Reports, 1995, 1998 and 1999; HM Treasury, *Public Expenditure Statistical Analyses*, 1999–2000.

[39] National Committee of Inquiry into Higher Education, *Higher Education in the Learning Society* (the Dearing Report), HMSO, London, 1997.

Concern over the rising costs of student maintenance due to increased student numbers led the Conservative government to introduce a student loans scheme in the early 1990s. In 1990, the value of grants was frozen in nominal terms and loans were introduced, such that the sum of the grant plus the loan was equal to what the grant would have been if it had continued to be indexed for inflation. The initial policy intended that the amount of the loan would increase year on year until the maintenance package consisted of 50% grant and 50% loan, after which each element would be indexed. But in the mid-1990s, grants were reduced by an extra 30% over a three-year period, meaning that the total maintenance package eventually included significantly more loan than grant. The loans were paid back over a period of 60 or 84 months (depending on the length of the course) at a zero real interest rate.

The total amount of loans taken out each year has increased in real terms since the 1990–91 academic year, as shown in Figure 4.19. By 1997–98, the total volume of loans taken out was almost £1 billion.

The Dearing Report and the 1998 reforms

In 1997, a committee set up by the Conservative government to examine the future of higher education in the UK under the leadership of Sir Ron Dearing published its findings. These included some recommendations for how student finance should be reformed. Dearing's recommendations were:

- for maintenance costs, a combination of 50% means-tested grant and a 50% loan with rules for repayment depending upon income levels;
- for tuition fees, the introduction of a 25% student contribution funded by an additional loan.

The current government has since reformed student funding but favoured a different approach from Dearing. The current system, which came into full operation in the 1999–00 academic year, is:

- for maintenance costs, a 100% loan with repayment dependent on income;
- for tuition fees, a 25% student contribution which is not funded by a loan but is means-tested on parental income.

Provisional figures from the latest DfEE Annual Report suggest that the number of student enrolments for the academic year 1998–99 was slightly below that for 1997–98. However, the government's projections for 1999–00 and 2000–01 predict that the total number of home and overseas undergraduate and postgraduate full-time students in England will increase by around 40,000. Whether this increase does occur is likely to depend on whether the abolition of the maintenance grant and the introduction of tuition fees deter potential students from entering higher education and, if so, how large a deterrent they are.

Future issues in education policy

This section focuses on some of the most important elements of current government policy and discusses the direction in which future developments may be headed.

Lifelong learning and Individual Learning Accounts

One aspect of the government's education policy is its commitment to 'lifelong learning', described in the 1997 Labour election manifesto as the ability 'to learn throughout life, to retain employment through new and improved skills'. In April 1999, the government launched the Individual Learning Account (ILA) scheme, which provides accounts for individuals to use to save money for training courses. The government has pledged to provide a £150 contribution towards training and educational expenditure for the first million account holders.[40] The take-up of ILAs since April 1999 has been slow as they are only available through Training and Enterprise Councils (TECs) in selected areas. From April 2000, the scheme is being extended to all areas and it is expected that banks and other financial institutions will begin to offer ILAs.

The education maintenance allowance

The education maintenance allowance (EMA) is a benefit that is paid directly to 16- and 17-year-olds who stay on in full-time education after the minimum school-leaving age. Plans to introduce the EMA were a response to concern about low staying-on rates in Britain compared with other countries, particularly amongst poorer socio-economic groups, where children may face additional pressure to leave education and enter employment because families find it more difficult to support them if they continue in education. At present, the scheme is being piloted in 12 local authority areas to assess its effectiveness.

Sure Start

Sure Start is a new programme targeted at children of a very young age (between birth and three years old) from disadvantaged backgrounds. Its purpose is to improve the prospects for these children by providing better services and facilities for the children and their families, to improve social and emotional development, health and learning ability. It is hoped that this early intervention will improve school performance and employment prospects amongst the group concerned. Sure Start pilots began in Summer 1999, and the main programme, comprising 250 projects, will start in April 2000.

Attainment targets and league tables

One response to concern about low standards in schools in recent years was the introduction in 1995 of formal testing of English, mathematics and science. Children sit Standard Assessment Tests (SATs) at the ages of 7, 11 and 14. The results of these tests are publicly available and are used (along with GCSE, AS and A level, and vocational qualification results) to construct league tables of school performance and to set targets for future school performance. Parents are provided with further information about school performance by OFSTED inspections of each school at least every six years. Combined with the National Curriculum (introduced in the early 1990s and revised several times since then), the recent trend has been towards more

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[40] See Chapter 10 of L. Chennells and A. Dilnot (eds), *The IFS Green Budget: January 1999*, Commentary no. 76, Institute for Fiscal Studies, London, 1999.

formal systems of quality control and more uniformity of teaching practices in state schools, designed to raise standards.

Selection and school choice

The years of Conservative government between 1979 and 1997 saw an increase in the extent to which parents could attempt to select the school they wished their child to go to, rather than simply sending their child to the school that was the closest geographically. At the same time, there was an increase in the extent to which schools were allowed to select by ability, with some comprehensive schools being allowed to select up to 10% of their intake according to ability or aptitude in particular subjects. The current Labour government has ruled out further selection by ability, and reversed this trend to some extent by enabling ballots of local parents over whether the selective admission arrangements for grammar schools should continue, where they still exist.

Private sector administration of state education

The government's decision to hand over control of schools in the London Borough of Islington to a private firm (Cambridge Education Associates) is regarded as a pilot for a new approach to the administration of schools, particularly where local education authorities are seen as performing badly. The government has set strict targets for test and exam results for Islington pupils, and the firm will be penalised if the targets are not met. This is an interesting experiment in replacing direct public sector provision of school administration with regulated private sector provision.

A look forward

Whilst spending on education has risen in real terms since the mid-1980s, this has not translated into a sustained increase in the proportion of national income spent on education. Current spending plans do project an increase, but over this parliament as a whole, the proportion of GDP spent on education is likely to be lower than in the previous parliament. Against this background, a crucial question for coming years is whether recent policies designed to improve school standards will succeed. If not, it is likely that public expectations of increasing standards will be frustrated, perhaps leading to greater use of private sector education amongst better-off families.

In the medium term, there do not appear to be significant demographic shifts in the number of children which would generate increased spending pressure; in the next decade, projections show school rolls for the under-16s falling slightly. However, the further and higher education sectors are likely to continue their expansion, as the demand for skills (and hence the returns to education) will probably increase, and the government has signalled its willingness to expand post-compulsory education and lifelong learning. The funding arrangements now in place should make further expansion of higher education less costly to the government than would have been the case prior to 1998.

There remain many issues on which the future is unclear. Government attitudes towards selection by ability in schools will depend on the outcome of

the next election. It is too soon to evaluate the impact of new policies such as the education maintenance allowance, Sure Start, and the introduction of private sector school management in the Islington education authority. Likewise, the introduction of devolution in Scotland and Wales provides a greater degree of autonomy for education policy outside England, which may result in differences in the structure of funding and provision over the UK as a whole (for example, the possible abolition of tuition fees for higher education by the Scottish Parliament). Finally, the impact of technological progress, with increased government-supported use of the internet and computers by schools, may lead to fundamental changes in the structure of classroom organisation and teaching in the next decade.

5. Direct taxes on individuals

This chapter looks at possible changes to the personal direct tax and benefit system for the coming Budget. In Section 5.1, we consider the possibility that the Chancellor may address a long-standing anomaly in the UK tax system — the gap between the upper earnings limit of National Insurance and the starting-point of the higher rate of income tax. Section 5.2 discusses the income tax rate structure in the context of the number of higher-rate taxpayers, the taxation of saving and the future of the 10% tax band. In Section 5.3, we consider the introduction of Individual Savings Accounts and the taxation of saving more generally. Finally, Section 5.4 discusses the government's recent proposals for reform of the taxation of charitable giving.

5.1 Further integration of income tax and National Insurance?

The current government has continued the recent trend towards the integration of National Insurance contributions (NICs) with income tax. The reforms (summarised in Box 5.1) represent a substantial rationalisation of the direct tax system, and it is hoped that the government will progress further with these reforms in the current Budget. One clear issue that remains is that the upper earnings limit (UEL)[1] lies below the point at which higher-rate tax becomes payable (the higher-rate threshold — HRT).

Box 5.1. Changes to the system of National Insurance contributions under New Labour

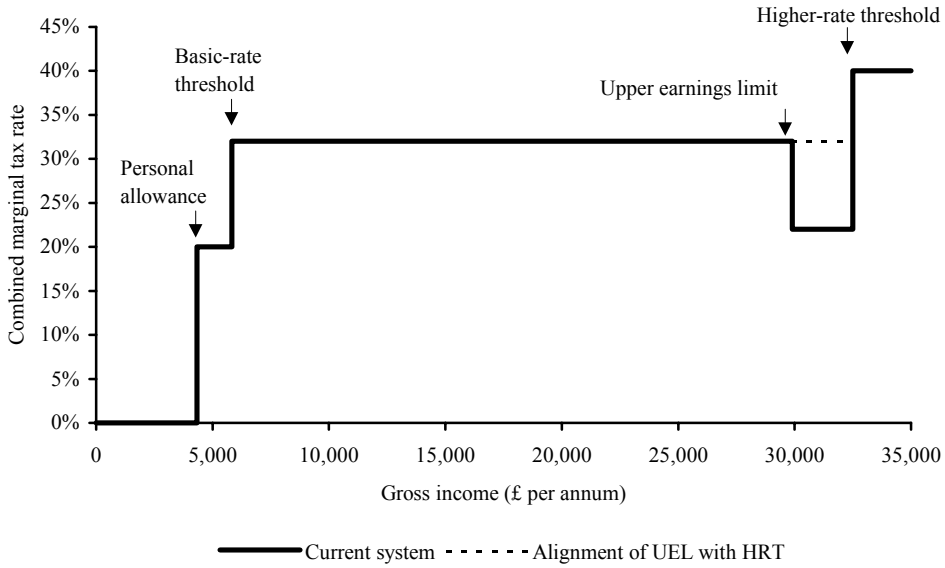
Alignment of National Insurance threshold with income tax personal allowance (and corresponding real increases in the UEL).
Abolition of 'entry fee' for both employee and employer contributions.
Replacement of discontinuity in employer system with single marginal rate structure.
Reduction in flat-rate Class 2 NICs for the self-employed.
Starting-point of Class 4 NICs for the self-employed aligned with the income tax personal allowance.
Merging of the Inland Revenue and the Contributions Agency.

Figure 5.1 illustrates how the combined income tax and employee NIC marginal tax rate will change as earnings increase, once all of the pre-announced changes have been implemented in April 2001. Once earnings exceed the personal allowance (currently £4,335 per annum), both income tax

[1] And the upper profits limit (UPL) for Class 4 contributions paid by the self-employed.

and National Insurance become payable at a rate of 10% each, producing a combined marginal tax rate of 20%. For incomes currently above £5,835 per annum, the income tax rate rises to 22% (from April 2000), raising the combined marginal tax rate to 32%. When income reaches the UEL for National Insurance (£29,900 a year from April 2001), no additional employee NICs are payable and the combined marginal tax rate falls back to 22%. Finally, once earnings exceed the HRT (£32,335 a year), the marginal rate of income tax increases to 40%.

Figure 5.1. Marginal rate structure from April 2001



Note: System for a childless person under 65 years; includes all pre-announced measures; employee class 1 NICs only.

This peculiar marginal rate schedule not only sits oddly with the principle of progressive taxation, it also acts as a barrier to the further integration of income tax and National Insurance. As a result of increases in the UEL announced in the 1999 Budget, the gap between the UEL and the start of higher-rate tax will be £2,435 a year by April 2001, down from over £8,000 in 1991, as shown in Table 5.1. The figures in Table 5.1 do not take account of the effect of either mortgage interest tax relief (MITR) or the married couples' allowance (MCA)[2], both of which effectively raised the higher-rate threshold for some individuals (prior to 1991 and 1993, respectively). A similar effect is generated by the payment of private pension contributions, which means that for some individuals the gap between the UEL and the HRT can be bigger than the figures in the table imply.

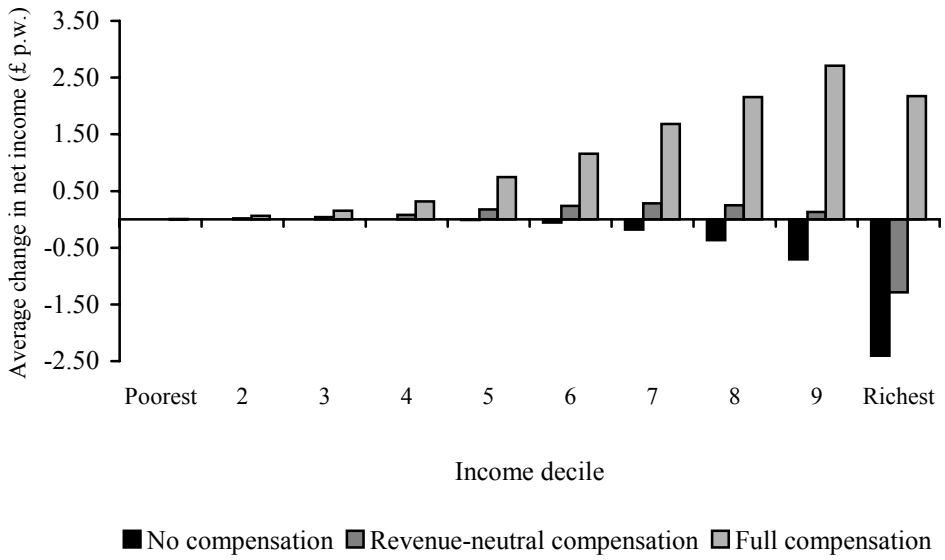
[2] The married man's allowance prior to 1990.

Table 5.1. Higher-rate tax threshold and National Insurance upper earnings limit (1999 prices)

	Number of higher-rate taxpayers (thousands)	Higher-rate tax threshold (per annum)	Upper earnings limit (per annum)	Difference between HRT and UEL
1980–81	796	£32,431	£22,040	£10,391
1985–86	950	£32,555	£24,374	£8,181
1990–91	1,700	£32,052	£24,608	£7,444
1991–92	1,620	£33,722	£25,334	£8,388
1992–93	1,720	£32,595	£25,288	£7,307
1993–94	1,740	£31,986	£25,735	£6,251
1994–95	2,000	£31,268	£25,756	£5,512
1995–96	2,130	£30,965	£25,462	£5,503
1996–97	2,080	£31,708	£25,635	£6,073
1997–98	2,120	£31,841	£25,541	£6,300
1998–99	2,200	£31,946	£25,745	£6,201
1999–00	2,300	£32,335	£26,000	£6,335
2000–01	n.a.	£32,335[a]	£27,820[b]	£4,515
2001–02	n.a.	£32,335[a]	£29,900[b]	£2,435

[a] Assumed unchanged in real terms.
[b] Announced in March 1999 Budget.
Source: Various Tolley's *Income Tax* and *National Insurance*; various *Inland Revenue Statistics*.

Figure 5.2. Distributional impact of aligning the UEL with the income tax higher-rate threshold



Note: Income deciles are derived by dividing the total population into 10 equally sized groups according to household income adjusted for family size. Decile 1 contains the poorest tenth of the population, decile 2 the second poorest and so on, up to the top decile (decile 10), which contains the richest tenth.
Source: IFS tax and benefit model.

The fact that the gap between the UEL and the HRT has been substantially reduced means that the losses imposed by removing this anomaly, and hence the cost of any desired compensation, are much smaller than in earlier years. Aligning the UEL with the HRT — currently £32,335 of gross income (or £622 a week) — would raise just under £600 million. The distributional effects are illustrated in Figure 5.2, which shows that the losses are concentrated at the top of the income distribution, amongst those families containing individuals earning above the current UEL.[3]

The additional tax revenue raised by aligning the UEL[4] with the HRT could be spent on measures to compensate those who would lose out from this reform — some 3.1 million individuals. Two possible compensating packages are considered here, one that reduces the NI rate to ensure the change neither costs nor raises revenue for the government (i.e. it is revenue neutral), and one that lowers the rate by enough to ensure that no individuals lose from the reform. Figure 5.2 illustrates the extent to which the losses from aligning the UEL with the HRT can be removed through such compensatory measures.

For a revenue-neutral reform, the employee NIC rate and the equivalent Class 4 rate for the self-employed can be reduced by 0.21 percentage points (the employee NI contracted-in rate from 10% to 9.79% and the contracted-out rate from 8.4% to 8.19%; the Class 4 rate from 6% to 5.79%).[5] Figure 5.2 shows that most of the losses from alignment of the UEL with the HRT fall on the very richest tenth of the population (those in decile 10), while the gains from a revenue-neutral reduction in the NI rate are most heavily concentrated in deciles 6, 7 and 8. This reform is not enough to offset the loss experienced by the richest group, however, whose average net loss is £1.20 a week.

Reductions in the main rate of employee NI to 9.13%[6] and in the Class 4 rate to 6.39% (i.e. giving full compensation) ensure that no individual loses from the change — the losses from the increase in the UEL are exactly offset by reductions in liability brought about by the reduction in the rate. This would be a relatively expensive reform package, costing the government around £1.7 billion.

One alternative route for providing compensation would be via the income tax system, in the form of a cut in the basic rate. However, this approach allows gains to go to individuals who are not currently paying NI contributions (such as pensioners), and it is not clear why the government would want to give a compensatory tax cut to these groups.

[3] The results do not allow for changes in people's behaviour in response to the reform.

[4] And the UPL for the self-employed.

[5] In fact, there might be a case for not extending compensation to the self-employed, due to the favourable treatment they already receive in terms of their National Insurance contributions (see L. Chennells and A. Dilnot (eds), *The IFS Green Budget: January 1999*, Commentary no. 76, Institute for Fiscal Studies, London, 1999).

[6] Contracted-out rate: 7.53%.

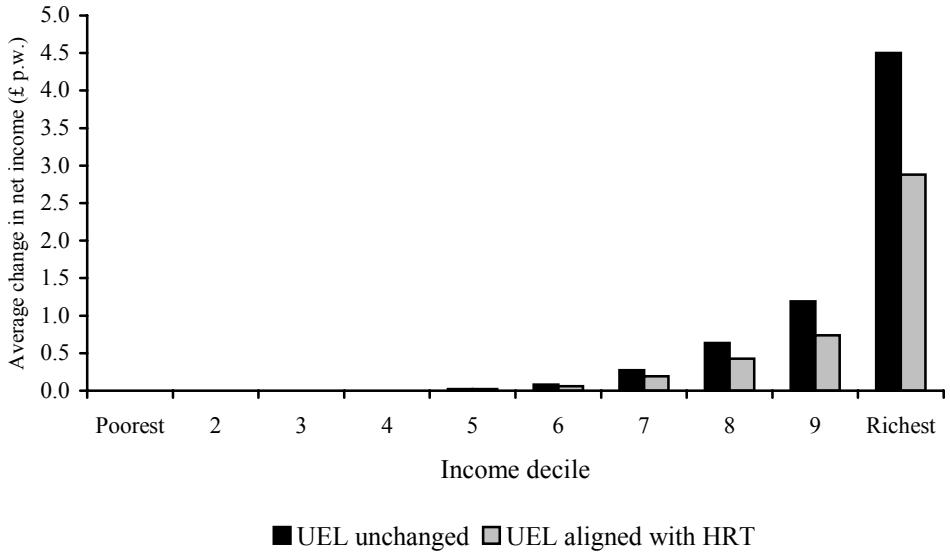
5.2 The income tax rate structure

This section discusses a set of issues related to the structure of income tax rates. First, we consider a phenomenon that politicians seem to be concerned about — the growing number of higher-rate taxpayers. There then follows a discussion of the complex issue of savings taxation, and of the future of the 10% band of income tax.

The number of higher-rate taxpayers

The number of individuals paying tax at the higher rate has increased substantially over the past two decades from just under 800,000 in 1980–81 to 2.3 million this year (see Table 5.1). Tax thresholds are usually increased in line with prices not earnings, so as long as real earnings grow the number of individuals with incomes above the higher-rate threshold will tend to rise over time. When thresholds are frozen in cash terms, as they were in four out of the first five Budgets in the 1990s, this trend is accelerated. In addition, restrictions in the rate of relief announced in the 1991 Budget for MITR and the 1993 Budget for the MCA effectively lowered the HRT further for some individuals. The replacement for the MCA, the children's tax credit (CTC), will similarly operate at a restricted rate.

Figure 5.3. Distributional impact of an illustrative £2,000 increase in the higher-rate income tax threshold



Note: See note to Figure 5.2.
Source: IFS tax and benefit model.

Figure 5.3 shows how the gains from an illustrative increase in the HRT by £2,000, to £34,335 of gross annual income, would be distributed across the population. Of course, the impact of such a reform is felt almost exclusively at the top of the income distribution, where families containing higher-rate taxpayers are concentrated. Almost 420,000 individuals are taken out of

paying higher-rate tax, at a cost of £1 billion. The cost of increasing the HRT would be significantly reduced if the UEL were aligned with the threshold at the same time. In this case, increasing the threshold by £2,000 would cost £660 million and would redistribute less to richer groups (see Figure 5.3).

Savings and the starting rate of income tax

The taxation of income at source, most importantly the taxation of interest income from savings, and the way in which this interacts with the income tax rate structure has had a chequered history in the UK. The taxation of interest income has been highly unsatisfactory since the introduction of the 20% lower-rate band by Norman Lamont in 1992. For most interest income, taxation occurs at source through the institution at which the savings are held. As these institutions do not have access to information on the account holder's full income tax liability, they deduct tax at a standard rate from all account holders. So, with the introduction of the 20% lower rate of tax in the 1992 Budget, all taxpayers were taxed on their savings income at the basic rate (then 25%), with higher-rate taxpayers liable to make further payments and lower-rate taxpayers able to apply for a tax rebate from the Inland Revenue. Few lower-rate taxpayers actually completed the necessary documentation, however. Therefore, in the November 1995 Budget, institutions were required to deduct tax at a rate of 20% (instead of 25%) and, to prevent basic-rate taxpayers facing additional tax charges, the basic rate of tax on savings income was reduced to 20%.

The problems inherent in the pre-1995 system have resurfaced with the replacement of the 20% band by the new 10% starting rate of income tax. When this was announced in the March 1999 Budget, both the basic and starting rates of tax on savings income remained at 20%, so that savings income was taxed more heavily than other sources of income for starting-rate taxpayers and less heavily for basic-rate taxpayers. In order to address this inconsistency, the Chancellor announced in last November's Pre-Budget Report that all starting-rate taxpayers would face a marginal tax rate of 10% on their savings income with effect from April 1999.

This returns us to the administrative problems that existed before 1995. Under the new scheme, banks will still deduct tax at source at 20%. Higher-rate taxpayers will be liable to an additional payment, administered through their annual income tax returns, while starting-rate taxpayers will be entitled to a refund to reduce their tax rate on savings income back to 10%. But the main reason for the changes in the November 1995 Budget was that few eligible taxpayers ever reclaimed their overpayments of tax. If this occurs again, the vast majority of the 2.5 million people that the government claims could potentially see a reduction in their tax bill (of £30 on average) will not actually benefit from this reform.

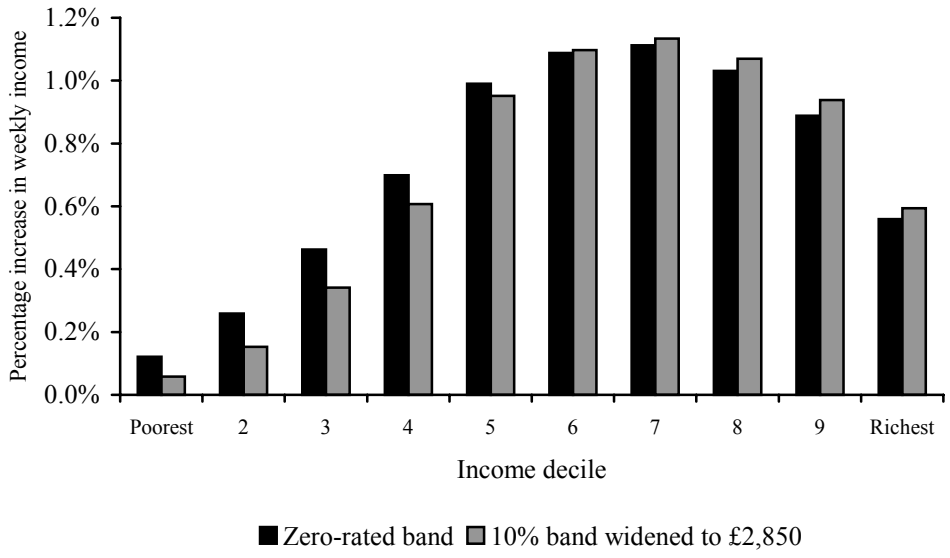
The future of the 10% income tax band

When the starting-rate band covers a narrow range of income, the issue of reclaiming tax on interest income is less of a problem; but if the band were widened, the problem would grow as the number of starting-rate taxpayers

increased. If the government wanted to cut income tax further, a range of possibilities exists, including widening the 10p band. The last government chose widening the 20p band as its preferred form of cutting income tax in a number of Budgets in the 1990s. But, rather than moving to widen the starting-rate band, the current government might want to reduce the lower tax *rate*, eventually moving towards a zero-rated band and thus removing the problem of overpayment of tax on savings income altogether. This approach has a number of other beneficial features, including being the most progressive means of redistribution via the income tax system, as it moves some people out of paying tax altogether. Increasing the number of non-taxpayers also acts to simplify the income tax system.

The distributional impact of reducing the starting rate of income tax to zero is illustrated in Figure 5.4. This would cost approximately £3.6 billion. A possible alternative to this is widening the starting-rate band, with the aim of eventually replacing the basic rate. While this policy seemed realistic at the time of the 20% lower tax rate, taking the basic rate to 10% seems simply too costly to be implemented in the near future. For the same cost as reducing the 10% rate to zero, the government could only widen the lower band from £1,500 to £2,850. Not only would this policy be less redistributive, as shown in Figure 5.4, but it would add to the problem of savings taxation, as mentioned above.

Figure 5.4. Distributional impact of reducing the starting rate of income tax to zero or widening the starting-rate band



Note: See note to Figure 5.2.
Source: IFS tax and benefit model.

5.3 ISAs and the taxation of saving

A new tax-free savings vehicle — the Individual Savings Account (ISA) — was introduced in April 1999 to replace Personal Equity Plans (PEPs) and Tax-Exempt Special Savings Accounts (TESSAs). This section contains a preliminary assessment of ISAs' first six months and considers how the tax treatment of ISAs compares with the taxation of other forms of saving, such as housing and pensions.

Individual Savings Accounts

ISAs provide a single tax-free savings vehicle for holdings of cash, life insurance and stocks and shares. They are subject to an overall annual investment limit of £5,000 (£7,000 in the first year) with a separate £1,000 limit on the amount that can be invested in life insurance and a £1,000 limit (£3,000 in the first year) on the amount that can be invested in cash. As with TESSAs, interest income on holdings of cash will be tax-free but, unlike TESSAs, there is no five-year minimum holding period. As with PEPs, dividend income and capital gains accruing to stocks and shares held in an ISA are tax-free. The tax-free status of ISA returns has been guaranteed for 10 years. In addition, a 10% tax credit will be paid on dividend income accruing to UK equities held in an ISA, guaranteed until April 2004. In practice, ISAs come in two forms — a mini and a maxi (see Box 5.2) — which differ according to which combination of the three elements (cash, shares and life assurance) can be invested and according to the investment limit.[7] The reason for this fairly complicated structure is to allow providers who may not want to offer all of the individual elements to enter the ISA market by offering, say, a cash-only mini-ISA.

Box 5.2. Mini- and Maxi-ISAs

Mini-ISAs
A single-asset account into which someone can invest up to £3,000 in cash (£1,000 in subsequent years) *or* £1,000 in life insurance *or* £3,000 in stocks and shares. In practice, an individual could hold up to three different mini-ISAs — one cash, one life insurance and one stocks and shares — each with a different provider.

Maxi-ISAs
An ISA held with a single provider, into which someone can invest up to the maximum annual limits in cash and/or life insurance and/or stocks and shares. A provider offering a maxi-ISA does not have to offer the cash or life insurance elements. A maxi-ISA would be suitable either for someone who did not want to hold different elements of their ISA with different providers or for someone wanting to hold more than £3,000 in stocks and shares.

[7] For further information, see Financial Services Authority, *FSA Guide to ISAs*, London, 1999.

A new feature of ISAs compared with PEPs and TESSAs is a set of voluntary minimum standards for their *c*osts, *a*ccess and *t*erms (hence CAT standards). For example, a CAT-standard cash ISA must have no charges for standard services, allow savers to put in or withdraw as little as £10 with only seven days' notice and pay a minimum interest rate of not more than 2 percentage points below the base rate. A CAT-standard stocks and shares ISA must have a maximum charge of 1% of annual fund value (including stamp duty) and accept minimum contributions of £50 a month or a £500 lump sum. The CAT standards are intended to act as a bench-mark — there is no requirement for ISAs to meet the standards.

ISAs offer less-generous tax relief than PEPs and TESSAs to anyone who was able to invest up to the maximum PEP and TESSA limits. The total amount that an individual could invest in a typical year in a single-company PEP, a general PEP and a TESSA combined was £11,400 (£12,600 in the first year of a TESSA), compared with £5,000 in an ISA (£7,000 in the first year). In addition, the dividend tax credit has been made less generous. The rate of the credit has been reduced from 20% in a PEP to 10% in an ISA. Assuming an annual investment return of 10% and a 50% dividend pay-out ratio, the total value of the dividend tax credit in an ISA is £27.78[8] on the maximum £5,000 investment. With the same annual investment return and dividend pay-out ratio, the 20% dividend tax credit would have been worth £75.00[9] if the maximum £6,000 had been invested in a general PEP.

ISAs are less favourable to wealthy investors who could invest up to the maximum limits in a TESSA and a PEP. However, evidence from the Financial Research Survey shows that only the wealthiest 25% of the population has more than £5,000 of financial wealth in total, and an even smaller proportion will be able to save this amount each year.[10] Moreover, wealthy investors can still invest in other tax-favoured forms of saving such as pensions and housing (the tax treatments of which are discussed below). ISAs are likely to be more attractive than PEPs and TESSAs to younger savers and to savers on lower incomes because they allow people to save tax-free without having to save for a minimum of five years and without having to invest in equity. Even if ISAs do not succeed in attracting substantial *new* savings from younger people and those on lower incomes, people in these groups who do already save will now find it easier to put their money in a tax-free savings vehicle.

[8] On this basis, the individual will receive dividend income of £250 on their £5,000 investment. The dividend tax credit is worth 10% of the grossed-up value of the dividend income, i.e. 0.1×£250/(1–0.1) = £27.78.

[9] The individual will receive dividend income of £300 on their £6,000 investment. The dividend tax credit is worth 20% of the grossed-up value of the dividend income, i.e. 0.2×£300/(1–0.2) = £75.00.

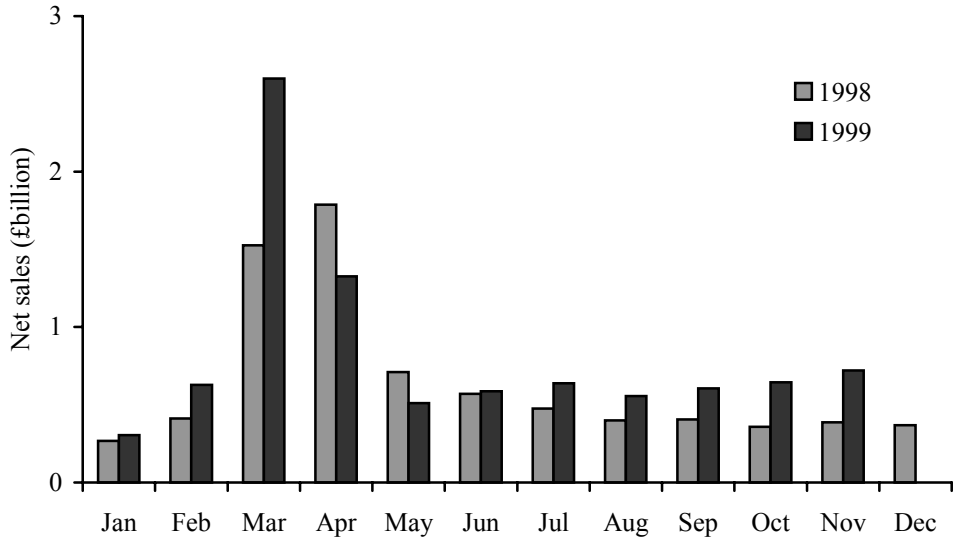
[10] J. Banks and S. Tanner, *Household Saving in the UK*, Institute for Fiscal Studies, London, 1999.

ISAs' first six months

Between 6 April 1999 and 5 October 1999, 5.1 million ISAs were opened and nearly £12.7 billion was invested in them. This compares with £9 billion that was invested in TESSAs and PEPs during the same period the previous year — and this occurred in spite of the lower investment limits for ISAs than for PEPs and TESSAs. The total amount invested in the first six months has been split fairly evenly between mini-ISAs (£6.5 billion) and maxi-ISAs (£6.1 billion).[11]

Initial ISA sales showed people favouring the cash element. Of the total amount of money invested during the first three months, 55% was in cash. However, during the second quarter, the proportion invested in cash fell to 44% while the equity share rose to 55%. By the end of the first six months, the total invested was evenly divided between cash (£6.4 billion) and stocks and shares (£6.2 billion). Only £27 million has been invested in life insurance. This pattern is also reflected in figures from the Association of Unit Trusts and Investment Funds (AUTIF) for their members' net sales of equity ISAs, which show that, for the first few months, monthly net sales of ISAs were behind the net sales figures for PEPs for the previous year. However, by July, net ISA sales were actually higher than those for PEPs for the previous year (see Figure 5.5) — again it is worth pointing out that this is in spite of the lower investment limits for ISAs.

Figure 5.5. Net sales of equity ISAs compared with PEPs



Note: The figures for net sales of equity ISAs after April 1999 also include the figures for net PEP sales (which are negative) to make them comparable with net PEP sales figures before April 1999.
Source: Various AUTIF press releases.

[11] All numbers from Inland Revenue press release, 22 December 1999, 'Almost £12.7 billion put into ISAs in first six months'.

So, what should we make of ISAs' first six months? It is unfortunate that there is one word that has become synonymous with ISAs — complicated. They are seen as complicated both because of the CAT standards, which are a new feature of savings products in the UK but one that is likely to become more common and likely to apply to both pensions and mortgages, and because of the mini/maxi distinction. As was argued earlier, the main reason for introducing a mini-ISA and a maxi-ISA was to allow all financial providers to offer at least a mini-ISA. If providers were required to offer all three elements of an ISA, this would exclude some providers from the ISA market. For example, supermarkets might not want to sell stocks and shares because of the financial advice that they would need to provide, while investment funds might not want to offer life insurance. But supermarkets can offer a cash-only mini-ISA, while investment funds can offer an equity-only mini- or maxi-ISA. Having the mini/maxi distinction increases the number of providers in the ISA market and might make the market more competitive.

There is some anecdotal evidence of 'mis-buying' and 'mis-selling' of ISAs, most of which relates to people applying for both a mini- and a maxi-ISA (and not being properly advised that if they take out a cash mini-ISA they will only be able to invest £3,000 in a stocks and shares mini-ISA).[12] However, judgement on this will have to be reserved until the end of the financial year when the full set of figures for the number of invalid ISAs comes out. More encouragingly, the statistics from the Inland Revenue and from AUTIF show that, even if ISAs are perceived as being complicated, this is not stopping people from taking them out.

Of course, the fact that ISA sales are higher than those for TESSAs and PEPs is no guarantee that ISAs are achieving their target of encouraging people to save more. Much of the money invested in ISAs is likely to be money that was in — or was going to be invested in — other interest-bearing accounts or equity investments rather than representing additional saving. But preliminary evidence suggests that some people who did not previously save in either TESSAs or PEPs are investing in ISAs. Data collected by NOP-Research show that 60% of people who have an ISA or say that they are likely to invest in an ISA previously had neither a TESSA nor a PEP.[13] Not all of these people will be new savers and many of them are likely already to have had an interest-bearing account. But the evidence does imply that a new — and wider — set of people are now able to take advantage of government tax-free savings vehicles compared with the old system of TESSAs and PEPs. This is welcome from the point of view of achieving fairness in the way the tax system treats savers. If the government makes returns on a limited amount of savings held in a particular form tax-free, it is fairer that all savers should be able to save tax-free in this way rather than only wealthier savers.

The most important effect of replacing TESSAs and PEPs with ISAs has been to get rid of the minimum holding period for savings that qualify for tax relief, making ISAs more attractive to younger and poorer savers. But the same result

[12] Which? Report, *ISA Advice on Test*, October 1999.

[13] 'Identifying and reaching the ISA customer', presented at Next Direction for ISAs, IBC conference, November 1999.

could have been achieved simply by maintaining TESSAs and PEPs but eliminating the minimum holding period in TESSAs. Compared with current ISAs, this would mean no favourable tax treatment for life insurance, although the figures show that this element has been far less popular than cash and stocks and shares anyway. Simply eliminating the minimum holding period in TESSAs would have avoided the complication caused by the mini/maxi distinction since providers could have offered either TESSAs or PEPs or both. In essence, this combination has a similar level of complexity as the mini/maxi-ISA distinction, but has the advantage — at least in the short and medium terms — that people had grown used to the TESSA/PEP distinction over the past few years. Of course, maintaining the former TESSA and PEP limits would have offered more-generous tax relief for cash and equity holdings to wealthier individuals. Whether this would have cost the government much money is debatable. In practice, there are other tax-favoured forms of saving, such as pensions and housing, that people are likely to invest their money in. The rest of this section compares the tax treatment of ISAs with that of these other forms of saving.

The taxation of saving

Table 5.2 presents a summary of the current tax treatment of different assets according to whether tax is imposed on the income out of which contributions are made, on the returns made while the asset is held or on the withdrawals once the asset is realised.

Table 5.2. Tax treatment of saving

Asset	Contributions	Returns		Withdrawals
		Interest/ dividends	Capital gains	
Interest-bearing accounts	Taxed	Taxed	—	Exempt
Shares	Taxed	Taxed	Taxed[a]	Exempt
Life assurance	Taxed	Taxed	Taxed	Exempt
Owner-occupied housing	Taxed[b]	Exempt	Exempt	Exempt
ISAs	Taxed	Exempt[c]	Exempt	Exempt
Private pensions	Exempt	Exempt	Exempt	Taxed[d]

[a] Above an annual allowance.
[b] Except mortgage interest tax relief, but this is due to be abolished in April 2000.
[c] Plus 10% dividend tax credit.
[d] Except for a 25% tax-free lump sum.

The form of saving with the least favourable tax treatment is money held in an interest-bearing account. All income paid into such an account is taxed at the individual's marginal tax rate and the full amount of nominal interest income is also subject to tax — at 10% for starting-rate taxpayers, 20% for basic-rate taxpayers and 40% for higher-rate taxpayers.[14] In the case of direct holdings of stocks and shares, both the contributions and returns are also subject to tax, although tax is only payable on capital gains greater than an annual allowance (£7,100 in 1999–00).

[14] For further details, see Section 5.2 on savings and the starting rate of income tax.

In the case of owner-occupied housing, the returns are tax-free (although capital gains made on second homes are subject to tax). Only the income used to pay for the house is subject to tax and tax relief is available on a limited amount of mortgage interest payments. Mortgage interest tax relief (MITR) is currently paid at 10% on the interest on the first £30,000 of a mortgage. The generosity of MITR has been steadily eroded over the past 25 years and it is due to be abolished altogether from April 2000.

In the case of pensions, contributions out of earned income receive tax relief at the individual's marginal income tax rate (up to a maximum annual limit). No tax is due on the returns — although the payment of a dividend tax credit to equity holdings in pension funds was abolished in July 1997. In retirement (before age 75), holders of defined contribution pension schemes are required to use the accumulated fund to purchase an annuity — with the exception of one-quarter of the fund, which can be taken as a tax-free lump sum — and pay income tax on that annuity income. People with defined benefit schemes can also take a tax-free lump sum worth one-and-a-half times their final salary and pay tax on their pension income.

If the same tax rate were imposed either on the income that is saved or on the final withdrawal of funds, the effect on the net value of the funds would be the same. A tax system that only taxed either the contributions or the withdrawals would treat all assets uniformly (assuming no expectation of an increase or decrease in the marginal rate of tax over time). The current system taxes different assets in different ways, although there has been a trend in recent years towards greater uniformity with the erosion of the value of MITR and the introduction of PEPs, TESSAs and ISAs. But it is still the case that the net returns to investing in different assets are likely to be affected by the tax system, as well as by the underlying investment returns.

Consider an individual deciding whether to save for retirement in a private pension or in an ISA. The investment returns in ISAs and private pensions are very similar. If ISAs and pensions received the same tax treatment, the greater liquidity of ISAs and the absence of a requirement to purchase an annuity would tend to make them more attractive to everyone apart from those seeking a credible long-term commitment strategy (i.e. those who want to tie up their savings because they don't trust themselves not to spend the money). If there were no dividend tax credit payable in an ISA and no tax-free lump sum in a pension, the tax system would be neutral between the two (assuming savers did not expect an increase or decrease in their marginal tax rate over time). In practice, which of the two is tax-advantaged depends on whether the value of the tax relief on the lump sum in a pension is greater than the value of the 10% dividend tax credit in an ISA. In turn, this depends on the annual rate of investment return. The greater the annual rate of investment return, the greater the value of the dividend tax credit, assuming a constant dividend pay-out ratio. In fact, for an individual intending to save money for 30 years, the 'critical' annual rate of investment return at which the dividend tax credit is worth more than the tax-free lump sum is around 10%, which is in fact the median annualised real return to PEPs and pensions over the last five years.[15]

[15] This assumes that a basic-rate taxpayer invests 10% of their net earnings for 30 years. The marginal income tax rate is 23% and the rate of employee NICs is 8.4%. A 50% dividend pay-

This assumes that the dividend tax credit is paid for the full 30 years. In fact, the government has only guaranteed the dividend tax credit in ISAs for five years, although it is quite possible for it to be extended beyond this date. If the dividend tax credit is only paid for five years, the critical real rate of investment return increases substantially to an implausible 93.6%. Moreover, this analysis ignores the fact that if employers — rather than employees — make contributions into a private pension, then the contributions are not only given relief on income tax, but are also not subject to either employer or employee National Insurance. Since no NI is payable when income is withdrawn from a pension, this makes employer contributions to pensions a particularly tax-effective form of saving.

Conclusions

Recent reforms to the taxation of savings have tended towards greater uniformity in the treatment of different assets. Such changes have included the gradual erosion of MITR, which reduced the privileged treatment of owner-occupied housing, and the introduction of TESSAs, PEPs and ISAs, which made the returns to limited holdings of cash and equity tax-free. A key element in the design of ISAs has been the removal of the minimum holding period requirement for cash. Interest-bearing accounts represent the most heavily taxed form of saving, but also the most widely held and where the less wealthy tend to hold most of their money. Removing the minimum holding requirement allows more savers — and in particular younger and poorer savers who are less able to tie up their money — to benefit from tax-free returns to their savings.

In spite of the trend towards greater uniformity in the tax treatment of different assets, saving in a pension remains relatively tax-favoured compared with other forms of saving. In the case of employee contributions to pensions, this is due to the presence of the tax-free lump sum. Employer contributions are even more tax-favoured since they are not subject to any National Insurance. What this means is that the net return to saving in a pension is increased relative to the net returns to saving in other assets, which gives people an incentive to hold relatively more of their wealth in a pension than they would if the tax treatment of all forms of wealth were neutral. If the government is going to use the tax system in this way to favour particular types of saving, there should be a clear rationale for why people would otherwise choose to save a sub-optimal amount in this way. The government might like people to save in a form that guarantees them an income throughout their retirement so as to avoid having to pay means-tested benefits to people who spend their entire savings. But a potential problem with favouring pension saving above other forms is that it might leave people with a lot of money tied up in a pension but too little accessible savings to cushion themselves against unanticipated shocks to their income or spending needs during their working years.

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out ratio is assumed. For further details, see C. Emmerson and S. Tanner, 'A note on the tax treatment of private pensions and Individual Savings Accounts,' *Fiscal Studies*, forthcoming, 2000.

5.4 Individual charitable giving

There are currently a number of different ways that individuals can give tax-free to charities — by covenant, under the Gift Aid schemes or through the payroll giving scheme, Give-As-You-Earn (see Box 5.3). Each of these schemes places limits on the donations that qualify for tax relief. If people want to give by covenant, they have to commit to giving a regular, fixed amount for at least three years. To qualify for tax relief under the Gift Aid scheme, they have to give at least £250. To participate in Give-As-You-Earn, they have to work for an employer who has set up a payroll giving scheme. The 1999 Pre-Budget Report contained a number of proposed changes to the tax treatment of donations to be introduced in April 2000. Their effect will be to extend tax relief to small and one-off donations — and thereby extend tax-free giving to a wider range of donors.

Box 5.3. Tax-free giving before the April 2000 reforms

Covenants provide tax relief on regular, fixed donations made by individuals (or companies) over a period of at least three years. The charity claims back the basic rate of tax on the gift; higher-rate taxpayers can claim back the difference between the basic rate and the higher rate. There are no upper or lower limits on the size of covenanted gifts.
Gross amount donated by individuals and companies in 1998–99: £1.25bn
Estimated cost of tax relief in 1998–99: £350m

The **Gift Aid** scheme, established in 1990, offers tax relief on one-off donations of money by individuals or companies of £250 or more. The operation of Gift Aid is very similar to that of a covenant. Donations are made net of tax; the charity recovers the basic rate of tax; and higher-rate taxpayers can claim back the difference between the basic rate and the higher rate.
Gross amount donated by individuals and companies in 1998–99: £1.33bn (of which £477m was donated by individuals)
Estimated cost of tax relief in 1998–99: £306m

The **Millennium Gift Aid** scheme was introduced in July 1998 to run until 31 December 2000. The scheme has a reduced limit of £100 for tax relief on donations to charities supporting education, health and anti-poverty projects in 80 nominated 'poor countries'. The scheme also allows smaller donations to be bundled up and still qualify for tax relief.

A **payroll giving scheme**, Give-As-You-Earn, was established in 1987. Employees authorise their employer to deduct amounts from their pay and nominate the charities to which their gifts should go. The donation is deducted from pay *before* calculating tax due under Pay-As-You-Earn. Donations must not exceed £1,200 a year. In 1998–99, a total of 400,000 employees participated in the scheme.
Gross amount donated in 1998–99: £29m
Estimated cost of tax relief in 1998–99: £7m

The most significant of the proposed changes in the Pre-Budget Report is to abolish the £250 minimum threshold for donations through the Gift Aid scheme to qualify for tax relief. This goes further than the government's earlier consultation document on charity taxation,[16] which proposed a reduction in the Gift Aid threshold to £100. With a zero threshold, all donations, whatever the size and whether one-off or made on a regular basis, could potentially be made tax-free. However, in order to claim back the basic rate of tax on donations, the government still requires charities to show an audit trail from a donation to the donor. In other words, only donations from donors who have formally joined the scheme will qualify for tax relief, suggesting that donations made in collecting tins might miss out. But the onus is on charities to find ways of ensuring that all donors join the scheme.

Second, the government proposes making changes to Give-As-You-Earn (GAYE) to encourage wider participation in the scheme. The £1,200 ceiling on annual donations will be abolished. The scheme will also receive a temporary boost, including an awareness-raising promotional campaign in the summer of 2000 and, more significantly, for three years, a 10% supplement paid by the government on top of individual donations made in this way — in addition to basic-rate tax relief.

The government's aim in introducing these measures is to try to encourage individual giving to charity. Research, including work done by IFS,[17] has shown that the number of people giving to charity has been declining over the past 20 years — particularly among young people. Also, the proportion of total donations that are made tax-free is relatively low, with fewer than 10% of donors giving in this way.[18] One possible explanation for this low level of participation is that having a number of different schemes results in confusion over how to give tax-free. Also, each of the existing schemes places limits on the type of donations that can get tax relief. In particular, one-off, small donations do not qualify.

The government's proposals go some way towards achieving greater simplicity and fairness in the system of tax relief for donations. The tax treatment of donations will be simpler since most people will be able to make all their tax-free donations through the Gift Aid scheme, rather than facing a number of different schemes depending on the type of donation they wish to make. In effect, the Gift Aid scheme will subsume covenanted giving, since people who previously gave by covenant will now be able to get tax relief on the same donations made under the Gift Aid scheme. This is likely to lead to a decline in the amount of giving by covenant and a switch to giving through Gift Aid, although charities may wish to encourage people to continue to covenant money since it carries a commitment to giving regularly over a longer period.

[16] HM Treasury, *Review of Charity Taxation*, March 1999.

[17] J. Banks and S. Tanner, *The State of Donation*, Commentary no. 62, Institute for Fiscal Studies, London, 1997.

[18] HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999.

The removal of any threshold on gifts qualifying for tax relief under the Gift Aid scheme is welcome since it leads to greater fairness in the way that the tax system treats different donors. If the government wants to encourage people to give to charity by making donations tax-free, it is fairer that all donors should be able to give in this way, rather than just donors who give large amounts or those who give regularly. If the government chooses to favour a particular type of donation, there should be a good reason for doing so.

This argument applies to the government's decision to give preferential tax treatment to donations made through payroll giving schemes, a move that is contrary to the trend towards greater simplicity and fairness. The motivation for the government's proposals to kick-start GAYE is the very low level of participation — less than 2% of all individuals on PAYE. But what is likely to matter for charities is the total amount of money given through all of the different tax-free schemes — and the total number of donors — rather than the amount given through any individual scheme. Since donors will now be able to make a donation of any size tax-free through the Gift Aid scheme, it is not clear why the government should give additional tax relief for donations made through a payroll giving scheme. It is worth noting that all donors can give through Gift Aid, but payroll giving schemes exclude people who are not on PAYE, such as the self-employed and most pensioners.

One possible argument is that there is a very low level of awareness of GAYE and that more people would choose to give in this way if they knew about it. The most direct response to this problem would be to increase the level of information about the scheme. In other words, this argument could account for the government's promotional campaign, but not the additional tax relief. A further possible argument is that charities do not care simply about the total amount of donations; they also care whether the donations are made regularly or on a one-off basis. There might be an advantage to charities in having people give regularly, rather than making one-off donations, since it leads to greater certainty about the charities' future incomes. In this case, however, the government should give additional support to all regular donations (including those made by covenant and through the Gift Aid scheme), not just those made through the payroll giving scheme. A final possible argument is that setting up a payroll giving scheme involves start-up costs. Since these are likely to be borne directly by the employer, it might be more appropriate to target additional help at employers rather than individual donors. As this discussion has shown, the reason for the government to give a 10% supplement to donations made in this particular way — by a particular group of people — needs to be made more explicit, since it is far from obvious.

A more difficult question to answer at this stage is what effect the increase in tax relief will have on charities' incomes. There is an argument that the effect of tax relief is to reduce the price of giving to charity — with tax relief, the price to a basic-rate taxpayer of giving £1 to charity falls, from £1 of net income to £0.77 of net income. In this case, so long as charitable giving is a normal good (i.e. a good for which a fall in the price results in an increase in demand), tax relief would cause donations to increase. This depends on people viewing a donation to charity as one in a bundle of different goods that they spend their money on. Alternatively, individuals might have a fixed amount that they want the charity to receive, say £1. In this case, tax relief would

cause individuals to reduce their donations, knowing that the government is providing a top-up. Charities' total income from donations (including the tax relief) would remain unchanged. But as a result of granting tax relief, the government would lose tax revenue that could have been spent on other things, including being given to charities in the form of government grants. There is very little evidence on the effect of the current system of tax relief on donations in the UK. Evidence from the US has tended to show that tax relief has a small positive effect on individual donations.[19]

[19] For a discussion of these issues, see J. Banks and S. Tanner, *Taxing Charitable Giving*, Commentary no. 75, Institute for Fiscal Studies, London, 1998.

6. Welfare reform

Two main planks of the government's modernisation of the welfare system have been the working families tax credit (WFTC) and the New Deal. Both programmes aim to address problems in the labour market and, in particular for the WFTC, to distribute resources to one of the government's main target groups, low-income families with children.

The Pre-Budget Report outlined plans to continue with reform in this area. It envisages the creation of a new benefit, known as the 'integrated child credit', to combine the current disparate elements of child support into a coherent whole. This will be complemented by an 'employment tax credit', which will incorporate the work-related elements of the WFTC and extend such support to childless households. In Section 6.1, we discuss these proposals and consider how they might be implemented.

On the New Deal, in Section 6.2, we outline the series of schemes that are currently in place and examine the early evidence on their effectiveness. We also discuss the form the New Deal may take after its initial funding expires in 2001–02.

6.1 Integrated child credit and employment tax credit

Two of the government's key aims are the redistribution of resources to families with children and the provision of incentives to encourage people to move from welfare to work. To further these aims, in the 1999 Pre-Budget Report, the government proposed reforms that would integrate welfare policies targeted at families with children and broaden the coverage of in-work benefits for the low-paid to include childless households.

On integrating child welfare provisions, the government's long-term goal is

> … to bring together the different strands of support for children in the Working Families' Tax Credit, in Income Support and in the Children's Tax Credit, to create an integrated and seamless system of financial support for children paid to the main carer, building upon the foundation of universal Child Benefit.[1]

In addition, the government has been considering extending in-work tax credits, currently available to working families with children, to childless households. This measure would form part of the government's welfare-to-work agenda. We begin by explaining the government's proposals as outlined in the Pre-Budget Report and then consider the wider implications of these proposals. As this section discusses a large number of actual and potential tax and benefit mechanisms, a brief summary of each of them is provided in Box 6.1.

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[1] HM Treasury, *The Modernisation of Britain's Tax and Benefit System, Number 5: Supporting Children through the Tax and Benefit System*, November 1999, p. 39.

Box 6.1. Benefits for families with children and welfare-to-work measures

Actual and proposed measures as at November 1999

Child benefit (CB)
Introduced in the late 1970s as a replacement for child tax allowances. It is a universal benefit for families with children. Its value is not related to family income or hours worked.

Income support (IS)/Income-based jobseeker's allowance (JSA)
Basic out-of-work income maintenance benefit, which is withdrawn pound for pound as income rises. Eligibility ends if one adult in the family works more than 16 hours per week. It is known as JSA where the claimant is obliged to be actively seeking work; IS where they are not (mainly for lone parents).

Working families tax credit (WFTC)
Work-related credit for families with children. Announced in the 1998 Budget, replaced family credit (FC) in October 1999. It is conditional on at least one adult working for the minimum of 16 hours per week. The credit is reduced by 55p for every £1 of family income, after income tax and National Insurance, above £90 per week.

Childcare tax credit
An addition to the WFTC that covers 70% of the cost of registered childcare used by WFTC recipients. Once entitlement to the basic WFTC has been exhausted, the childcare tax credit is reduced by 55p for every additional £1 of income.

Children's tax credit (CTC)
Announced in the 1999 Budget to be introduced in April 2001 as a replacement for the married couple's allowance. One credit will be available to each family with children. It will reduce the tax liability of the family by a maximum of £416 a year. For higher-rate taxpayers, £1 of the credit will be withdrawn for every £15 of income taxed at the higher rate.

Integrated child credit (ICC)
Proposed by the government in November 1999. Involves integrating the support for children given under IS/JSA, WFTC, CTC and CB into a single benefit.

Employment tax credit (ETC)
Proposed by the government in November 1999. Involves extending the work-related credit in WFTC to individuals and couples without children.

Earnings top-up (ETU)
Scheme for extending family credit to individuals and couples without children. Pilot schemes were established under last Conservative government.

It is worth stressing from the outset that the proposals on child support may come to represent a turning-point in the structure of the UK tax and benefit system. In 1990, the UK adopted a system of taxation based on individual incomes, while retaining a means-tested benefit system based on total family income. As the operation of the means-tested system was confined to low-income households, since 1990 there has been no mechanism to meet

distributional objectives based on total family income for those outside the groups traditionally defined as 'poor'. The current proposals on child support envisage the creation of such a mechanism. Given the Conservative Party's proposals to introduce transferable income tax allowances in the 1997 general election, it seems that within 10 years of its introduction, the distributional constraints imposed by independent taxation have been judged to be undesirable by both of the main political parties in the UK. It is possible that the next 10 years of debate on tax and benefit reform will be dominated by discussion of coherent mechanisms to substantially reverse the 1990 move to independent taxation. The current government's proposals should be seen as an initial contribution to this debate.

The government's proposals

The government's proposals were outlined in two diagrams at the time of the Pre-Budget Report.[2] These diagrams are reproduced here to help explain how the proposals operate. Figure 6.1 shows how child-related benefits will vary as earnings rise in April 2001, when all confirmed government measures have been introduced. The diagram is based on an example couple with one child where one adult works for £3.60 per hour.[3] Figure 6.2 shows the benefits for the same example family under the new structure being considered by the government.

As illustrated in Figure 6.1, child benefit is paid at a flat rate of £15 per week regardless of how much our example adult earns. This flat-rate payment would remain under the government's proposals, as shown in Figure 6.2.

When our example adult is not working (i.e. when earnings in Figure 6.1 are zero), the family would receive £105.45 of jobseeker's allowance. As earnings rise, JSA is withdrawn pound for pound. This is why the JSA block in Figure 6.1 falls as earnings increase. Once our example adult works 16 hours per week, the family stops receiving JSA, but instead becomes entitled to WFTC. The family receives £73.20 in WFTC while our adult's earnings, net of income tax and National Insurance, are less than £90 per week. Above this level, the amount of WFTC is reduced by 55p for each additional £1 of net earnings. This explains why WFTC in Figure 6.1 is paid initially at a flat rate, but then falls as net earnings rise above £90 per week.[4]

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[2] HM Treasury, *The Modernisation of Britain's Tax and Benefit System, Number 5: Supporting Children through the Tax and Benefit System*, November 1999, Chart 3.6.

[3] The figures here and in *Supporting Children through the Tax and Benefit System* are intended to be illustrative of the government's proposals and not feasible examples. Taken literally, the figures imply that the example adult works over 24 hours per day in order to earn the highest amounts shown.

[4] There is also a jump in the amount of WFTC that the family receives when our example adult starts working more than 30 hours per week. This is due to the full-time credit in the WFTC system.

Figure 6.1. Child-related benefits and tax credits under the current system (including all measures announced in 1997–99 Budgets)

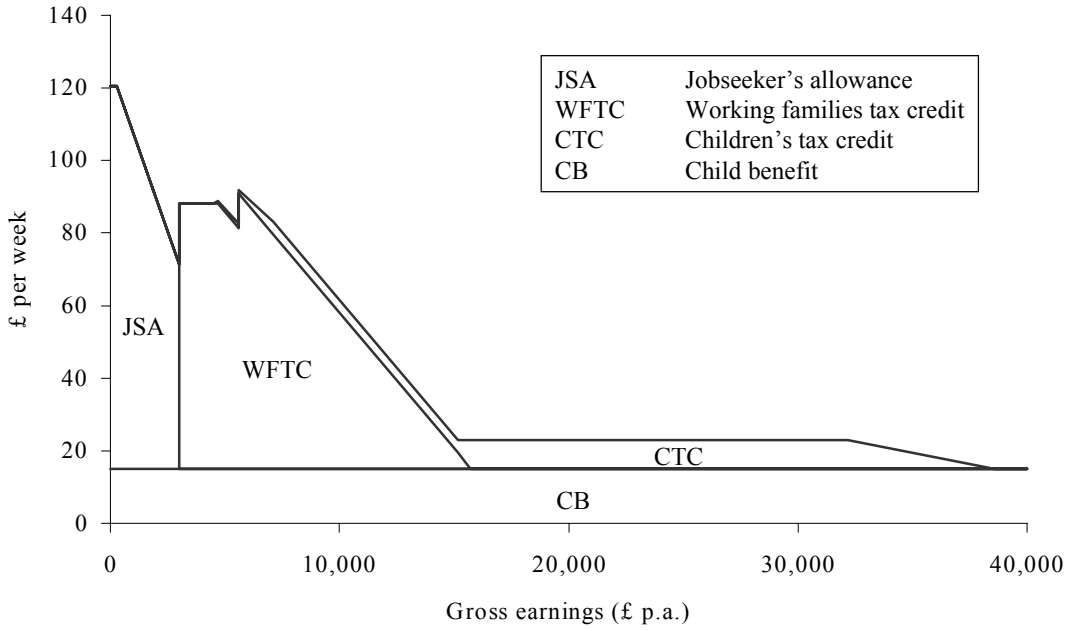
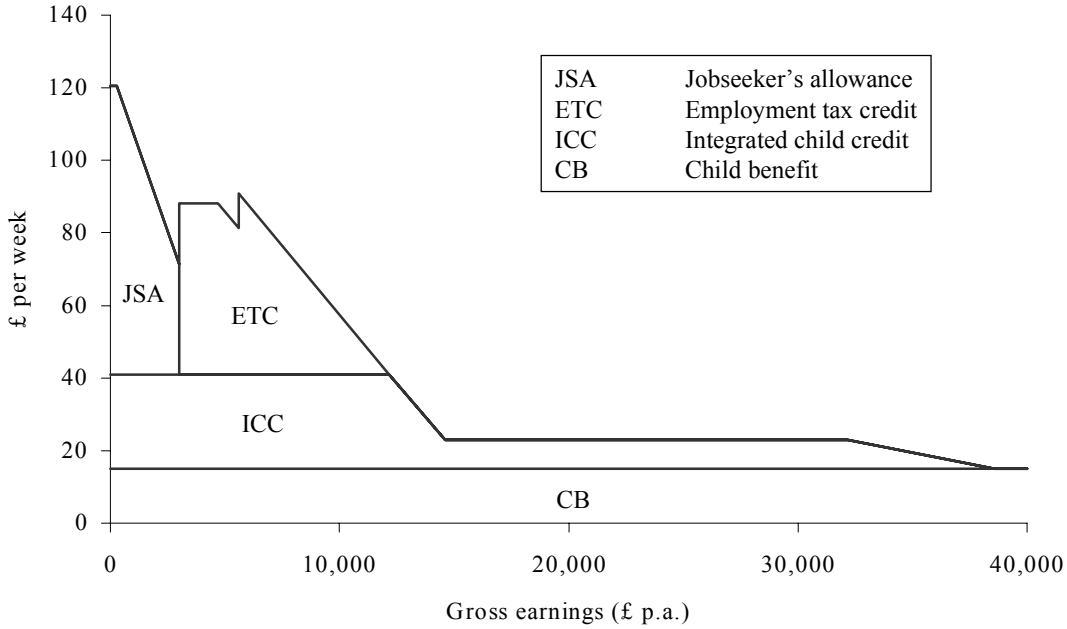


Figure 6.2. Proposed integrated structure of child-related benefits and tax credits



Under the government's proposals, as shown in Figure 6.2, both the JSA and the WFTC payments would be split into 'work' and 'child' components. Currently, of the £105.45 JSA that our example family receives when no one is working, £24.80 is paid because there is a child in the family. Under the proposals, this part of the JSA payment becomes the integrated child credit (ICC). The remaining £80.65 continues to be paid to the family as JSA.

Similarly, the WFTC payment is split into two parts — a child element, which forms part of the ICC, and a work element, which becomes the employment tax credit (ETC). While the family would still cease to be entitled to JSA and become entitled to ETC once our example adult worked more than 16 hours per week, the ICC would still be paid at the same level. The ICC would be 'a seamless payment across the welfare to work divide'.[5]

Finally, Figure 6.1 shows the children's tax credit (CTC), which is due to be introduced in April 2001. Once our example adult becomes liable to pay income tax, the family becomes entitled to the CTC. This reduces the family's income tax bill by £416 per year. The CTC continues to apply at this rate until our example adult starts paying higher-rate income tax: the CTC is reduced by £1 for every £15 of annual income taxed at the higher rate. The CTC is completely withdrawn when our example adult has £6,240 of income taxed at the higher rate.

Under the proposals shown in Figure 6.2, the CTC would be abolished. The payment would be incorporated into the ICC, which would continue to be paid to families whose earnings were above the level currently covered by the WFTC. The ICC system would therefore be used to make payments on a means-tested basis to the vast majority of families with children.

Figure 6.2 shows the ICC being withdrawn in the same way as the CTC once our example adult starts paying higher-rate income tax. The CTC is withdrawn on the basis of the highest individual income in the family, as opposed to the total income of family members. So a family with one earner on £40,000 per year would have the CTC completely withdrawn, while a family with two earners on £30,000 each would receive the full CTC. While it is not explicit in the government's proposals, it seems likely any withdrawal of the ICC would be made on the basis of total family income, as is the case with JSA/IS and the WFTC. Certainly it would be odd to have one means test based on total family income and one based on the highest individual income operating within the same system.

As Figures 6.1 and 6.2 show, the total amount of benefit or credit entitlement is unchanged, and the proposed reform mainly relabels the cash flows. The structure of payments differs in several important ways, though, and this could open new options for policymakers. Some of these options are examined below. It should also be stressed that while the proposals for integrating child-related benefits and for extending work-related benefits to the childless have been announced together, there are very different issues involved in each of these proposals. It is perfectly possible that one of these proposals could be adopted but not the other.

Integrated child credit

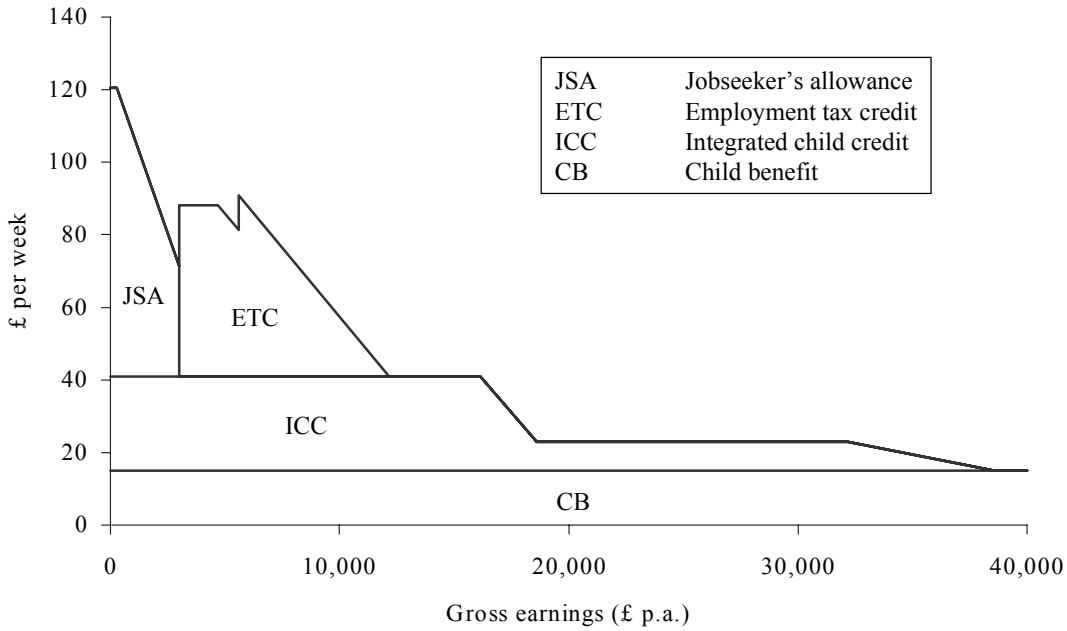
One of the principal reasons for introducing the ICC is the claim that keeping certain components of income stable during the move into work would improve work incentives, and thus encourage the transition from welfare to

[5] HM Treasury, *The Modernisation of Britain's Tax and Benefit System, Number 5: Supporting Children through the Tax and Benefit System*, November 1999, p. 39.

work. Qualitative evidence suggests that individuals often possess little information about in-work entitlements, and the resulting uncertainty makes them less likely to accept job offers.[6]

While the proposed ICC would not vary with the decision of individuals to enter work, its value would be reduced when family income exceeded a given level. This raises the question of how the ICC means test would operate. If the credit were to be a seamless payment across the movement to work and if the ICC were to be genuinely independent of the ETC, then means testing of the two credits would have to be separated. Separating the two would also allow the ICC to be used to achieve distributional aims over and above those achievable under the current system. For example, Figure 6.3 shows an extension of the maximum ICC to households with net earnings beyond the point at which all of the ETC would be withdrawn.

Figure 6.3. Extending the ICC under the government's proposals



Of course, if ICC and ETC were not integrated, then there would be a need to decide issues such as who would administer the two means tests, what income measures would be used and how often the means tests would be reassessed. One option would be a system of duplicate means tests for the ICC and ETC, each of which would be similar to that currently in operation in the WFTC. The WFTC means test requires the family to submit a claim detailing and providing evidence of their current income. Duplicating such a system for both of the new credits would not be very practical or attractive, and would introduce an unnecessary complication for people currently claiming the WFTC.

[6] See, for example, J. Ford, E. Kempson and J. England, *Into Work? The Impact of Housing Costs and the Benefit System on People's Decision to Work*, Joseph Rowntree Foundation, York, 1995.

An alternative option for administering the ICC would be a combination of weekly and annual assessment and payments. Since the role of transfer payments for families in the lower range of incomes is to prevent their incomes from falling below a certain minimum level, for these households ICC entitlement would have to be assessed on a short-term basis and the credit should be made available immediately. This could be done on the basis of entitlement to claim JSA/IS or ETC, which would give the family a passport onto weekly ICC for the duration of the JSA/IS or ETC claim.

In addition, the ICC could be made available for a longer period of time on the basis of annual income, especially at the levels of income beyond ETC eligibility. At such levels, the question of whether funds are immediately available is of less concern. To limit the amount of information that families need to supply for this additional means test, it might be possible to exploit income data held by the Inland Revenue. If family income, as recorded by the Inland Revenue in the previous year, fell below a certain threshold, the family would be eligible to claim the ICC for the whole of the following year.

While such a scheme seems worth exploring, there are a number of possible drawbacks. First, only income that the Inland Revenue could attribute to individuals could be used in the means test. So any income taxed at source, such as interest on savings or earnings below the National Insurance lower earnings limit, would have to be excluded. Second, under these arrangements, one period of low income would become the basis of two entitlements — the first at the time of low pay through the passport from JSA/IS or ETC, and the second through the test based on annual income. But as families in this situation would have experienced substantial fluctuation in their income over the year, this effect may not necessarily be undesirable. Third, there is the problem of checking the accuracy of the ICC claim. In particular, there would need to be a means of detecting claims from cohabiting couples representing themselves as a lone parent and single individual. This problem already applies in the benefit system — the introduction of the ICC would simply increase the number of cases for which the government would have to be able to check on the genuine family structure.

Employment tax credit

The introduction of the ICC has been proposed alongside a plan to extend the work-related part of the WFTC to families without children. The ICC would be '... complemented by an Employment Tax Credit paid through the wage packet to working households, with or without children'.[7]

The ETC would represent an extension of the government's welfare-to-work policies. There is some evidence on the impact of in-work benefits and tax credits on levels of employment, which is summarised in Box 6.2. Unfortunately, most of the evidence relates to schemes targeted at families with children. The major exception is the pilot results on earnings top-up (ETU), whose basic structure seems to be close to that of the proposed ETC.

[7] HM Treasury, *The Modernisation of Britain's Tax and Benefit System, Number 5: Supporting Children through the Tax and Benefit System*, November 1999, p. 39.

So far, this has not produced evidence of large changes in behaviour in response to ETU.

Box 6.2. Evidence on the impact on labour supply of in-work benefits and tax credits

UK earnings top-up (ETU)
Since October 1996, a family credit type of in-work benefit has been available to individuals and couples without children in eight pilot areas in the form of the ETU programme. For the purpose of evaluation, information has also been collected in four control areas. Initial findings from the first year of the pilot estimate take-up of the benefit by those entitled to it to have been extremely low: only 11% in a basic scheme and 18% in a more generous scheme. Moreover, most of the expenditure for ETU benefits has gone to workers 'working the hours they would have worked for the wages they would have otherwise accepted', with very little impact on employment behaviour or wages. There is some indication that some individuals might have moved into work more quickly than they otherwise would have, while the data also show that the more generous ETU scheme might have reduced the wages that the long-term unemployed received in new jobs. The failure to detect any large impact of the programme may be due to the short time period of its operation that was analysed. (See R. Ford, L. Finlayson, A. Marsh, M. White and A. Smith, *The Earnings Top-Up Evaluation: Interim Report*, Policy Studies Institute, London, 1999.)

UK family credit (FC)
Analysis of the employment effects of the FC programme suggests that the benefit encouraged employment among lone mothers and had relatively little impact on the probability of working full-time as opposed to part-time (P. Bingley and I. Walker, 'The labour supply, unemployment and participation of lone mothers in in-work transfer programmes', *The Economic Journal*, September 1997). Researchers have also considered the impact on work choices of the introduction of a £10 30-hour bonus in 1995 (A. Duncan and C. Giles, 'Labour supply incentives and recent family credit reforms', *The Economic Journal*, January 1996). For lone parents, the simulations suggest that only marginally more lone parents increased their hours of work to 30 hours than those who reduced their hours to 30. For married women, some increased their working hours to 30, but a significantly larger number reduced their hours away from 30. Indeed, the simulations predicted that as many women would leave the labour market altogether as would increase their hours. This shows how in-work support based on household income can have a negative effect on secondary earners: married women work less because of the additional support given for their male partners' full-time work.

UK working families tax credit (WFTC)
Recent work has simulated the likely employment impact of replacing the FC programme with the WFTC (R. Blundell, A. Duncan, J. McCrae and C. Meghir, 'The labour market impact of the working families tax credit', mimeo, Institute for Fiscal Studies, London, October 1999; P. Gregg, P. Johnson and H. Reed, *Entering Work and the British Tax and Benefit System*, Institute for Fiscal Studies, London, March 1999). The first study suggests that around 2.2% of lone parents (approximately 34,000 women) will move into work, with a minor offsetting reduction in the labour supply as 0.2% of lone parents move from full-time to part-time work. On the other hand, 0.6% of women with employed partners (approximately 20,000 women) are estimated to move out of employment due to the additional income provided to their working

partners. The hours of work for this group are also likely to decline. Again, this illustrates how important it is to consider the effects on secondary earners. The overall impact on men in this first study was positive but small. However, for two-parent households without earners, around 14,000 women and 13,000 men were predicted to enter work. The second study, which models changes in entry rates to employment, holding exit rates from employment constant, finds a very similar impact on long-run participation in the labour market for single parents and also similar positive participation effects for households with no earners.

US earned income tax credit (EITC)

The WFTC is very similar to the EITC, which has operated in the US since 1975. Most studies estimating the employment impacts of the EITC have used simulation methods, using empirical estimates on labour supply from other sources, or have used the control group of single women without children to capture the impact on lone mothers. (For example, see: J. Scholz, 'In-work benefits in the United States: the earned income tax credit', *The Economic Journal*, January 1996; N. Eissa and J. Liebman, 'Labor supply response to the earned income tax credit', *Quarterly Journal of Economics*, May 1996; N. Eissa and H. Hoynes, 'The earned income tax credit and the labour supply of married couples', National Bureau of Economic Research, Working Paper no. 6856, 1998.) The results are very consistent and accord with those reported above for the WFTC reform in the UK. Recent expansions in the programme are estimated to have raised the level of lone mothers' participation in employment, with little detrimental effect on the hours worked for those already in employment. The reforms have also slightly increased the probability of working for the primary earner in two-parent families but, as in the WFTC simulations for the UK, have significantly reduced work among secondary earners, mostly married women. Overall, most studies conclude that the increased generosity of the scheme has increased the level of employment.

Canadian self-sufficiency project (SSP)

The SSP is an in-work benefit that pays an earnings supplement to single parents who have been unemployed and receiving Income Assistance for a year, who move into employment of at least 30 hours a week. The scheme is generous, paying a supplement of half the difference between gross earnings and a target level set above average earnings for women working full-time. Participants are eligible for support for up to 36 months, and support is assessed on an individual basis, independent of other household income.

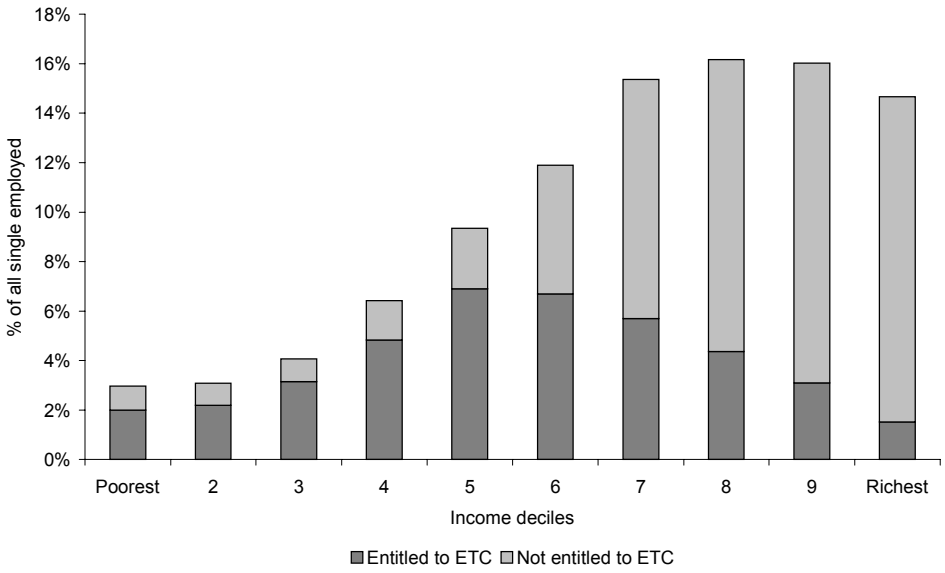
The SSP randomly allocates individuals to a treatment group, where they are eligible for the SSP benefit, or to a control group, where they are not offered the benefit. Initial comparisons from the two groups after 18 months show 29% of the treatment group in work after 15 months, compared with 14% of the control group, with most of this increase at the expense of non-employment rather than part-time work. (Social Research and Demonstration Corporation, *When Financial Incentives Encourage Work: Complete 18-Month Findings from the Self-Sufficiency Project*, September 1998.)

In terms of distributional effects, the ETC proposal could imply a significant transfer of resources. It is not clear from the government's proposals what form the ETC for childless households would take, but one possibility would be an extension of the work-related element of the WFTC to all childless

families, at the same rates as those currently paid to families with children. In this case, the payments would be transferred primarily to two family types. Of all individuals who would gain, 89% would be single people in employment and 7% would be individuals in single-earner couples without children. The total cost of this policy would be almost £4.5 billion per year, of which 91% would be transferred to the single employed and 6% to single-earner couples.

The majority of single employed individuals live in households whose total disposable income falls into middle and upper income groups, as is shown in Figure 6.4. This gives the proportion of single employed individuals in each tenth of the household income distribution. The graph also shows that many of those who would be eligible for the ETC on the basis of their individual earnings live in households whose total income is relatively high.

Figure 6.4. Percentage of single employed individuals by household income



Note: Income deciles are derived by dividing the total population into 10 equally sized groups according to household income adjusted for family size. Decile 1 contains the poorest tenth of the population, decile 2 the second poorest and so on, up to the top decile (decile 10), which contains the richest tenth.
Source: IFS tax and benefit model.

Table 6.1 provides some details on the individuals potentially entitled to the ETC. This divides the single employed group between those who live on their own and those who live with others. The single employed group are predominantly in their early 20s, and almost 80% of them share their household with other people. In 61% of cases, these other people include the recipient's parents. This profile of potential recipients suggests that the government might be reluctant to introduce an ETC for childless families with the same rates as the work-related element of the WFTC. One possibility might be the introduction of an ETC with a substantially reduced rate for those aged under 25.

Table 6.1. Characteristics of those entitled to the ETC based on WFTC work-related element

	Single employed				**Single-earner couples**
	Living alone	Living with others: HoH is not parent	Living with others: HoH is parent	All	All
Percentage of ETC entitled in a given group	22%	17%	61%	100%	100%
Percentage of total new ETC expenditure	15.9%	13.9%	61.6%	91.5%	5.8%
Average age	39.7	32.5	22.5	28.0	45.1
Percentage of individuals under 26	17%	43.8%	82.3%	61.5%	17%

Note: HoH — head of household.
Source: IFS tax and benefit model.

Other possible models for the ETC are to be found in some of the schemes piloted under the New Deal. The details of such schemes and their effectiveness are covered in the next section. These schemes tend to relate benefit entitlement not just to family structure and current income, but also to the amount of time spent unemployed. As such, they tend to target resources on those with the lowest potential in the labour market. For example, the New Deal for those aged at least 50 includes a £60 per week employment credit, which is time-limited to one year and conditional on having been unemployed for six months. Such arrangements would greatly contain the cost and change the focus of the ETC from being mainly redistributory to being more 'welfare to work' orientated. However, such schemes need to be designed with care so as to minimise the degree to which people alter their behaviour, say by staying unemployed longer, in order to qualify for additional assistance.

There is one final question that arises in relation to the ETC — would it be possible to integrate this tax credit fully with PAYE by moving means testing from family income to that of the individual? The main issue here is the degree of redistribution that would be involved. Such a scheme would not only benefit low-income childless individuals and couples, but also high-income couples where one individual was in low-paid employment. To date, while the government has spoken of tax and benefit integration, it has not advanced any arguments in favour of such redistribution.

6.2 The New Deal

The New Deal is a major part of the government's welfare reform measures. The stated aim is to move further away from the state as a passive payer of unemployment benefits and towards enhancing the employment prospects of those who have difficulty finding a job.

The programme has been targeted at specific groups of the unemployed, with an emphasis on the young (18- to 24-year-olds), the long-term unemployed, lone parents and disabled people. Pilots for the New Deal for young people began in January 1998 and the programme took effect at the national level from April 1998. A national scheme for the long-term unemployed started in

June 1998 and for lone parents in October of the same year. By the end of September 1999, there were just over 136,000 18- to 24-year-olds in the New Deal, and more than 81,000 people aged 25 and over.

The windfall tax on the privatised utilities raised £5.2 billion between 1997 and 1999, and all of these funds have been allocated to financing the New Deal. Table 6.2 shows the government's estimates of the allocation of windfall tax receipts to different elements of the programme in November 1999. The New Deal for young people is projected to receive the largest proportion of the funds (£2.2 billion). So far, total expenditure on the New Deal has been less than initially expected due to the buoyancy of the labour market. Schools have been allocated £1.35 billion, and £570 million has been left unallocated, although some options for how it might be spent are considered below.

Table 6.2. Allocation of the windfall tax, 1997–98 to 2001–02

Spending by programme (£m)	**1997–98**	**1998–99**	**1999–00**	**2000–01**	**2001–02**	**1997–02**
New Deal for 18- to 24-year-olds	50	210	710	630	640	2,240
New Deal for those 25 and over	0	20	170	210	90	490
New Deal for those 50 and over	0	0	10	20	20	40
New Deal for lone parents	0	50	50	50	40	190
New Deal for disabled people	0	10	30	90	80	210
New Deal for the partners of unemployed people	0	0	20	20	20	50
New Deal for schools	100	270	340	330	310	1,350
Other	0	35	20	10	10	75
Total expenditure	150	580	1,350	1,350	1,210	**4,630**
Unallocated						**570**
Windfall tax receipts	2,600	2,600				**5,200**

Note: 'Other' includes out-of-school childcare, start-up costs for the University for Industry and enterprise development.
Source: HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, November, 1999.

The elements of the New Deal

The programme is composed of several parts, with different options offered to different groups of the unemployed.

The New Deal for young people (NDYP) is compulsory for all those aged 18–24 who have been receiving the jobseeker's allowance (JSA) for more than six months. Initially, individuals enter a 'Gateway' period, where they are assigned a personal adviser who gives them extensive assistance with job search. If the unemployed person is still on JSA at the end of the Gateway period (formally, a maximum of four months), they are offered up to four options:

- entry into full-time education or training for up to 12 months for those without basic qualifications (without loss of benefits);
- a job for six months with a voluntary sector employer (paid a wage or allowance at least equal to JSA plus £400 spread over the six months);

- a job on the Environmental Task Force (paid a wage or allowance at least equal to JSA plus £400 spread over the six months);
- a subsidy to a prospective employer for six months, with training for at least one day a week (£60 per week plus an additional £750 training subsidy spread over the six months).

If an option is refused, the claimant is liable to suffer a benefits sanction. Initially, sanctions take the form of withdrawal of benefit for two weeks, and further refusals may result in repeated four-weekly withdrawals. Individuals returning to unemployment after an option go onto the 'follow-through' programme of job assistance, which is essentially the same as the Gateway.

Out of the four options, education and training has been the most popular (47.1% of all those who had joined the NDYP option by the end of April 1999 chose education and training). The employer's option had a much lower take-up than anticipated (only 20.5%).[8] The reasons for this low take-up are uncertain, but it is worth noting that low take-up has often been a problem for wage subsidy schemes in other countries (see Box 6.4 later). Additionally, the current New Dealers who fail to get unsubsidised jobs during the Gateway period may have very poor basic skills. The failure to secure a job during the Gateway might act as a signal to employers that the individual is not yet ready to take on a job.

The scheme for the long-term unemployed gives all those aged 25 or over who have been unemployed for more than two years access to a personal adviser to assist them with job search. They are also eligible for a subsidy of £75 per week for six months provided directly to the employer. Alternatively, they can enter full-time education courses for up to 12 months without loss of benefit.

Lone parents receive assistance under the New Deal if they are looking after at least one school-aged child on their own, and are already claiming or making a claim for income support. The assistance takes the form of personal advice and support to improve employment prospects. Similar support has been offered to the partners of unemployed people nationally since April 1999.

The government has financed pilot programmes of extensions of the New Deal to those aged 50 and over and to the disabled unemployed. A New Deal for communities aims to increase employment in deprived areas by providing incentives for businesses to move into these neighbourhoods. Other pilot programmes focused on intensifying the job search advice, on help with skills such as punctuality and communication, and on greater geographical mobility.

The government intends to extend and intensify the New Deal. The New Deal for those aged 50 and over will be launched nationally in April 2000. It includes personal advice and help with job search, an employment credit of £60 a week for full-time work and self-employment and of £40 a week for part-time employment for up to one year, and a training grant of up to £750. The programme is voluntary and available to both unemployed and inactive people who have been receiving benefits for at least six months.

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[8] R. Riley and G. Young, *First Year Analysis of Implications for the Macro-Economy*, Employment Service Research and Development ESR34, 1999.

The government has also piloted an intensive Gateway approach for young people, providing additional help with job search, especially in the fourth month of the Gateway. This approach will also be launched nationally from Spring 2000.

Following pilot schemes launched in November 1998, the 1999 Pre-Budget Report announced an intensification of the New Deal for the long-term unemployed (i.e. those unemployed for two years or more) aged 25 and over. The programme will be implemented nationally in Spring 2001. It will include an enhanced search stage, and will bring 'the rights and responsibilities for those aged 25 and over closer into line with those for young people'.[9] Taking up an option will no longer be voluntary.

How should the New Deal work?

The principal idea behind all active labour market programmes is to assist those who find it difficult to compete effectively in the labour market. The New Deal contributes to this by assisting with job search, providing employment subsidies and giving opportunities to acquire human capital. For the latter, the New Deal includes formal education and training, as well as opportunities to gain work experience on various subsidised employment schemes.

The aims of particular policies and the groups at which they are targeted are listed in Box 6.3. There is a cluster of different policies, all with the aim of reducing unemployment.

Policies targeted on one particular group of people might have the unintended effect of harming others. The policy will be less effective in raising net employment if there is displacement (when creation of jobs in one firm results in reduction in employment elsewhere) and substitution (when someone covered by the scheme gets a job at the expense of someone already working or another person looking for a job). For example, the Employment Service may be putting its energies into finding New Dealers a job at the expense of the non-New-Deal unemployed. However, the argument behind targeting specific groups of the unemployed — groups perceived as disadvantaged in the labour market — is that by increasing the number of employable people, the effective labour supply in the economy will rise, leading to downward pressure on wages and thus higher employment overall. The evaluation of welfare-to-work programmes needs therefore to consider the counter-factual — what would employment have been if the policy had not been implemented?

[9] HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, November 1999.

Box 6.3. Components of the New Deal policies

A personal adviser
Gives extensive help with job search and advice. Obligatory in the New Deal for young people (the Gateway programme) but voluntary for all other New Deal target groups. Interviews with the personal adviser are expected to help in matching jobs to people and enhancing links with employers. Under the compulsory scheme, obligatory interviews reduce the value of not working and help reduce fraud.

Subsidies for employers employing New Deal participants
Available as one of the four options following the Gateway period under the New Deal for young people (£60 per week) and under the New Deal for the long-term unemployed (£75 per week). These subsidies effectively lower the wage paid by the employer. It is hoped that during the 26 weeks of the subsidy, the productivity of employees will rise enough to encourage the employer to keep them on after the subsidy runs out.

Employment credit paid to the individual
Available under the New Deal for those aged 50 and over (£60 or £40 per week). This directly increases the initial wage of the individual to make employment more attractive.

Twelve months of training or education
Available under the New Deal for young people, for the long-term unemployed and for those aged 50 and over. It is expected to increase future employment prospects by raising skills and productivity.

Employment in the Environmental Task Force or with a voluntary sector employer
Available under the New Deal for young people as an option following the Gateway period. These are expected to increase employability by providing on-the-job training and work experience.

Is the New Deal working?

Since the New Deal started, youth unemployment has fallen from 12.3% in the spring quarter (March–May) of 1998 to 10.9% in the summer quarter (June–August) of 1999 (Table 6.3) and youth employment rates have risen from 66.7% to 67.4% over the same period (Table 6.4). Long-term youth unemployment has fallen dramatically. Comparisons of this type of statistic before and after the New Deal are not very meaningful, however, as the programme is specifically designed to stop 18- to 24-year-olds remaining on jobseeker's allowance for more than 10 months (the six months before they enter the scheme and up to four months on the Gateway). Long-term unemployed who return to the unemployed pool after completing options are reclassified as short-term unemployed, so that the introduction of the New Deal has, by definition, reduced the number of young long-term unemployed.

Table 6.3. Unemployment by age-group (%, seasonally adjusted)

Year [a]	All aged 16 and over	18- to 24-year-olds	25- to 49-year-olds	50–64 (males) 50–60 (females)
1992	9.9	15.8	8.6	8.3
1993	10.5	17.8	8.8	9.5
1994	9.8	16.3	8.4	8.9
1995	8.8	15.4	7.6	7.4
1996	8.3	14.6	7.1	6.8
1997	7.3	13.1	6.0	5.9
1998	6.3	12.3	5.2	4.8
1999	6.2	11.7	5.0	4.6
1999 Jun–Aug	5.9	10.9	4.8	4.2

[a] Spring quarters (Mar–May) are used unless otherwise specified.
Note: The unemployment rate given here is based on the International Labour Organisation (ILO) definition of unemployment, rather than on the number of individuals claiming unemployment-related benefit.
Source: Office for National Statistics, *Labour Market Trends*, November 1999.

Table 6.4. Employment by age-group (%, seasonally adjusted)

Year [a]	All aged 16 and over	18- to 24-year-olds	25- to 49-year-olds	50–64 (males) 50–60 (females)
1992	57.1	65.9	77.1	63.2
1993	56.3	64.0	76.8	61.9
1994	56.7	63.7	77.2	62.4
1995	57.1	64.3	77.7	63.0
1996	57.5	65.9	78.0	63.5
1997	58.3	66.6	79.1	64.5
1998	58.7	66.7	79.8	65.4
1999	59.2	66.8	80.4	66.2
1999 Jun–Aug	59.4	67.4	80.8	66.2

[a] Spring quarters (Mar–May) are used unless otherwise specified.
Source: Office for National Statistics, *Labour Market Trends*, November 1999.

Both Tables 6.3 and 6.4 show a clear trend of increasing employment and falling unemployment for 18- 24-year-olds since 1994, long before the introduction of the New Deal. Furthermore, the job prospects of those aged 25 and over also improved in 1998 and 1999 even though only a very small number of the age-group are affected by the New Deal. Consequently, the extent of the contribution of the New Deal to increased employment after April 1998 cannot be directly established.

More fundamental is the question of how permanent the fall in unemployment is going to be. Many of those who would have been unemployed are in various New Deal options (e.g. full-time education and training or the Environmental Task Force) and it is difficult to say how much their long-term employability is going to rise due to this experience. Only by following individuals in the years after they leave these programmes will it be possible to judge their success at raising their employment prospects in the long term. Existing US evaluations are pessimistic about the ability of temporary government jobs and

training schemes to raise the long-term prospects of the young unemployed.[10] The success of the employment subsidy option will also hinge on the extent to which the experience of work and training will raise productivity, thereby enabling workers to keep their jobs when the subsidy runs out.[11] Box 6.4 summarises the existing evidence on the effectiveness of wage subsidy programmes.

It is possible to examine the performance of the Gateway period of job assistance using publicly available data.[12] After the start of the New Deal, the proportion of male 24-year-olds who got jobs between the sixth and eighth month of unemployment (the initial part of the Gateway period) increased from 15.2% to 18.2%. In other words, they were 3 percentage points more likely to get jobs in 1998 (when the New Deal started) than in 1997. By comparison, for 25-year-old men who are not eligible for the New Deal, the likelihood of getting a job fell by 0.7% over the same period (from 15.7% to 15.0%). Assuming that these two groups are affected by the same trends in the overall economy, this seems to imply that the Gateway increased the chances of employment for the 24-year-olds by 3.7 percentage points. Attributing this increase entirely to the New Deal is likely to be an overestimate of the effect of the Gateway for several reasons. Fewer 25-year-olds may have got jobs because they were now in competition with the newly motivated 24-year-olds or because the Employment Service focused its efforts on the younger claimants. A better group for comparison might be older workers who are less likely to be close substitutes for the New Dealers. However, comparing the initial impact of the Gateway on the 24-year-olds with changes in employment of 26- to 34-year-old men suggests that the New Deal effect is actually slightly higher (at 3.8 percentage points).

Some caution is required over these results. First, the number of unemployed on which the figure is based is quite small. Second, the existence of the New Deal may have changed the type of people still claiming jobseeker's allowance — some people might wait longer on JSA than they otherwise would have, to take advantage of the extra help being offered on the New Deal. The proportion of men aged 24 who left JSA during the sixth month of unemployment fell by 2.3 percentage points from 1997 to 1998. This is the month immediately preceding assignment to the New Deal. By comparison, for the 25-year-old men, this proportion increased by 0.7 percentage point. This would suggest that the New Deal has induced 3% of claimants to delay their exit from unemployment for one month in order to enrol in the programme. Finally, the target group is relatively small — 80% of the young unemployed claim JSA for less than six months and most of the unemployed (especially the long-term unemployed) are not young.

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[10] For a recent survey, see M. White, P. Auspos and J. Richhio, 'A review of US and European literature on the micro-economic effects of labour market programmes for young people', Employment Service Report no. 20, 1999.

[11] B. Bell, R. Blundell and J. Van Reenen, 'Getting the unemployed back to work: the role of targeted wage subsidies', Institute for Fiscal Studies, Working Paper no. 99/12.

[12] These numbers are based on an analysis of the Joint Unemployment and Vacancies Operating System (JUVOS) data, which contain information over time for a sample of 5% of those claiming unemployment-related benefits in the UK.

Box 6.4. The international evidence on the effectiveness of wage subsidies

Previous UK experience

The use of wage subsidies to encourage the unemployed to move into work is not new in Britain. Prior to the introduction of this government's New Deal, the previous Conservative government had already experimented with several initiatives in this area, including the jobstart allowance, the Workstart scheme and Jobmatch pilots. The common feature of these schemes was the payment of a fixed weekly subsidy, typically of around £50 or £60, for the initial months of employment of a long-term unemployed individual, payable either to the individual (jobstart allowance and Jobmatch) or to the employer (Workstart). In addition, an employers' National Insurance contributions holiday for the long-term unemployed was introduced in April 1996. However, these initiatives have been criticised for failing to raise net employment. For example, one analysis of the Workstart pilots (where firms received a subsidy) concluded that only 17% of the Workstart vacancies represented new employment that would not have existed without the subsidy and that much of the employment of the long-term unemployed occurred at the expense of the shorter-term unemployed. (J. Atkinson and N. Meager, *Evaluation of Workstart Pilots*, Institute for Employment Studies, Report no. 279, 1994.)

US experience

The targeted jobs tax credit (TJTC) was introduced in the US in 1978 and operated for most of the period until 1994. The TJTC originally offered a tax credit of 50% of the first year's wages and 25% of the second year's wages, subject to a maximum, to firms hiring workers from specific target groups. The target group varied over time, but the main beneficiaries were economically disadvantaged youths and public assistance recipients. Various studies have found a relationship between use of the tax credit and increased employment for the target groups, but it is difficult to distinguish whether the credit created additional employment or whether the credit was simply used more when firms already intended to expand employment. (K. Hollenbeck and R. Willke, *The Employment and Earnings Impact of the Targeted Job Tax Credit*, Upjohn Institute for Employment Research, 1991; J. Bishop and M. Montgomery, 'Does the targeted jobs tax credit create jobs at participating firms?', *Industrial Relations*, 1993.)

In 1983, the Job Training Partnership Act (JTPA) introduced temporary wage subsidies of 50% of wages for up to six months to encourage firms to employ and provide on-the-job training to JTPA participants. Overall, subsidy and training have been found to have substantial positive effects on earnings for enrolled adults, especially women, not only during the six months of participation in the programme, but also in the first two post-programme years. However, no positive effects were found for the earnings and employment of out-of-school disadvantaged youth. (H. Bloom et al., *The National JTPA Study: Overview: Impacts, Benefits and Costs of Title II-A*, Abt Associates, January 1994.)

One concern about the TJTC was the very low rate of take-up. This may have been due to the administrative burden, but it could also be connected with stigma effects, either because potential employees did not wish to declare themselves eligible for the subsidy or because employers could use the subsidy to identify an individual with a particular target group, one that the employer associated with negative characteristics. An experiment in Illinois found that a re-employment bonus paid to employees had a positive impact on

finding work, but that an identical bonus redeemed by employers had no beneficial effect (S. Woodbury and R. Spiegelman, 'Bonuses to workers and employers to reduce unemployment: randomized trials in Illinois', *American Economic Review*, September 1987). Moreover, experiments in Ohio and Wisconsin found that treatment groups who were encouraged to reveal their eligibility for targeted tax credits to potential employers were significantly less likely to find employment than the control group, who did not have to reveal any such subsidy (G. Burtless, 'Are targeted wage subsidies harmful? Evidence from a wage voucher experiment', *Industrial and Labor Relations Review*, October 1985; K. Hollenbeck and R. Willke, op. cit.).

Other OECD countries

Other OECD countries have also experimented with wage subsidy programmes. Many focused on marginal employment subsidies (payable for net additional employment) during the 1970s, but targeted schemes have since become more popular, especially those for the long-term unemployed and young unemployed. Evaluations of the marginal employment subsidies indicate that there was some benefit through increased employment, although most analysis is based upon asking employers whether the subsidy altered their behaviour. The targeted schemes have been found to have some beneficial effects in reducing the duration of unemployment — for example, in the Netherlands and Italy — and in enhancing the probability of retaining the job after the subsidy ended — for example, in Denmark and for the young unemployed in Australia. (L. Katz, 'Wage subsidies for the disadvantaged', National Bureau of Economic Research, Working Paper no. 5679, July 1996; N. Adnett and A. Dawson, 'Wage subsidies and European unemployment: theory and evidence', *Economic Issues*, March 1996.)

Reports on the expansion of the Australian Jobstart subsidies to all the long-term unemployed suggest that employers were not keen to hire from this more general group, even with the subsidies, due to concerns over poor skill levels and work motivation (D. Finn, *Working Nation: Welfare Reform and the Australia Job Compact for the Long Term Unemployed*, Unemployment Unit, London, 1997). The targeted schemes have been criticised for imposing large displacement effects and dead-weight loss (Organisation for Economic Co-operation and Development, *The OECD Jobs Study*, Paris, 1994).

The finding of small positive effects on employment of the New Deal also emerges from other recent evaluations. Some recent analyses of the pilot areas and regional data have estimated that youth employment was about 18,000 higher by October 1999 as a result of the New Deal.[13] Using a macroeconomic model, the same authors find that GDP will increase by 0.1% in each of the years 1998 to 2001. A proportion of the increase in GDP arises from macroeconomic effects, over and above the impact of the NDYP on the level of employment.[14]

This work also claims that 'the NDYP is close to being self-financing', when measured by the change to the government's deficit during the years in which

[13] R. Riley and G. Young, *New Deal: Early Findings from the Pathfinder Areas*, Employment Service Research and Development ESR33, 1999.

[14] R. Riley and G. Young, *First Year Analysis of Implications for the Macro-Economy*, Employment Service Research and Development ESR34, 1999.

the NDYP operates.[15] But the deficit is reduced in part by interest income accruing from the early collection of the windfall tax on privatised utilities. This does not correspond to what might normally be understood by the use of the term 'self-financing', i.e. that there would be no need for structural changes to the tax system in order to fund the scheme. Ignoring the interest income from the windfall tax, this research indicates that half of the expenditure on the NDYP could be financed by the additional revenue generated by extra economic activity arising from the introduction of the NDYP.

The future of the New Deal

A 're-engineered' New Deal seems very likely to continue in some form after 2002 and to become a long-standing feature of the UK labour market. It is most likely that funds for the continuation of the programme will come from general revenue, rather than from a successor to the one-off windfall tax. Given that £570 million remains unallocated, it is probable that the current programme will be extended further — the exact form of that extension will depend on the relative performance of the different components. The government has recently announced plans to introduce a compulsory course lasting two to three weeks for young people who join the New Deal. It will cover basic presentation skills and serve to screen participants for literacy and numeracy difficulties, in order to address these problems early in the programme. In the future, the government might put greater emphasis on intensifying job search and extend mandatory options for an ever-larger proportion of benefit recipients. Other possibilities include giving assistance to people at an earlier stage of their period of unemployment, and changing the value of employment subsidies if these prove effective in providing long-term employment. The employers' wage subsidy is the element that is most vulnerable to being cut, due to its low take-up. Such a cut could be premature. The long-term success of the New Deal hinges critically upon improving employment prospects through the acquisition of better job skills, either in the Gateway period or, more likely, during one of the options. It will take some time to monitor the extent to which these dynamic gains in worker productivity really have been boosted by the New Deal.

[15] Ibid., p. 24.

7. Excise duties

Excise duties are additional taxes levied on goods such as alcohol, tobacco and petrol. Since 1993, successive governments have pre-committed themselves to real increases in road fuel and tobacco duties. In the Pre-Budget Report, the current government announced an end to these automatic escalators. In this section, we consider what effect this will have on government tax revenue. We also discuss the government's announcement that any revenue from future real increases in tobacco duty will be spent on health, and any revenue from future real increases in road fuel duty will be spent on 'improving public transport and modernising the road network'.[1]

Excise duties are forecast to raise around 12% of total government revenue in 1999–00 but some of this revenue is under threat. In the case of tobacco, the main threat appears to come from smuggling, but legitimate cross-border purchase of alcohol is also important, and in Section 7.2 we consider what effect cutting duty on alcohol or tobacco would have on indirect tax revenue.

Duty is also imposed on gambling — in different ways and at different rates on different types of gambling. Recently, some of the UK's largest bookmakers have located offshore so they can offer their customers tax-free betting. This also has the potential to cost the government revenue. We consider this issue and also discuss the taxation of gambling more generally in Section 7.3.

7.1 Excise duty changes

Since 1993, there has been a pre-commitment to annual real increases in road fuel and tobacco duty. In the July 1997 Budget, these duty escalators were increased to their current levels of a 5% annual real increase for tobacco duty and a 6% annual real increase for road fuel duty. It was announced in the Pre-Budget Report that there would be an end to both of these automatic escalators. This section discusses the revenue effect of these changes and the possible conflict with government targets that are in place to reduce smoking and environmental damage. The government also announced that any additional revenue from real increases in tobacco duty will in future be spent on improved healthcare and any additional revenue from real increases in road fuel duty would go into a ring-fenced fund for improving public transport and the road network. In this section we also discuss the implications of this announcement. Setting aside taxes to spend in specified areas in this way is referred to as hypothecation.

Any increases in road fuel and tobacco duties will in future be made on a Budget-by-Budget basis. If future increases are less than the current levels of the escalators, the government will receive less revenue. A 6% annual increase

[1] HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999.

in road fuel duties would have raised approximately £1.4 billion in 2000–01 and £2.8 billion in 2001–02. The revenue raised from the tobacco escalator would have been £360 million in 2000–01 and £740 million the next year.[2]

A possible economic justification for imposing additional taxes on goods such as alcohol, tobacco and petrol is that these goods are often thought to impose external costs, such as adverse health effects or environmental pollution, that may not be taken into account by individuals when deciding how much to consume. The government has set itself targets to reduce smoking and has legally binding targets to reduce greenhouse emissions, so in addition to raising revenue, excise duties may contribute to meeting these commitments.

As well as the legally binding target of reducing greenhouse emissions by 2008–12 to 12.5% below their 1990 levels, the government has also set itself a target of reducing carbon dioxide emissions to 20% below their 1990 levels. The road fuel escalator has been the main fiscal instrument used to tackle greenhouse emissions and achieve these targets so far. There are alternatives to increasing duty on road fuel (such as congestion charging) as a way of trying to reduce environmental pollution. Since the amount of road fuel used is only loosely linked to the levels of some (typically local) pollutants and congestion, these alternatives might provide a more targeted way of reducing environmental damage. The government is also introducing new legislation to control carbon dioxide emissions from the business sector, which accounts for around 40% of UK emissions. From April 2001, the Climate Change Levy will be introduced which will be charged on the business use of energy. So although the government is ending the road fuel duty escalator, new ways of attempting to control environmental pollution are being introduced.

Table 7.1. The price effects of various increases in excise duty[a]

	Beer	Wine	Spirits	Cigarettes	Petrol, 4 star	Unleaded petrol	Derv fuel
				Current			
Duty	£0.25	£1.12	£5.48	£1.65	£0.53	£0.47	£0.50
VAT	£0.26	£0.47	£1.77	£0.58	£0.11	£0.10	£0.11
Ad valorem				£0.86			
Old price	£1.76	£3.16	£11.86	£3.91	£0.76	£0.68	£0.72
Real increase:[b]				**Increase in price**			
0%[c]	0.3p	1p	7p	3p	1p	1p	1p
1%	1p	3p	14p	6p	1p	1p	1p
3%	1p	5p	26p	12p	3p	2p	2p
5%	2p	8p	39p	18p	4p	3p	4p
6%	2p	9p	46p	21p	4p	4p	4p

[a] Typical prices at January 1999 are taken from HM Customs and Excise, *Annual Report 1998–99* and uprated to September 1999 using RPI sub-indices. The prices are for a pint of bitter (3.9% abv) on licensed premises, a 75cl bottle of table wine (5–15% abv) in retail premises, a 70cl bottle of whiskey (40% abv), a packet of 20 cigarettes and a litre of 4-star petrol, unleaded petrol and derv fuel (diesel). Figures have been rounded to the nearest penny.
[b] For the required real increase in *total* duty on cigarettes (i.e. *ad valorem* plus specific duty), the real increase in *specific* duty has to be greater if the *ad valorem* rate remains at 22%. For example, a 5.8% real increase in specific duty is required for a 5% real increase in total duty.
[c] This is in line with inflation at 1.1% — the annual inflation figure to September 1999.

[2] HM Treasury, *Financial Statement and Budget Report*, March 1999, Table 1B.2.

Since any future increase in duty on cigarettes and road fuel, and of course alcohol, will be made on a Budget-by-Budget basis, Table 7.1 shows the increases in prices of different goods that would result from a range of real increases in duty. The full 6% road fuel escalator would have added 5 pence to the price of a litre of four-star fuel and the full 5% tobacco escalator would have added 18 pence to the price of a packet of 20 cigarettes.

In addition to the end of the road fuel and tobacco escalators, the Chancellor also announced in the Pre-Budget Report that any additional revenue from real increases in tobacco duties will in future be allocated, or hypothecated, to healthcare spending, while any additional revenue from real increases in road fuel duties will be allocated to spending on transport and roads. In order to be sure that the hypothecated revenue is really additional money, it is important to know what the level of spending would have been in the absence of hypothecation.

In the Comprehensive Spending Review (CSR), the government set out its spending plans for the period up to March 2002. In theory, any revenue allocated to transport and roads or healthcare will have to be over and above the amount specified in the CSR, making the hypothecated revenue easier to identify. There is, however, a contingency fund which sets aside additional funds to be used if necessary, over and above amounts set out in the spending plans. Currently, there is £3.9 billion set aside for 2000–01 and £6.4 billion for 2001–02 (see Table 3.1 in Chapter 3). In the past, the NHS has often been allocated funds; for example, in November 1998, an extra £250 million was allocated to the NHS. Health and transport could in the future receive less from the contingency fund than they would have done in the absence of hypothecation, so there is no way of guaranteeing an increase in spending even in the short term. In the longer term, any new spending plans beyond March 2002 could take account of the potential hypothecated revenue, and so higher spending in these areas cannot be guaranteed in the future.

In practice, the amount of revenue that is raised from tobacco duty is small in comparison with total spending on health. Spending on health in 1998–99 was £45 billion, which contrasts with £360 million that would be raised in 2000–01 from a 5% real increase in duty on tobacco. This and the fact that tobacco revenue is also small compared with the size of the contingency fund make it even harder to monitor whether spending is higher than it would otherwise have been. The revenue raised from a 6% real increase in road fuel (£1.4 billion) is a very significant share of total spending on transport (which was £8.6 billion in 1998–99). In fact, the Chancellor stated in his Pre-Budget Speech that if there were any future real increases in road fuel duty, they would be lower than 6%, which would make their effect on the transport budget more difficult to monitor.

One argument made in support of hypothecation is that it makes people more willing to pay tax, so that more revenue would be collected if hypothecation were used more widely. But if the reason why people are more willing to pay tax is that they believe the government is required to spend a minimum amount in those areas as a result, the fact that this is difficult to guarantee even in the short term, and even harder in the longer term, should be made clear.

Even if the government could guarantee that allocating revenues in this way would lead to an increase in spending in these areas, it is still not clear that it is a good idea. Although there are some links between smoking behaviour and health spending, for example, the optimal levels of tobacco taxation and health spending are determined by a wide range of different factors. In addition, if spending in the absence of the hypothecation were fixed, and revenue from tobacco and road fuel duties were lower than expected, it is unlikely that people would be happy that spending on health and transport would be lower than expected as a result. Equally, if revenue from tobacco and road fuel duties were higher than expected, people might prefer the extra funds to be spent on areas other than health and transport, such as education for example. Also, the fact that the government is trying to reduce the consumption of tobacco and road fuel to meet health and environmental targets might imply lower revenue in future. Under genuine hypothecation, any reduction in consumption would lead to lower spending on health and transport, which does not seem sensible.

Hypothecation of tobacco and road fuel taxes cannot guarantee higher spending on health and transport, particularly in the long term. Since it is not clear that it is desirable to link taxation on tobacco to spending on health or taxation on road fuel to spending on transport, even if it were possible to guarantee higher spending, this new development in taxation policy is not very appealing.

7.2 Tax revenues and the Single Market

In its Pre-Budget Report, the government expressed concern about the amount of cross-Channel smuggling of alcohol and particularly tobacco that is taking place. Cross-border shopping — both legitimate and illegal — is driven partly by high tax rates on tobacco and alcohol in the UK compared with neighbouring EU countries. Table 7.2 compares the duty rates, on different types of alcohol and on cigarettes, in different EU countries. Duty on beer, for example, is six-and-a-half times higher in the UK than in France. The VAT rate in each country is also reported.

Both smuggling and legitimate cross-border shopping represent a loss of indirect tax revenue for the government. The latest estimates of revenue lost (from both excise duty and VAT) through these activities are shown in Table 7.3.

This Budget, as with all Budgets, there will be pressure on the Chancellor from the alcohol and tobacco industries to cut duty. To the extent that it would lead to lower prices, cutting duty would reduce the financial incentive to shop across the border — either legitimately or illegally — and so there would be an increase in domestic sales. One consideration for the Chancellor is whether cutting duty would enable him to recoup some of the revenue that he is losing to legitimate and illegitimate imports or whether it would result in further revenue losses. Following a cut in excise duty, domestic sales would rise, but less revenue would be collected on each unit sold. The overall effect on revenue would depend on the balance of these two effects. For the overall effect to be positive, the additional revenue from the increase in sales would have to outweigh the loss on each unit that was being sold in the UK before

the cut in duty. Whether this would be the case depends on how responsive the tax base, i.e. domestic duty-paid demand, is to changes in price (the own-price elasticity of demand). The more responsive domestic demand is to changes in price, the more likely it is that the increase in sales following a cut in duty will be large enough for the extra revenue collected to outweigh the revenue lost on each unit that was previously being bought at the higher rate of duty.

Table 7.2. EU duty rates and VAT, at 1 September 1999[a]

Country	Standard VAT rate (%)	Beer, pint, 5% abv (pence)	Wine, 75cl, 11% abv (£)	Spirits, 70cl, 40% abv (£)	Cigarettes, pack of 20 (£)
Austria	20	7	nil	1.41	0.88
Belgium	21	8	0.25	3.23	1.01
Denmark	25	18	0.49	7.20	1.63
Finland	22	56	1.23	9.81	1.43
France	20.6	5	0.02	2.82	1.16
Germany	16	4	nil	2.54	1.02
Greece	18	6	nil	1.79	0.80
Ireland	21	39	1.43	5.41	1.56
Italy	20	7	nil	1.26	0.78
Luxemburg	15	4	nil	2.03	0.74
Netherlands	17.5	8	0.25	2.93	0.94
Portugal	17	6	nil	1.58	0.74
Spain	16	3	nil	1.34	0.46
Sweden	25	31	1.53	10.53	1.31
UK	17.5	33	1.12	5.48	2.50

[a] Duty on cigarettes at 1 October 1999.
Sources: Figures for alcohol provided by the Wine and Spirits Association; figures for cigarettes taken from the Tobacco Manufacturers Association website.

Table 7.3. Estimates of revenue losses and tax receipts, £ million

	Loss due to cross-border shopping in 1998	Loss due to cross-Channel smuggling in 1999	Duty plus VAT receipts in 1998[a]
Tobacco	85	1,055	10,395
Alcohol	290	215	11,122
Total	375	1,270	21,517

[a] Duty plus VAT receipts are calculated using figures for excise duty receipts taken from Office for National Statistics, *Financial Statistics*, December 1999, plus an amount for VAT based on figures for consumer expenditure on alcohol and tobacco taken from Office for National Statistics, *Consumer Trends 1999*.
Note: Figures do not include any amounts for smuggling by air passengers, or revenue evaded through commercial fraud or in very large freight consignments.
Source: HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999.

Alcohol

As well as the effect of cutting duty on beer on revenue from beer, for example, it is also important to consider the effect of cutting duty on demand for, and therefore the revenue from, all other goods (the cross-price effects). If the price of beer goes down (following a tax cut), then people may switch away from buying other types of alcohol such as wine or spirits (if they are

considered to be substitutes) and hence there would be a fall in revenue from wine and spirits. In this case, we are less likely to see an increase in total revenue following a tax cut on beer. Alternatively, beer and wine may be complements, in which case when the price of beer falls, not only do people buy more beer, they also buy more wine. This means there would be an increase in revenue from wine, so we are more likely to see an increase in total tax revenue following a tax cut on beer. The size of these cross-price effects, measured by cross-price elasticities, is important when considering the effect on total indirect tax revenue of cutting duty on a particular type of alcohol.

Also important for the total revenue effect is the rate at which the complement or substitute is taxed. The more heavily the complement or substitute is taxed relative to the good itself, the more likely it is that the change in revenue from the complement or substitute will outweigh any opposite effect from revenue on the good itself. This is because, for a given change in demand, the higher the tax rate is, the greater the change in revenue will be. In the UK, spirits are taxed at a higher rate than beer or wine. Excise duty plus VAT on spirits, as a proportion of final price, is 61% compared with 29% on beer and 50% on wine.[3]

In order to assess the effect on revenue of changing the tax rate, we need to know about the relationship between changes in taxes — and prices — and the tax base (the level of domestic demand for these goods).[4] Direct evidence on cross-border shopping or smuggling is not needed since changes in domestic demand will reflect changes in the amount of both of these activities. Information on the amount spent on domestic alcohol by UK households can be used to estimate own-price elasticities (for example, the effect of a change in the price of beer on the quantity of beer consumed) and cross-price elasticities (for example, the effect of a change in the price of beer on the quantity of wine consumed). These are reported in Table 7.4 for the UK in the period since the completion of the Single Market (further details are contained in Appendix B).

The numbers in Table 7.4 show the proportional change in the quantity demanded of the goods in each column with respect to proportional changes in the price of the goods in each row. Own-price elasticities are given in bold, while the cross-price elasticities are in normal type. For example, the own-price elasticity of beer is –0.76. This means that if the price of beer falls by 1%, there will be a 0.76% rise in the quantity of beer demanded. The elasticity of wine with respect to the change in the price of beer is –0.60. The fact that this number is negative implies that a fall in the price of beer would lead to an increase in demand for wine, so beer and wine are complements. The amount by which demand for wine would rise for a 1% fall in the price of beer is

[3] Tax as a proportion of price is calculated using typical prices of a pint of beer at 3.9% abv on licensed premises, a 75cl bottle of table wine at 5.5–15% abv in retail outlets, and a 70cl bottle of spirits at 40% abv in retail outlets, taken from HM Customs and Excise, *Annual Report 1998–99*.

[4] A more detailed discussion of tax revenues on alcohol and the Single Market can be found in I. Crawford, Z. Smith and S. Tanner, 'Alcohol taxes, tax revenues and the Single European Market', *Fiscal Studies*, vol. 20, no. 3, pp. 287–304, 1999. Some further details of the relationship between tax rates and tax revenues are contained in Appendix B.

0.6%. Spirits and beer are also complements, while spirits and wine are substitutes.

Table 7.4. Estimated elasticities for the UK, 1993–96

Change in price of:	Change in quantity of		
	Beer	**Wine**	**Spirits**
Beer	**–0.76**	–0.60	–0.59
Wine	–0.17	**–1.69**	0.66
Spirits	–0.20	0.77	**–0.86**

Source: I. Crawford, Z. Smith and S. Tanner, 'Alcohol taxes, tax revenues and the Single European Market', *Fiscal Studies*, vol. 20, no. 3, pp. 287–304, 1999.

Taking account of both own- and cross-price elasticities, a cut in duty on either beer or wine would lead to a reduction in overall indirect tax revenue.[5] In the case of spirits, the current tax rate appears to be close to the rate that maximises revenue, so that either a cut or an increase in duty would lead to fall in indirect tax revenue.

Cigarettes

Underlying the analysis of the revenue effect of cutting duty is the idea that there is a simple relationship between tax rates, tax revenues and the price elasticity of demand (see Appendix B for more details). Using this relationship, it can be shown what the elasticity of demand for cigarettes would have to be if the current tax rate and price were revenue-maximising. It is possible to carry out a preliminary analysis of the revenue effect of cutting duty on cigarettes using information on prices and tax rates and some estimate of the own-price elasticity of demand for cigarettes.

The tax rate on cigarettes is currently 79% of retail price, which implies that if the current tax rate and price were revenue-maximising, the elasticity of demand would have to be –1.27. This would mean that for a 1% increase in price, there would have to be a 1.27% fall in demand. If demand is more responsive than this critical level, cutting duty would lead to an increase in revenue from tobacco duty. If it is less responsive than this critical level, cutting duty would lead to a fall in tax revenue from cigarettes.

Cigarettes are an addictive good, which implies that smokers would not respond dramatically to changes in cigarette prices. Actual estimates of the own-price elasticity of demand for cigarettes suggest that between 1965 and 1998, the elasticity was –0.25.[6] This means that if the price of cigarettes increased by 1%, there would be a fall in demand of 0.25%. This elasticity is much smaller than the critical level of –1.27, suggesting that the tax rate is below the revenue-maximising level. In other words, it suggests that if the Chancellor were to cut duty on cigarettes, he would lose revenue.

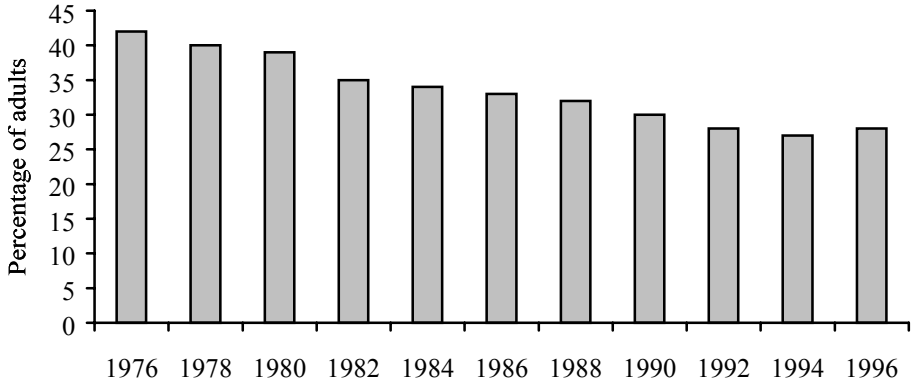
[5] As well as the effect on revenue from other types of alcohol, the effect on revenue from all other goods is also taken into account when assessing the effect on total indirect tax revenue.

[6] M. Chambers, 'Consumers' demand and excise duty receipts equations for alcohol, tobacco, petrol and derv', Government Economic Service Working Paper no. 138, August 1999.

This analysis does not take into account any potential cross-price effects. For example, if people enjoy smoking while they are drinking alcohol, a cut in duty on cigarettes would lead not only to more cigarette consumption, but also to more alcohol consumption. This would mean that, although revenue might be lost from cigarettes, additional revenue would be collected from alcohol. People could use alcohol as a substitute for smoking, in which case a cut in duty on cigarettes would lead to a fall in alcohol consumption and therefore a fall in revenue from alcohol. Whether alcohol is a substitute for, or a complement to, cigarettes has to be determined from information on how individuals behave.

The above elasticity estimate reflects changes in demand for UK tobacco from changes in the level of legitimate and illegal cross-border shopping. But to determine the effect on UK revenue, the elasticity must measure only the responsiveness of demand to changes in the price of cigarettes on which duty has been paid, as this is the relevant tax base. If UK consumption includes demand for cigarettes that have been smuggled into the UK and illegally resold, the demand for duty-paid cigarettes is likely to be more responsive to price changes than this elasticity estimate implies. A cut in duty would mean that it would be less profitable for people to smuggle cigarettes into the UK and for consumers to buy smuggled cigarettes, so there would be a switch from purchases of illegal (non-duty-paid) cigarettes to purchases of duty-paid cigarettes.

Figure 7.1. Percentage of adult population[a] who smoke, 1976–96



[a] Adults aged 16 or over.
Source: The Stationery Office, *Living in Britain*, 1996.

Cutting duty would increase the demand for UK-duty-paid cigarettes both through a reduction in the volume of cross-border shopping and an increase in demand, but this would conflict with the government's health targets. In the 1998 White Paper, *Smoking Kills*, the government set new targets for reducing cigarette consumption by 2010. These targets include reducing smoking among children from 13% to 9% or less by the year 2010, and reducing adult smoking in all social classes so that the overall rate falls from 28% to 24% or less by the year 2010. Figure 7.1 shows the percentage of smokers in Great

Britain in the period 1976–96. During the 1970s and 1980s, there was a steady fall in the percentage of adults who smoke, but the decline has levelled out during the 1990s. In fact, there was a small increase between 1994 and 1996 from 27% to 28%. This reversal of the downward trend led to the 1992 target of fewer than 20% of adults to be smokers by 2000 being revised to the current target.

In its Pre-Budget Report, the government outlined a number of measures to try to reduce the amount of smuggling and tobacco tax evasion directly. These include new technology to detect illegal imports and pack marks to show that UK duty has been paid on cigarettes and tobacco. Since there is a problem of smuggling, it seems more sensible to target smuggling directly rather than to attempt to reduce it indirectly through cutting duty. Also, these direct measures allow the government to try to reduce smuggling without increasing domestic demand more generally, which is more in keeping with its health targets.

7.3 Gambling duty

Tax revenues from alcohol and cigarettes are threatened by legitimate and illegal cross-border shopping and by fraud. A related issue is the threat to gambling duty revenue that has arisen from recent moves by the UK's largest bookmakers to set up in offshore tax havens such as Gibraltar. Revenue receipts from betting, gaming and lottery duties totalled about £1.5 billion, which represented 0.4% of total government revenue, in 1998–99. The opportunity for gamblers to avoid paying the duty by betting outside the UK on the telephone or the internet has led to concerns that this revenue is under threat. Customs and Excise estimates that if all telephone betting moved offshore, the revenue loss would be £50 million. So far, the yield from duty is being maintained,[7] but the increasing number of bookmakers locating offshore and the growth of the internet mean that there is a potential threat. If there is a large cut in duty, then revenue is likely to fall; Customs and Excise estimates that if betting duty were cut to 3%, it would cost £270 million. On the other hand, if the government does not cut duty, then there is a risk that more betting will be conducted offshore, which also would lead to a fall in revenue.

UK bookmakers have operated offshore betting centres for a number of years but maintained a voluntary code not to accept bets from the UK, a code that has recently broken down. Clients are able to place bets either by telephone or via the internet, subject to a minimum stake (usually £5). In the Pre-Budget Report, the Chancellor announced that he would extend an advertising ban on offshore bookmakers to include teletext and other electronic media and has 'ruled out no options' for maintaining revenue. This section looks at what betting duty is and how it is levied on different types of gambling. We also discuss some economic justifications for taxing gambling and whether there are any reasons, apart from the threat to revenue, why the government should

[7] HM Customs and Excise and Inland Revenue, *Electronic Commerce: The UK's Taxation Agenda*, November 1999.

be concerned about the increasing number of bets that are being placed offshore.

Types of betting duty

There are six betting, gaming and lottery duties. Table 7.5 shows the breakdown of receipts and rates across the six different duties.

Table 7.5. Betting, gaming and lottery duty rates and revenue

	1998–99 duty yield (£ million)	Duty rate
Lottery duty	628	12%
General betting duty	480	6.75%
Amusement machine licence duty	156	3 bands — £250, £645, £1,815
Bingo duty	105	10% (+1/9 of added prize money)
Gaming duty	91	banded duty — between 2.5% and 40%[a]
Pools betting duty	70	17.5%
Total	*1,530*	

[a] The intermediate bands are 12.5%, 20% and 30%.

Source: HM Customs and Excise and Inland Revenue, *Electronic Commerce: The UK's Taxation Agenda*, November 1999.

Different types of betting are taxed in very different ways. Lottery duty applies to the National Lottery and is simply 12p per ticket. General betting duty is a duty on the total money staked on off-course bets (on-course bets are not liable to duty) and the current rate is 6.75%. The different bands of amusement machine licence duty are levied according to whether machines give prizes, the amount of the maximum prize and the cost of a game. Bingo stakes are subject to 10% duty plus 1/9 of 'added prize money', which is the total weekly prize money less the stakes after duty has been paid. Gaming duty is levied on 'gross gaming yield' (given by the stakes less winnings) and the bands are applied according to the amount of gross gaming yield. In the March 1999 Budget, the Chancellor announced that the bands would be indexed from 1 April 1999. The Chancellor also announced a 9 percentage point cut in pools betting duty to 17.5%. This was in response to a decline in turnover for the pools companies following the introduction of the National Lottery.

In practice, because the bookmaker is liable to pay the general betting duty, bookmakers choose to make a deduction of 9% on all bets. The additional 2.25% contributes towards charges such as the horserace levy (currently under review by the Home Office). Bookmakers give clients the choice of making the 9% deduction on the stake at the time the bet is placed or having the deduction made as a percentage of the winnings plus the stake. Of course, this is simply the way in which bookmakers choose to cover the costs of the tax; it is not clear what would happen to the odds offered to gamblers if the tax, and the additional levy, did not exist. Table 7.6 presents a simple example where deductions of 9% are made on a £10 bet with odds of 10:1 and shows how the total return differs according to when the deduction is made.

Unless you are certain to lose the bet, you would always want to make the deduction on the stake — for the same initial outlay, your total net winnings

will be greater (£110 rather than £109.11). This is because bookmakers charge 9% on both the stake and the winnings when gamblers choose to pay on their winnings. Of course, if you are certain to lose, you are better off not placing the bet at all.

Table 7.6. Deductions on a bet

Odds — 10:1	Make deduction when bet is placed	Make deduction with winnings
Stake	£10	£10.90
Deduction	£0.90	—
Initial outlay	£10.90	£10.90
Gross winnings + stake	£110	£119.90
Deduction	—	£10.79
Net winnings	£110	£109.11

Why tax gambling?

Apart from raising revenue, economic justifications for taxing gambling might include the possibility that individuals overestimate their chances of winning and so gamble more than they would have done if they had had full information. Taxing gambling lengthens the odds against the gambler and so helps reduce the volume of gambling. A second justification may be that people do not take into account the potential addictiveness of gambling when they decide whether to bet. If gamblers knew that they would become addicted in the future, the level of gambling they would undertake might be lower than the level chosen in the absence of this knowledge. Once someone is addicted, gambling might impose social costs in the form of potential adverse effects that it could have on the family of the addicted gambler.

Taxing gambling is one way to control the betting industry. The alternative way to reduce the amount of gambling and limit its availability is to regulate it directly. The betting industry is already regulated by the government — for example, casinos and betting shops need a licence and are only open to people over 18. Whereas everyone who gambles has to pay a gambling tax, regulation can target particular groups of people (such as children). Whether regulation or taxation is a better instrument for controlling gambling depends on whether it is believed that there are external social costs that do not depend on who is gambling, which suggests taxation is appropriate, or whether the aim is to target the controls more specifically, suggesting regulation. The fact that both methods are adopted suggests that both concerns arise in policymakers' attitudes toward gambling.

Should it be a concern that an increasing number of bets are being placed offshore? Regulation becomes much more difficult if bookmakers are located outside the UK, and one argument for cutting duty to a competitive level is so that the industry remains in the UK, making it easier to regulate. The difficulty with this argument is that, once the industry is regulated, those who dislike the regulations would bet offshore anyway.

Alternatively, if the intention is to control gambling through taxation, the fact that consumers can place bets abroad without paying tax allows them to

choose the level of consumption that they would have chosen in the absence of any tax. In this case, it would be better not to cut duty and to try to prevent offshore betting directly. So far, the government plans to extend the offshore betting advertising ban to teletext services, although it would be extremely difficult to prevent bookmakers from advertising on the internet. It is not clear that a ban on advertising is an effective way to reduce offshore betting anyway, since the present advertising ban in UK newspapers and television has not prevented current growth in this area.

How should gambling be taxed?

The facts that different sorts of gambling are taxed in different ways and that, even on the same gamble, a different tax rate can be paid seem to lack a coherent rationale. One possible economic justification for different rates of tax might lie in the level of addictiveness of different types of gambling. If one type of gambling is more addictive, it may make sense to tax it more heavily than other types. This raises the question of what a sensible system for taxing gambling would be, which depends on what gambling actually is. The expected return on, for example, a horse race might be 80p in every pound. This means that the extra 20p paid could be thought of as the gain to consumers from gambling, i.e. the price. Gambling could then be regarded as a consumer good and taxed as such, by levying VAT on the expected price. The difficulty with this is that different sorts of gambling will have different expected prices. The National Lottery, for example, has an expected return of about 50p and so VAT would be levied on 50p of every lottery ticket. The expected price could also change over time, leading to a very complicated system. Also, taxing gambling in this way would not overcome the offshore betting issue since bookmakers themselves would still be liable to pay the tax, allowing customers to choose the lowest-taxed bookmakers.

In theory, a possible solution to tax avoidance through offshore betting is to make individuals liable to pay tax on their gambling, perhaps by treating the winnings as a form of income. This would make it irrelevant where the bookmaker was located — the tax rate levied would be the one prevailing in the country where the individual lived. The difficulty with this solution is that relatively few UK taxpayers currently fill in tax returns declaring their income, and even if all taxpayers did, there would be no guarantee that they would declare their winnings from gambles placed outside the UK, making the tax difficult to enforce.

In practice, at least some types of gambling, such as bingo, contain a social aspect which would be hard to replicate over the telephone or on the internet. Almost half of the revenue from total gambling duty comes from the National Lottery, and it is always possible to tax the lottery, provided that people choose to play in the UK. Revenue from more mobile forms of gambling, such as internet and telephone betting, cannot be guaranteed in a world of increasing economic integration.[8] This is likely to give revenue authorities food for thought for some time to come.

[8] The issues surrounding the taxation of very mobile economic activities are discussed further in Section 8.2.

8. Taxes on business and enterprise

The latest Pre-Budget Report indicates a continued emphasis on business tax measures that principally affect smaller companies. These include new plans for tax-privileged share ownership schemes, changes to capital gains tax rates on business assets, tax relief for larger companies investing in smaller firms and a tax credit for R&D spending carried out by smaller firms. These measures, and the possible rationales underlying the government's current emphasis on the behaviour of smaller firms and their investors, are discussed in detail in Section 8.1.

The Chancellor has also gradually cut the corporate tax rates faced by both large and small firms, from 33% to 30% for large firms, and from 23% to 20% for smaller companies. These reductions in corporate tax rates should be examined in their wider context — in a world of increasing competition between different countries to provide the most desirable home for footloose investment. This tax competition occurs in a wide range of areas, from taxes on gambling through special tax reliefs for particular industries to lower corporate tax rates. The most recent developments in the UK and within Europe, in particular the EU's package to tackle harmful tax competition, and the potential concerns these raise for tax revenue collectors are set out in Section 8.2.

8.1 Tax reliefs for small firms

In his last three Budgets, the Chancellor has announced tax reliefs targeted at small and medium-sized enterprises (SMEs). Other non-tax measures affecting small and start-up firms have also been introduced, such as the University Challenge Fund. The changes to the tax system benefiting SMEs have not been very costly in terms of forgone tax revenue. Reductions in the small companies' corporation tax rate from 23% to 20% have reduced the revenue raised from the taxation of smaller companies' profits by around £350 million a year. Enhanced first-year capital allowances for SMEs for investment in plant and machinery have cost around £170 million a year. The March 1999 Budget also saw the introduction of a new 10% rate on the first £10,000 of taxable profits for the smallest companies. The annual cost of this new rate is estimated to be £100 million and it is expected to benefit around 270,000 companies with taxable profits up to £50,000. Table 8.1 shows how much the Chancellor has spent on tax measures aimed at SMEs.

Changes to the tax system that primarily affect large companies and their shareholders were estimated to lead to large revenue increases. Changes to the taxation of dividend income introduced in the July 1997 Budget were estimated to raise approximately £4–5 billion in tax revenue a year. In addition, the introduction of the new corporation tax payments system in the March 1998 Budget brings forward payments by large firms and significantly increases corporation tax revenues over a four-year transitional period starting

in 1999–00. These revenue increases outweigh the costs of the reductions in the main rate of corporation tax from 33% to 30%.[1]

Table 8.1. Revenue costs of Budget tax measures for SMEs, 1999–00 to 2001–02

	1999–00 £m	2000–01 £m	2001–02 £m
July 1997			
Small companies' corporation tax rate cut from 23% to 21% from April 1997	–250		
Enhanced first-year capital allowances for plant and machinery investment for SMEs at 50% for one year[a]	–170		
March 1998			
Small companies' corporation tax rate cut from 21% to 20% from April 1999		–90	
Extension of enhanced first-year capital allowances for SMEs at 40% for one year[a]		–160	
March 1999			
10% corporation tax rate for the smallest companies from April 2000			–100
Extension of enhanced first-year capital allowances for SMEs at 40% for one year[a]			–150
R&D tax credit[b]			–100

Notes: Figures are full-year costs except those marked [a] or [b].
[a] The initial cost will be partially clawed back over time.
[b] First-year cost. The full-year cost is £150 million.
Sources: HM Treasury, FSBR, July 1997; FSBR, March 1998; FSBR, March 1999.

In the 1999 Pre-Budget Report, the Chancellor outlined further tax measures targeted at SMEs, including:

- tax relief on share options for selected employees in small companies (Enterprise Management Incentives scheme);
- changes to capital gains tax on business assets;
- tax relief for corporate venturing;
- extensions to the proposed R&D tax credit;

as well as a new tax-favoured all-employee share ownership scheme open to companies of all sizes.

This package of measures is motivated by the perception that too little activity would otherwise take place in the small firms sector, perhaps as a result of market failures. Market outcomes are known to be inefficient in a number of contexts — for example, where competition is limited by significant monopoly power, or where externalities or spillover effects are important (i.e. where actions have consequences that are not fully reflected in prices, as in the case of actions that produce environmental pollution). Market failures may also be important in situations where risk is significant (i.e. outcomes cannot be predicted perfectly in advance) and where information is asymmetric (i.e. one party to a transaction knows something that others do not). Although the

[1] Sources: HM Treasury, FSBR, July 1997; FSBR, March 1998; FSBR March 1999.

precise nature of the market failure in some of these contexts is not fully understood, government might nevertheless intervene — for example, by requiring car drivers to take out insurance, whether they would choose to or not.

Market failures of one form or another may thus be pervasive, and government intervention may produce better outcomes in many contexts. But government intervention can also produce unintended results, and this is particularly true when governments try to use the tax system to bring about some change in behaviour.

Experience suggests that tax measures are most successful at improving on the free market outcome in situations where the nature of the market failure is clear and there is evidence that it is significant, and where a tax measure is available that tackles the source of the inefficiency, has a significant effect on the behaviour in question and does not produce major distortions elsewhere. Where market failures are suspected but their effects are unclear, or where the effects of a particular tax policy are highly uncertain, there is a strong case for introducing measures on a pilot basis and evaluating their effects, before proceeding to nation-wide implementation. The current government has adopted this approach in important areas of labour market and education policies, which is welcome. Where the main aim of a policy is to change attitudes or to promote the benefits of a particular type of behaviour, there is a good case for making the tax measure temporary, which makes it less difficult to remove at some point in the future when the promotion has been successful.

In the next section, we review some general arguments for taxing small firms differently from larger firms. We then look at some aspects of the measures outlined in the Pre-Budget Report in more detail.

Why do we tax small firms differently?

Tax reliefs for small firms are not an innovation. The UK has operated a lower rate of corporation tax for small companies for decades, and the rate was lowered under the Conservative government in the 1980s. In the 1990s, the Conservative government introduced the Enterprise Investment Scheme and Venture Capital Trusts, which provide very generous tax reliefs for individuals investing directly in small unquoted businesses or through pooled venture capital funds.

The current Chancellor is also championing tax breaks targeted at small firms. Gordon Brown has introduced or extended tax reliefs for small companies in each of his Budgets to date, and the most recent Pre-Budget Report indicates that this trend is likely to continue. This raises two interesting, if somewhat awkward, questions. Why do we have special tax reliefs for small companies at all? And why might we want greater tax advantages for small firms now than we have had in the past?

Small and medium-sized enterprises (SMEs) are certainly an important sector of the economy. SMEs (firms with fewer than 250 employees) accounted for 56% of total employment in 1998, and small firms (fewer than 50 employees)

accounted for 45% of total employment.[2] But importance to the economy does not justify special tax treatment. Engineering companies and supermarkets are both important sectors of the economy but do not have special corporation tax rules.

There are two quite different types of arguments for having special tax rules for smaller firms. One is that existing features of the tax system discriminate against small firms and that lower tax rates or more generous allowances are required to offset these distortions. The other is that market mechanisms result in an inefficiently low share of activity taking place in the small firms sector, perhaps because small firms generate spillover benefits or because they are particularly affected by market failures in the financial sector. Each of these arguments is discussed in turn.

Existing distortions in the tax system

One argument for taxing small companies less heavily than large companies is that they face relatively high compliance costs. There are fixed costs involved in keeping the financial records required to calculate corporation tax liabilities and in filling out tax forms, so these costs of complying with the tax rules will be a bigger share of profits for small firms than for large firms. If small firms faced the same tax rate as large firms, their total tax cost (tax payment plus compliance costs) would end up being a higher share of profits. Thus a lower tax rate is required to keep the total tax costs similar. But recent decisions to cut the small companies' corporation tax rate, and to introduce a new 10% rate for companies with taxable profits up to £10,000, have not been accompanied by evidence that compliance costs for small firms are higher than previously thought, or that they have increased significantly over the last two years.

A second argument for lower taxes on small companies is that the unequal treatment of profits and losses bears more heavily on smaller firms. Taxes have to be paid on positive taxable profits as soon as they become due, but tax losses may not qualify for tax relief for several years, until the firm generates sufficiently high taxable profits to absorb accumulated past losses. The value of tax losses can therefore be reduced substantially compared with a symmetric treatment, under which tax losses would attract rebates in the same way that taxable profits attract bills.

Two types of investment are particularly affected by this unequal treatment of tax losses. Most investments involve an initial purchase of assets that might only generate positive profits after some period of time. For large, mature firms generating tax liabilities on existing lines of business, this is not a problem — they can set allowances on new investment spending against existing taxable profits and claim their full value without delay.[3] For new firms without existing taxable profits, this delay before allowances can be claimed reduces the value of those allowances. This discriminates against investment spending by new firms, or by small firms during a high-growth

[2] DTI Statistical Bulletin, *Small and Medium Enterprise Statistics for the UK, 1998*. The figures include sole traders and unincorporated businesses that do not pay corporation tax.

[3] These capital allowances allow companies to deduct a certain proportion of their historical investment spending from their taxable profits to reflect the costs of depreciation.

phase in which investment spending is high relative to current profits. To some extent, this bias may be alleviated by arrangements such as finance leasing, although leasing is more likely to be available to large new firms (e.g. new UK subsidiaries of foreign multinationals) than to small, domestic start-ups. This problem applies to investments with long payback periods, whether they are high or low risk.

The second type of investment affected by unequal treatment of losses is high-risk investments. By definition, high-risk investments might fail and result in losses rather than profits. For large, mature firms, this is again unlikely to be a problem — losses from an unsuccessful venture effectively qualify for immediate tax relief as they can usually be set against profits being earned on other activities. For small firms contemplating the same high-risk investment, it is more likely that failure would push the whole firm into a loss-making position, so that the value of the prospective tax relief is lower than it is for large firms. Thus imperfect loss offsets also discriminate against smaller firms with high-risk investment programmes.

If governments are concerned about these distorting effects of the asymmetric treatment of losses, the most appropriate response would be to treat tax losses and taxable profits symmetrically. This could be done either by allowing negative tax liabilities to be reclaimed from the Inland Revenue or by allowing tax losses to be sold to firms with positive tax liabilities. This consideration appears to have had some influence on the design of the proposed new R&D tax credit for SMEs (see below), which will be partially refundable to firms in a tax loss position. This feature of the proposed R&D tax credit is a welcome development that will increase the value of the credit to new and fast-growing firms and to small firms with high-risk R&D programmes.

Once this principle becomes established, it would be reasonable to extend it more widely. For example, making capital allowances for fixed investment expenditures similarly refundable for SMEs would help to reduce the discrimination under the current tax treatment of losses. But lower corporation tax rates or other tax reliefs for all small companies is a poorly targeted response to this problem, since such changes apply equally to all small firms, whether they are affected by tax losses or not.

Spillover benefits and market failures

The two arguments discussed so far relate to ways in which the tax system itself tends to discriminate against small firms, unless corrective action is taken. Two further arguments for a favourable tax treatment of small companies are more controversial. These are the claim that small companies generate spillover benefits for the rest of the economy, and should therefore be promoted by government policies, and the claim that the financial system provides insufficient funding for small firms, or requires an excessively high rate of return from investment in small firms, resulting in an inefficiently low share of economic activity taking place in the small firms sector. Both these arguments depend on the beliefs that the market economy allocates resources inefficiently between small and large firms and that the government can intervene effectively using tax policy to bring about a better allocation of resources.

In the case of spillovers, if it were shown that the presence of small firms generated benefits for larger companies or for consumers that the small firms were unable to capture in their own profits, then there would be a prima-facie case for government support. This case hinges on finding convincing evidence of these spillover benefits. It is not sufficient to demonstrate that the small firms sector is large or generating rapid employment growth or productivity growth — evidence that a sector is large or rapidly growing does not establish that the market is generating too little of the activity.[4] Moreover, the case for government intervention also requires some demonstration that the intervention will improve on the market outcome in question, without introducing serious distortions elsewhere.

The most appropriate forms of support would depend on the types of spillovers that were identified. For example, if it were shown that R&D performed by small firms generated greater spillover benefits than R&D performed by large companies, there might be a case for an R&D tax credit that is more generous for small firms. It seems likely that spillover benefits would be associated with particular types of small firms, such as new entrants or innovative firms in high-technology sectors, rather than affecting all mature small companies in established sectors. It is therefore unlikely that this kind of argument could rationalise lower tax rates or higher capital allowances across the board for all small firms.

The argument that small firms face disadvantages in raising finance for investment does not immediately provide a rationale for government intervention. Bankruptcy is a costly event and small firms are much more likely to go bankrupt than large firms, and as a result are likely to be charged more for loans than larger firms. The fact that small firms face higher interest rates than larger companies is not by itself sufficient to establish that the financial system is operating inefficiently. Similarly, there are fixed costs involved in underwriting equity issues, and observing that small firms find it more expensive to issue new shares is not sufficient to prove that the financial system is inefficient.

For these reasons, finance raised outside the firm, through borrowing or issuing new shares, is likely to be more expensive than finance raised from within the firm through retained profits. There is considerable evidence to support this.[5] Outside finance is likely to be particularly expensive for newer and smaller firms subject to greater bankruptcy risk. Moreover, newer and fast-growing smaller firms tend to require proportionately more external finance than mature, larger firms generating substantial profits. It would be surprising if newer or smaller firms did not perceive the cost or availability of

[4] In fact, whilst the share of employment accounted for by SMEs did grow in the 1980s, it has been stable in the 1990s; and labour productivity in the small firms sector as a whole is lower than labour productivity in large firms. While small firms accounted for 45% of total employment in 1998, they produced only 38% of total turnover (DTI Statistical Bulletin, *Small and Medium Enterprise Statistics for the UK, 1998*); and Census of Production data show that value added per worker increases with enterprise size in the production industries.

[5] See, for example, S. Bond and C. Meghir, 'Financial constraints and company investment', *Fiscal Studies*, vol. 15, no. 2, pp. 1–18, 1994; and R. G. Hubbard, 'Capital market imperfections and investment', *Journal of Economic Literature*, vol. 36, pp. 193–225, 1998, for a comprehensive recent survey.

finance to be a more significant constraint on growth than larger companies do. Survey evidence confirming this does not establish that there is a market failure.[6]

A market failure could arise if there is asymmetric information between lenders and borrowers (for example, if borrowers know more about the likely returns from an investment project than lenders), or between subscribers and issuers of new equity. Asymmetric information is more likely to be important for newer and smaller companies than it is for large, mature firms — and may be most serious for innovative small firms in high-technology sectors.

However, asymmetric information does not necessarily imply under-investment. Theoretical analyses of capital markets with asymmetric information suggest that the inefficiency may take the form of either too little or too much investment.[7] The Bank of England has expressed concern that too many small businesses may have attracted finance in the late 1980s.[8] Survey evidence does not suggest that innovative small firms or small firms in high-technology sectors generally perceive the cost or availability of finance to be a more significant constraint than their less innovative or conventional technology counterparts.[9]

It should also be noted that there are potential dangers in tilting the balance of the economy in favour of smaller firms. There is convincing evidence that, on average, small firms tend to provide lower productivity, lower wage and less secure jobs than larger companies.[10] By itself, this is not a reason to tax small firms more or less favourably than larger companies. But if the market allocation of resources between small and large firms is not inefficient, policies that distort this allocation in favour of smaller companies could have a perverse impact on the 'productivity gap' between Britain and other developed economies that they are intended to close.

Budget 2000 measures

Many of the small firms' tax measures to be implemented in the 2000 Budget were announced in the Budget last year. The one surprise announcement in the November 1999 Pre-Budget Report was a proposed reform to the capital gains tax taper for business assets. The Pre-Budget Report also outlined more details of proposed new tax reliefs for employee share ownership, management share

[6] Some recent and detailed survey findings are reported in A. Cosh and A. Hughes (eds), *Enterprise Britain*, ESRC Centre for Business Research, University of Cambridge, 1998.

[7] See D. De Meza and D. Webb, 'Too much investment: a problem of asymmetric information', *Quarterly Journal of Economics*, vol. 102, pp. 281–92, 1987, and D. De Meza and D. Webb, 'Credit rationing may involve excessive lending', London School of Economics Financial Markets Group, Discussion Paper no. dp0297, 1998.

[8] 'A combination of government policy and more relaxed credit criteria on the part of banks resulted in a large number of small businesses being established that proved not to be viable in the long term', *Finance for Small Firms*, Sixth Report, Bank of England, 1999.

[9] See A. Cosh and A. Hughes (eds), *Enterprise Britain*, ESRC Centre for Business Research, University of Cambridge, 1998, particularly Tables 8.1, 8.2 and 9.15.

[10] See C. Brown, J. Hamilton and J. Medoff, *Employers Large and Small*, Harvard University Press, 1990, for some detailed US evidence.

options, corporate venturing and R&D. The following sections discuss these main tax measures, including a closer analysis of both the current forms of equity-based remuneration and the government's proposed new schemes.

Equity-based remuneration

The government has announced details of two new tax relief schemes to encourage the use of equity-based remuneration. The new all-employee share ownership plan can be taken up by both small and large firms, must be open to all employees and gives tax relief on holdings of shares. The Enterprise Management Incentives (EMI) scheme is open only to small firms, gives tax relief on holdings of share options and is available only to a maximum of 10 key employees.

Employee share ownership ties part of employees' incomes to the performance of the firm for which they work. This might improve individuals' work incentives or motivation, and hence productivity, but also involves their bearing additional risk. An adverse shock affecting the firm or industry in which employees work would already jeopardise their future income from employment; if they hold shares in the firm, it would also jeopardise this part of their savings. Standard principles of portfolio diversification suggest that employees would bear less risk if they owned shares in a varied group of firms, rather than just their own firm.

There is some empirical evidence linking employee share ownership to improvements in productivity, although this evidence is both weak and difficult to interpret.[11] More importantly, even watertight evidence that employee share ownership causes increased productivity does not in itself justify granting a tax privilege to this form of remuneration. If employee share ownership does improve productivity and company performance, sufficient to outweigh the additional risk borne by employees, then it is likely to be in firms' own interests to provide this form of remuneration — without any need for a tax break. If the government wants to encourage employee share ownership, a rationale is needed for why firms might be under-providing this form of remuneration, or why employees might have inappropriate levels of such shareholdings or hold them for an inappropriate length of time, given the trade-off between the risks they bear and the potential rewards. If the main aim is simply to promote the potential benefits of employee share ownership, perhaps the tax advantages introduced under these schemes should be granted for a limited time period only.

[11] D. Kruse and J. Blasi, 'Employee ownership, employee attitudes, and firm performance', NBER Working Paper no. W5277, 1995, report that only two of the nine US studies analysed had found a statistically significant positive effect, although no studies had found a negative effect. They highlight the importance of other aspects of employee relations and human resource policies. The difficulty with interpreting studies of this kind is that the presence or introduction of employee share ownership schemes may be correlated with good or improving practices in other areas of personnel management, rather than directly causing a change in productivity.

New all-employee share ownership plan

The new scheme will provide relief from income tax, employee and employer National Insurance contributions (NICs) and capital gains tax. It can be split into three components:

- free shares — an employer can give an employee up to £3,000 of free shares per year;
- partnership shares — the employee can also purchase up to £1,500 of 'partnership shares' out of pre-tax income per year;
- matching shares — the employer can choose to match each partnership share with up to two more free shares, up to a maximum of £3,000 per year.

The tax treatment of the shares varies with the length of time they are held. Provided the shares are held in a trust for five years, the employee can withdraw them without paying income tax and employee and employer NICs. But if shares are withdrawn before five years, income tax and NICs must be paid.[12] No capital gains tax is due if shares are sold immediately after they are taken out of the trust. Capital gains tax might be due if shares are sold later, on the difference between the value of the shares when they are sold and the value when they were removed from the trust, although only individuals who make gains greater than the annual tax-free allowance — £7,100 in 1999–00 — are actually liable for capital gains tax. Employers will be able to deduct set-up and running costs of the scheme, together with the costs of providing free and matching shares, when they calculate their taxable profits.

There are two existing tax-favoured all-employee share schemes — the Approved Profit Sharing (APS) scheme and the Save-As-You-Earn Sharesave (SAYE) scheme. As shown below, these schemes are principally taken up by larger quoted firms. About one million employees participate in APS schemes at an annual cost to the government of £150 million, and approximately 1.25 million employees participate in SAYE schemes at an annual cost of £380 million.[13] These costs compare with an estimated annual cost of £400 million for the new scheme.[14]

The APS scheme gives tax relief on shares allocated to an employee up to certain limits (the greater of £3,000 or 10% of earnings, up to a maximum of £8,000 a year). The shares must be left in trust for at least two years, and receive full income tax relief after three years. Capital gains tax might be due on the difference between the value of the shares when they are eventually sold and the value of shares when they were first awarded.

[12] If shares are withdrawn between three and five years, income tax and NICs are paid on the lower of their market value when taken out and their value when they were purchased or awarded. Dividend income received while the shares are held in the trust will be free of income tax and NICs if it is used to purchase further shares. These 'dividend shares' can be withdrawn tax-free after three years.

[13] HM Treasury, *Consultation on Employee Share Ownership*, 1998.

[14] Inland Revenue Press Release 5, 10 November 1999.

The SAYE scheme is a share option scheme, where an employee saves between £5 and £250 per month for at least three years. At the end, they receive a bonus, based on number and value of monthly contributions made. The savings and the bonus can be used to exercise share options granted at the start of the contract. The bonus and any interest income are not charged to income tax, nor is any income tax due when the options are exercised. Capital gains tax might be due when the shares are eventually sold, on the difference between the value of the shares when sold and the value at the exercise price.

The new scheme is more flexible since a company can choose which of the three components — free shares, partnership shares and matching shares — it will offer to employees and can link awards of free shares to performance targets. Under the new scheme, all employees with twelve months' service must be given the opportunity to participate, compared with a limit of five years' service under the existing schemes.

The free shares component of the new scheme can be compared with granting free shares under the existing APS scheme. Details of the two schemes are shown in Table 8.2. Under the new scheme, free shares cannot be withdrawn until three years have passed, (if the employee has remained a member of staff), compared with two years under the APS. In addition, the shares must be left longer before they qualify for full income tax and NICs relief under the new scheme, for five years compared with only three years under the APS. The capital gains tax treatment is more generous under the new scheme. If shares are sold when they are withdrawn, no capital gains tax is due, whereas it might be due under the APS scheme if an individual's capital gains for the tax year are above the annual tax-free allowance.

Table 8.2. Comparison of tax treatment under APS and free shares in the new all-employee share plan

Years after award	New all-employee share plan	APS
Less than 3 years	Cannot withdraw before 3 years[a]	Cannot withdraw before 2 years[b] Between 2 and 3 years, income tax and NICs on value at award
3 to 5 years	Income tax and NICs on lower of value at award and value on removal	No income tax or NICs
After 5 years	No income tax or NICs	No income tax or NICs
CGT treatment (if applicable)[c]	Payable on the difference between the value when sold and the value when removed from the trust	Payable on the difference between the value when sold and the value when first awarded

[a] Shares can only be withdrawn if the employee leaves the firm's employment, but provisions are also made for employers to arrange for shares to be forfeited. If shares are withdrawn, income tax and NICs are payable on market value when they are taken out.
[b] Apart from under certain circumstances such as redundancy.
[c] Individuals receive an annual tax-free allowance — £7,100 in 1999–00.

Take-up of existing schemes

The Chancellor aims to double the number of companies offering all-employee share schemes. The fate of the existing all-employee schemes once

the new scheme is in place has not yet been finalised. Table 8.3 shows the take-up of existing schemes. These schemes have been most popular among larger firms — 65% and 93% of the FTSE 100 firms operate APS and SAYE schemes respectively — hence the growth in firms running schemes will need to come from smaller or unlisted firms. Holding shares is risky, since their price can go down as well as up, and it is easy to understand why participating in such a scheme might be less attractive for an employee in a small unquoted firm. If the firm performs poorly, employees risk losing both their salaries and their savings. Shares in smaller firms also tend to be more difficult to convert into cash than shares in larger firms. In addition, the costs of setting up and administering schemes may impose a heavier burden on smaller firms, although under both the existing and the new schemes, firms are able to deduct the costs of setting up the schemes when calculating their taxable profits. It is unclear whether the new all-employee share ownership scheme will be substantially more attractive to smaller firms. It is also worth noting that public sector workers are excluded from benefiting from the tax reliefs for equity-based remuneration.

Table 8.3. Companies with approved employee share schemes, November 1998

Number of companies	APS	SAYE
FTSE 100 companies	65 (65%)	93 (93%)
FTSE 250 companies	64 (26%)	175 (70%)
Smaller listed companies	185 (11%)	554 (34%)
Total listed companies	314 (16%)	822 (41%)
Total unlisted companies	545	379

Notes: Where possible, percentages of participating companies in each category are given in parentheses. The number of smaller listed companies defined as outside the FTSE 350 is 1,642 (November 1998).
Source: HM Treasury, *Consultation on Employee Share Ownership*, 1998.

Enterprise Management Incentives

The Enterprise Management Incentives (EMI) scheme will provide selective tax relief on awards of share options. Under the scheme, firms will only be able to give qualifying awards to 10 employees, and restrictions apply on the firms that qualify to grant them. Only small firms, either quoted or unquoted, with assets worth less than £15 million will qualify under the scheme, and some lower-risk trades will be excluded (based on the definitions already used under the existing Enterprise Investment Scheme (EIS) and under Venture Capital Trusts (VCTs)). The government intends the EMI scheme to help smaller, riskier companies overcome difficulties in recruiting talented employees from established companies, although it will also be available to existing employees in qualifying firms.

Under the scheme, options on shares up to a value of £100,000 at the time they are granted can qualify for tax relief. An employee holding these options has no income tax or National Insurance liability when the options are exercised,[15] and companies are free to set their own exercise period. Capital gains tax will

[15] Income tax and NICs are normally paid on the difference between the value of the shares at the exercise price and the market value of the shares.

be charged when the shares are sold, on the difference between the value of the shares at the sale price and at the exercise price. These shares will be treated as business assets, and so qualify for the more generous treatment under the proposed changes to the capital gains tax taper (discussed below). In addition, the number of years the shares are considered to have been held will begin from the point when the options are granted, not from the point they are exercised, which increases the generosity of the capital gains tax relief even further. So, if the shares are sold five years from the award date of the options, they will qualify for the proposed 10% rate of capital gains tax, if the employee is a higher-rate taxpayer. Under the scheme, income tax and employee and employer NICs, which are otherwise due at the point when the options are exercised, are replaced by a lower-rate capital gains tax charge when the shares are actually sold.

A discretionary share option scheme open to all companies — the Company Share Option Plan (CSOP) — already exists. This scheme was introduced in 1996 and replaced the more generous executive share option scheme. Under the CSOP, options over shares — up to the value of £30,000 when the options are granted — qualify for income tax relief when they are exercised. In November 1998, 3,769 companies (including 94 FTSE 100 companies) operated a CSOP. The scheme covered approximately 300,000 participants, at an annual revenue cost of £100 million.[16] Compared with the CSOP, Enterprise Management Incentives are open to a restricted class of firms and only 10 employees per firm, but the value of shares over which qualifying options can be granted is higher. The estimated cost of the new scheme is £45 million per annum. Over the first three years, around 2,200 firms are expected to set up schemes.[17]

Share options are commonly used as part of remuneration and recruitment packages for executives and other key employees, and can provide strong performance incentives when an employee's own performance can significantly influence the share price. Again, this does not, by itself, justify a preferential tax treatment. Deferred remuneration might be an entirely appropriate way for new or small firms with good growth prospects to attract key personnel from larger companies. But it is not clear why such firms will make too little use of this opportunity, or why the tax system should strongly favour one form of deferred remuneration (share options) over other forms, such as performance-related cash bonuses.

One argument that has been put forward is that a tax charge on share options at the point when they are exercised may present liquidity problems for the taxpayer, so making options a less attractive form of remuneration.[18] At best, this suggests a rationale for deferring the normal tax charge to the point when the shares are sold; it does not follow that the normal tax charge should also be replaced by a much more generous capital gains tax treatment. Moreover, this

[16] HM Treasury, *Consultation on Employee Share Ownership*, 1998.

[17] Inland Revenue Press Release 6, 10 November 1999.

[18] See, for example, HM Treasury, *Financing of High Technology Businesses: A Report to the Paymaster General*, 1998.

argument could be applied to all share options used as employee compensation, not only to those for selected employees in small companies.

Capital gains tax taper for business assets

The government implemented a major reform of capital gains taxation in the March 1998 Budget. This replaced indexation, for nominal gains caused by price inflation, with a tapered rate structure, with lower tax rates for assets that have been held for longer periods. The reform also introduced a distinction between 'business assets' and other assets, with gains on business assets being subject to a faster taper, and a lower minimum tax rate once they have been held for 10 years. Holding periods for the purpose of the taper commence on the later of 5 April 1998 or the date when the asset was purchased, but holdings before 5 April 1998 qualify for indexation relief up to that date and receive an extra year under the taper. Business assets are currently defined as assets used for trading purposes, or holdings of equity above a threshold of 5% of the total stock of a company if the individual is an employee and 25% of the total stock if the individual is not an employee.

The Pre-Budget Report proposed to shorten the taper for business assets, so that the minimum tax rate is reached after a five-year holding period rather than a 10-year period. For a top-rate taxpayer, this lowest tax rate on capital gains on business assets is 10% (see Table 8.4). This proposal widens the gap between the treatment of business assets and non-business assets; for a top-rate taxpayer, the lowest tax rate on capital gains on non-business assets remains at 24%, and this is applied only for assets held for 10 years or longer. The government is also considering reductions in the thresholds above which equity holdings qualify for the business assets treatment.

Table 8.4. The capital gains tax taper for business assets

Number of complete years after 5 April 1998 for which asset held	Current system		Proposed change	
	Percentage of gain chargeable	Equivalent tax rate for higher-rate taxpayer	Percentage of gain chargeable	Equivalent tax rate for higher-rate taxpayer
0	100	40	100	40
1	92.5	37	85	34
2	85	34	70	28
3	77.5	31	55	22
4	70	28	40	16
5	62.5	25	25	10
6	55	22	25	10
7	47.5	19	25	10
8	40	16	25	10
9	32.5	13	25	10
10 or more	25	10	25	10

Sources: Inland Revenue News Release 16, 17 March 1998; Inland Revenue Press Release 1, 9 November 1999.

The rationale for a lower rate of capital gains tax on long-term holdings in general, and business assets in particular, is to encourage more individuals to invest in smaller companies. Most equity in large firms is held either by the main financial institutions — pension funds, and insurance companies in

relation to their pension business — that do not pay capital gains tax, or by foreign shareholders.[19] Also, individuals investing in small unquoted companies under the existing Enterprise Incentive Scheme are exempt from capital gains tax.

Both Britain and the US have a history of repeated changes to their capital gains tax rules. Prior to 1988, the UK had a separate flat rate of capital gains tax of 30%. Thus, in the 1970s, there was potentially a considerable difference between the tax rates on earned income and that on capital gains for higher-rate taxpayers (see Table 8.5). The introduction of indexation in 1982 removed one rationale for a separate, lower tax rate on capital gains, and between 1988 and 1998 real capital gains were taxed at ordinary income tax rates.

Table 8.5. Highest income tax and capital gains tax rates, 1973–74 to 1999–00

	Income tax (%)	Capital gains tax (%)
1973–74	75	30
1974–75 to 1978–79	83	30
1979–80 to 1987–88	60	30
1988–89 to 1998–99	40	40
1999–00	40	10–40

Notes:
Income tax: Between 1973–74 and 1983–84, an investment income surcharge of 15% applied to unearned income above certain limits.
Capital gains tax: A reduced rate of capital gains tax applied for the period 1977–78 to 1979–80 if an individual's taxable gains were less than £9,500. An indexation allowance applied from 1982–83 to 1998–99. For 1999–00, the taper system applies, with the tax rate depending on the type of asset and the length of holding period.
Sources: Fiscal Facts, http://www.ifs.org.uk/taxsystem/contents.shtml; Tolley's *Capital Gains Tax 1999–2000*.

The US has long operated a two-rate structure for capital gains, with short-term holdings taxed at a higher rate than long-term holdings, except for the period 1988–90. The holding period required to qualify for the lower tax rate on long-term gains is currently 12 months, although prior to 1977 it was only six months, and for a brief period in 1997 it was increased to 18 months. Short-term capital gains have generally been taxed at ordinary income tax rates. The tax rate applied to long-term capital gains has fluctuated considerably. It was reduced from 35% to 28% in 1978 and to 20% in 1982, increased to 28% in 1987, and reduced to 20% again as recently as 1997. Whilst some commentators attach considerable importance to the 20% long-term capital gains tax rate in stimulating the US venture capital industry,[20] this industry also flourished in the period 1987–96 when the tax rate was 28%.

[19] For UK quoted firms at the end of 1997, the Office for National Statistics estimates that 45% of total equity is owned by pension funds and insurance companies, 24% is owned by foreign shareholders and only 16.5% is owned by individuals. See ONS, *Share Ownership: A Report on the Ownership of Shares at 31 December 1997*, The Stationery Office, London, 1999.

[20] See, for example, HM Treasury, *Financing of High Technology Businesses: A Report to the Paymaster General*, 1998.

This experience illustrates the absence of a clear consensus on the appropriate tax treatment of capital gains. Two widely discussed approaches to direct taxation are the comprehensive income tax and the expenditure tax.[21] Under the first approach, both long-term and short-term capital gains would be taxed at the same marginal rate as any other source of income, and capital gains would ideally be taxed as they accrue rather when they are realised. Under the second approach, capital gains would effectively be exempt from tax to the extent that they are reinvested, but this treatment would apply to dividends and interest as well as to capital gains. Both these approaches would apply the same treatment to capital gains as to other forms of income from capital.

Yet governments have frequently opted to tax capital gains (or long-term capital gains, or gains on business assets) at preferential rates, and face regular demands for still more generous treatment from representatives of the small business sector and the venture capital industry. There seems to be a tension between the desire to promote entrepreneurship through lower capital gains tax rates and concerns over the opportunities this creates for tax avoidance. Recent evidence suggests that the scale of avoidance activity may be quite limited, at least at the differences between long-term capital gains tax rates and ordinary income tax rates that have existed in the US over the last decade.[22]

In the UK context, given that large financial institutions do not pay capital gains tax, fewer than 150,000 individuals pay capital gains tax as a result of the annual exemption,[23] and individuals investing in small unquoted firms can avoid the tax by using the Enterprise Investment Scheme, it is not obvious that reducing capital gains tax rates on business assets will have a large impact on the level of investment.

Corporate venturing

Corporate venturing involves one firm making an investment in another firm. The proposed corporate venturing scheme will provide a corporation tax credit of 20% of the qualifying investment expenditure, to firms making investments in a restricted class of small companies. To qualify, the investment must be in an independent unquoted company, whose gross assets cannot be greater than £15 million (or £16 million immediately after the investment is made). The investment must be made in a company that carries out a qualifying trade, (some lower-risk trades based on the definitions under the existing EIS and VCT schemes are excluded). Individuals making venture capital investments through the EIS and VCT schemes already receive generous tax reliefs.[24]

Under the scheme, a firm making a qualifying investment of, say, shares in the small company worth £100,000 will be able to reduce its corporation tax

[21] See J. Kay and M. King, *The British Tax System*, Oxford University Press, Oxford, 1990.

[22] See, for example, A. Auerbach, L. Burman and J. Siegel, '*Capital gains taxation and tax avoidance: new evidence from panel data*', National Bureau of Economic Research Working Paper 6399, 1998.

[23] Table 14, *Inland Revenue Statistics 1999*, The Stationary Office, London.

[24] For a detailed discussion of these schemes see L. Chennells and A. Dilnot (eds*), The IFS Green Budget: January 1999*, Commentary no.76, Institute for Fiscal Studies, London, 1999.

payments by up to £20,000 (depending on the size of its corporation tax bill). The relief is available if the investing company holds the shares for three years, but can be claimed before the three years have passed. Companies investing under the scheme will also be able to postpone any tax charge on a capital gain from corporate venturing if that gain is reinvested under the scheme. The investing firm will also be able to receive relief for losses from qualifying investments, if they cannot be offset against capital gains, by setting them against income.

The government does not intend this tax relief to be permanent, and has proposed legislation covering only a 10-year period. The scheme is intended to act as a catalyst to encourage more corporate venturing activity.[25] It is not clear why companies might currently be under-investing in other firms. Financial investments by larger established companies may facilitate the transfer of knowledge and skills to smaller companies, but it is far from clear that these benefits will spill over to other firms not party to the financial alliance.

The R&D tax credit

An R&D tax credit for small and medium-sized firms (SMEs) is intended to be introduced in April 2000. The government expects that around 4,500 firms will be eligible for the credit. To qualify, firms must spend at least £25,000 on research and development a year, and their annual turnover must not be greater than £25 million. These limits have been changed since the original proposals were announced in the 1999 Budget, allowing more firms to qualify for the credit.

At present, current expenditure on R&D can be deducted from profits in the year that the expenditure is made. The tax 'credit' will be an additional deduction from taxable profits, based on the volume of R&D carried out by the firm (including R&D carried out outside the UK). The proposal is that 150% of current R&D expenditure will be deductible. This means that qualifying firms will be able to deduct £150 from their profits for every £100 spent on R&D. For example, for a firm paying corporation tax at the 20% small companies' rate, the 'credit' is worth an additional £10 for every £100 spent on R&D, making the total tax deduction £30 for every £100 spent.[26]

The government has also chosen to make the credit partially refundable to firms that are not making taxable profits. Under the current system, firms in this position must carry forward any R&D expenditure they could not deduct to set against future profits. Once the credit is introduced, eligible firms will be able to choose to give up the right to carry forward their total R&D deduction in return for part of the value of the credit plus the original deduction (80% of the total value). For example, a firm paying corporation tax at the 20% rate will receive £24 for every £100 spent on R&D, reducing the

[25] The Corporate Venturing Scheme: Draft Legislation and Commentary, http://www.inlandrevenue.gov.uk/drafts.

[26] The R&D tax 'credit' is technically a deduction, whilst the corporate venturing relief discussed above is a credit. A deduction allows a certain sum to be deducted from taxable profits, whilst a credit allows the tax payment to be reduced by a certain amount. A deduction will not have the same effect as a credit when the tax rate varies.

cost of R&D by 24%, compared with 30% for firms making taxable profits. Any claim will also be limited to the total of a firm's PAYE and National Insurance payments for the period.

The R&D tax credit lowers the price of carrying out R&D, which should encourage qualifying firms to conduct more of it. Innovations do generate spillover benefits — once a discovery has been made, it can be imitated and used by many competing firms — so that firms engaging in R&D may not be able to appropriate fully the total return on their investment. As a result, firms might perform too little R&D. This is the rationale underlying the patent system, which protects innovators from imitation for a limited period. However, the patents system works better in some sectors than in others, and there may well be a case for further intervention in the form of R&D subsidies or tax credits. Several large countries have introduced R&D tax reliefs, including the US, Canada, France and Australia.

The case for limiting the R&D tax credit to small companies is less clear. The Pre-Budget Report suggests that spillover benefits are greater for R&D conducted by small firms than for R&D conducted by large firms, and that financing constraints are more significant for smaller firms, without referring to any evidence. Restricting the measure to small companies will lower the cost to the government, but will also reduce the additional R&D that is likely to be generated. Even on optimistic assumptions, the proposed tax credit is unlikely to increase total business expenditure on R&D by more than 2%, or £200 million.[27]

This illustrates one clear conclusion that can be drawn about the impact of tax measures targeted at small companies: even on optimistic assumptions about their impact on small firms themselves, they are unlikely to have a major impact on aggregate levels of investment or R&D spending. Enhanced capital allowances for SMEs cover only about 15% of total business spending on plant and machinery investment, and the proposed R&D tax credit covers a similar proportion of total business spending on R&D. The limited role of capital gains tax in the UK suggests that changes to the taper for business assets are equally unlikely to have a significant aggregate impact.

8.2 Tax competition

There have been a number of developments in the last year highlighting a tax question to which no one yet has a satisfactory answer. The question is whether it is possible to continue taxing types of activity that are mobile — people, purchases, income and profits that can move easily from one country to another and in the process reduce their tax bill. Obvious illustrations of this

[27] For example, if firms currently spending a total of £2 billion on R&D qualify for the credit, and the elasticity of R&D with respect to its cost is unity, so that a 10% reduction in cost induces a 10% increase in expenditure, the credit will induce around £200 million new R&D expenditure. This assumes that all firms can claim the full value of the credit and pay the small companies' rate of corporation tax. Firms with fewer than 400 employees spent £2.1 billion out of total business expenditure on R&D of £9.5 billion in 1997 (see SET Statistics, http://www.dti.gov.uk/ost/setstats/data/4/index.htm).

issue have arisen in the last year (and even earlier) in the UK, through developments in the betting industry, and at the European level, through attempts to tax interest income on savings and to restrict the number of special regimes Member States of the EU can use to attract new investment to their shores.

The overall issue is relatively straightforward. Few people like paying more tax than they have to. The amount of effort that people are prepared to spend in order to reduce the amount of tax that they pay — legitimately — varies enormously, according to the cost of finding out about how to reduce their taxes, the size of the reduction in tax and the ease with which that reduction can be achieved. One crucial aspect of the cost of reducing tax paid is the degree of mobility: it is difficult to choose to pay the lower council tax levied in the London Borough of Wandsworth if your home is in Camden, but relatively easy to pick up the telephone and choose to place a bet with an offshore bookmaker rather than going to the local betting shop. The tax paid on each bet can be reduced at a relatively low cost (picking up the phone or logging onto an internet site), but home-owners cannot choose a lower level of council tax without the relatively high cost of moving house.

The long-term issue is whether the current balance of revenue from different sources of taxation can be sustained. While governments will continue to want to raise money to fund their public expenditure plans, the balance of revenue from different taxes is likely to adjust over time to reflect changes in the mobility of different sources of revenue. Advances in technology, particularly through the development of the internet, and increasing economic integration are likely to affect many different types of tax revenue, from betting duties to income taxes paid by highly skilled employees. Whether the underlying distributional aims of governments can be achieved through adjusting the receipts from different types of taxes in a world of increasing mobility, bearing in mind that the person making the formal payment of a tax is not necessarily the person who bears the burden of that tax, is another question.

This section discusses recent developments concerning gambling duties, and goes on to consider the European approach to tax competition issues. There is a brief discussion of the recent trend for reductions in corporation tax rates, in Europe and beyond, and finally a brief assessment of the effects of globalisation on the distribution of tax revenues.

Place your bets here … or here

Recent developments in the betting world are a good example of the effects of tax competition on mobile activities. Despite the fact that the rate of betting duty is currently at a historically low level in the UK, having fallen from 8% prior to 1992 to 6.75% in 1996, it has been under pressure for much of the last six months.[28] In December 1998, the Irish government announced that, from July 1999, it would halve its betting duty from 10% to 5% and reduce its racing levy from 5% to zero. (A similar racing levy in the UK is currently

[28] Betting duty is charged on bets placed, off-course, with a bookmaker or the Tote. More details about UK betting duty and a discussion of gambling taxation can be found in Section 7.3.

2.25%, in addition to the betting duty.) The Finance Minister, Charlie McCreevy, said in his Budget Speech,

> I have received strong representations that the current level of betting tax … is an incentive to the betting public to use offshore tax-free telephone betting. This could place tax revenue and jobs at risk in the betting industry. [I]t is necessary to take measures to secure that source of revenue. In my view the best way to do that is to reduce the rate of tax to internationally competitive levels.[29]

In other words, the approach of the Irish government has been to lower tax rates in order to try to retain the level of business being carried out (or even increase it), recognising that it would be difficult to force Irish gamblers to use Irish-based bookmakers charging a 15% rate of tax on each bet. Other countries offering low or zero rates of tax also hope to increase employment and raise revenue from other sources, such as income tax.

The change in the Irish rate of tax prompted UK-based betting companies, starting with Victor Chandler and followed by Ladbrokes, Coral and William Hill amongst others, to launch — or plan to launch — low-tax telephone betting services to UK gamblers, from sites based in low-tax countries such as Gibraltar and Ireland. These services tend to offer bets for a commission charge of 3%, rather than the 9% paid within the UK (which includes a horserace levy and some other charges on top of the betting duty). The arguments given for setting up these sites were that high-spending telephone customers would have switched their allegiance to Irish bookmakers, so defensive action had to be taken. As an alternative, although perhaps not one that is sustainable over time, some sites such as the Tote's have opted to charge a low levy of 2% and to make up the difference in tax to the revenue authorities themselves.

Hence action taken to protect the Irish betting industry has sparked off a defensive reaction from British bookmakers that threatens to erode the revenue that can be raised in the UK from betting duty. This has itself led to a defensive reaction from the UK revenue authorities, which so far has been aimed at protecting the revenue through attempts to prevent advertising of low-tax services and to ensure that foreign operations of UK-based bookmakers pay suitable levels of tax through existing anti-avoidance mechanisms, rather than by lowering the tax rate.

The movement of betting to offshore sites raises interesting questions about the regulation of betting and the most sensible method of taxing betting, which are discussed in Section 7.3. It also provides a good illustration of the pressures on tax systems provided by mobile activities in the absence of international agreements to fix tax rates at a particular level. Once the betting public can access tax-free sites on the internet at low cost, the maximum level of tax that they are prepared to pay could fall significantly, provided they are placing bets through reputable firms operating under a regulatory regime in which they have confidence.

[29] Financial statement of the Minister for Finance, Mr Charlie McCreevy, TD, 2 December 1998.

The European perspective

Since late 1997, the European Union has been developing a package of three proposals designed to tackle harmful tax competition. The first element of the package is a Code of Conduct for business taxation, which attempts to reduce the number of special measures in business tax regimes that affect where companies choose to do business within the EU. The second element is a proposal for the taxation of income from saving, which suggests levying a withholding tax on interest in order to reduce the level of tax evasion and avoidance. The third and final element is a directive for the tax treatment of interest and royalty payments made between companies, to help reduce the level of double taxation of those payments that currently occurs. These have been bundled together into one package, probably for political reasons, but each addresses a very different type of issue.

A Code of Conduct for business tax

Under the EU's Code of Conduct for business taxation, a Working Group has been set up to analyse a list of over 200 special tax measures aimed at business, and to assess whether they amount to harmful tax competition. Those tax breaks that are found to affect the location of business activity in the Union should be withdrawn under the Code, and Member States have committed themselves not to introduce new measures that might be harmful. Although the Code is not legally binding, political commitments have been given to support the Code, and whether the Working Group manages to produce a list of harmful measures will be an indication of whether countries are prepared to take that commitment seriously. Whatever is, or is not, on the list, the fact that Member States have been prepared to discuss their own special tax breaks and consider whether or not they constitute harmful competition should lead to greater co-operation between revenue authorities and greater transparency over those parts of their tax systems.

It is difficult to say what is likely to be achieved by the Code without an indication of which measures the Working Group decides are harmful. The tax measures under examination by the group vary enormously. Some are found in one form or another within most countries of the EU, such as special incentives for the film industry, for small and medium-sized firms or for under-developed regions. Although the exact provisions of the tax break might vary, for it to be deemed harmful under the Code it would have to affect significantly the location of activity within the Community. Most countries will no doubt argue that their measure only offers what other countries also offer, and so if it had any effect, it would be a minimal one.

Other types of measure being examined include some, such as holding company regimes, that are largely designed not to lower the effective tax rate, but to prevent double taxation of profits as they pass through an intermediate country. It is not clear why this type of measure should be discouraged. It will be interesting to see what approach is adopted towards measures that exist in only one country in the EU, but that are also offered by regimes outside the EU, such as the special tax treatment of independent investment managers in the UK. Although they are likely to affect whether or not the particular activity (managing funds for overseas clients) is carried out in the UK, the removal of such schemes would almost certainly result in more investment management

occurring in other financial centres outside the EU, such as the US and Switzerland, rather than being redistributed between EU members.

Although the Working Group has prepared a final report, including a list of the harmful measures that have been agreed upon, and submitted it to the last meeting of the Council of Finance Ministers (ECOFIN) in November 1999, no decision was made over whether the document could be published. The next opportunity for Ministers to allow publication will be at the end of January 2000, when ECOFIN meets again. The main obstacle to reaching a decision over the Code was the amount of time spent debating the future of the next element of the package.

Taxation of saving

The second element of the package is a proposal for a withholding tax of 20% on payments of interest income to non-residents, or the exchange of information that would allow the home states of non-residents to levy a tax on their interest income (assuming the individuals did not declare the income themselves). A withholding tax is simply a tax deducted from income at its source, in this instance by a bank or other financial intermediary when it pays any interest due on the savings account or bond held. The concern is that interest earned in accounts overseas could escape taxation altogether if the income is not repatriated or if it is repatriated but never declared to the home tax authority.[30] If Member States do not want to levy the tax, under a 'co-existence' model they would have the option of providing a certain amount of information about the assets held by non-residents to the tax authority in their place of residence.

This measure has been subject to resistance from the UK Treasury, due to its potential effect on the Eurobond market, currently based in the City of London. Previous attempts to impose withholding taxes on interest (such as that of the US in the 1960s, and of Germany in 1989 and 1993) have led to significant capital flight out of the countries concerned; the new initiative at the EU level is an attempt to overcome at least part of this problem.[31] This raises the question of whether the EU is a large enough group of countries to adopt this policy with any effectiveness, since it is likely that acceptable alternative homes for the interest income, which would not levy similar withholding taxes, could be found outside the EU.

Interest and royalty payments between companies

The final element of the EU package is a draft directive on the taxation of interest and royalty payments made between related companies. This is addressing a very different aspect of the mobility question: rather than facing a lower tax rate because of special treatment, these payments face a higher tax rate as they are taxed in more than one jurisdiction when they cross national boundaries. The EU has previously attempted to resolve this double taxation

[30] In some countries, this problem is exacerbated by domestic rules concerning bank secrecy.

[31] In the case of the German withholding tax, the capital has tended to be invested in investment funds based in Luxemburg, which promptly reinvest the capital in German bonds.

issue,[32] and it would be better for this particular measure if it could be uncoupled from the package, rather than being held up by unrelated disputes over the taxation of individual savings income.

Recent trends in corporate income taxes

The Chancellor's recent preference for lowering the rate of corporation tax reflects a wider trend towards lower corporate tax rates in most developed countries. Since July 1997, the corporate tax rate has been reduced from 33% to 30% in the UK, while countries such as Japan, Italy, France and Germany have all either reduced their corporate tax rates or announced that they will shortly do so. Ireland has announced that it will reduce its rate to 12.5% from 2003, and, further afield, Estonia plans to abolish its corporate tax (currently levied at 26%) entirely.

This recent trend towards lower tax rates continues a process that began in the mid-1980s, when both the UK and the US restructured their corporate tax systems, moving from quite high tax rates of 52% and 46% respectively at the beginning of the decade to significantly lower ones (both at 34%) by the end.[33] These reductions in the tax rate were combined with measures to broaden the corporate tax base, such as reducing the generosity of deductions for depreciation on capital assets and eliminating other tax reliefs.

Despite these cuts in tax rates, corporate tax revenues have remained relatively buoyant, at 3.3% of GDP for the OECD countries in 1997, compared to 2.8% in 1985. This is partly due to changes to tax bases and partly due to a recovery in corporate profitability during the period. Looking at the share of total tax revenue that corporate taxes provide, over the same period this grew slightly from 8.0% to 8.8% in the OECD. This general buoyancy in corporate tax revenues does mask some interesting differences in the experience of different European countries. In Germany, corporate tax revenues have fallen as a share of GDP over the last decade (from 2.0% in 1988 to 1.5% in 1997) and also as a share of total tax revenues (from 5.3% to 4.0%). In Sweden, Finland and Ireland — three countries that have cut their corporate tax rates sharply — corporate tax revenues have increased, both as a share of GDP and as a share of total tax revenues.

It is not surprising that corporate tax rates have been falling as economic activity has become more integrated and economies have become more open. In a world where individual countries are not large enough to influence the world rate of return, and capital flows freely between countries, it may be that taxes on income from capital are inefficient.[34] In small open economies, owners of capital can earn the going rate of return on the world capital market

[32] See, for example, European Commission, *Report of the Committee of Independent Experts on Company Taxation*, 1992.

[33] The tax rates given here are those levied by the central government on corporate income. The US also has state-level corporate income taxes, which in 1990 were 6.6% on average. The tax on local profits is deductible when calculating the federal tax owed. The federal corporate tax rate was raised to 35% in 1993.

[34] See, for example, R. Gordon, 'Taxation of investment and savings in a world economy', *American Economic Review*, vol. 76, pp. 1086–102, 1986.

— if domestic investment projects are taxed, fewer projects will be able to pay the world rate of return, and there will be less domestic investment as a result. This suggests that taxes on mobile capital income will be fully shifted onto workers or consumers, through lower wages and lower employment or through higher prices, caused by lower investment in the economy (which reduces labour productivity and raises prices). In other words, taxes on mobile inputs to production are shifted onto less mobile inputs, such as labour, regardless of who writes the cheque to the revenue authority.

Globalisation and tax revenues

All of these trends — in tax-free betting, in international moves to reduce the number of special business tax measures and in corporate tax rates — indicate that mobile activities are becoming more difficult to tax. The globalisation of international markets and advances in technology have reduced the costs of seeking out lower tax rates and increased the likelihood that tax rates on mobile activities will continue to fall. Whether this is something that revenue authorities should be seriously concerned about is a moot point.

Governments do need to find sources of revenue to fund their public spending plans, and can adopt one of two approaches. The tax-cutter's approach is to lower tax rates and hope to maintain or even increase revenue by stimulating economic activity in those areas. This is the type of approach that Ireland has adopted recently, for example, through the move to a low corporate tax rate and the cut in betting duty. The tax-defender's approach is to clamp down on tax avoidance and find methods of preventing information about lower tax rates from reaching its taxpayers, an approach that the UK appears to be taking over betting duty. In fact, the UK also uses the tax-cutter's approach, reducing corporate tax rates to encourage investors to locate or expand in the UK. It is this type of competition over tax rates that has led to attempts at co-ordination, both within the EU and the OECD for example, and not just over tax competition, but also competition over grants and other forms of state subsidy.

Looking to the future, it is clear that mobile activities will only become more difficult to tax, although revenue authorities will no doubt seek to use the same advances in technology to improve their methods of collection that taxpayers are using to shop around for the best tax rates. This does not mean that governments will not be able to raise revenue at all, but without further international co-ordination it is possible that the distribution of tax revenues will change in the long term — a smaller share of total revenue will be raised from taxes on relatively mobile activities and a larger share from less mobile activities. But it is important to remember that the underlying burden of the current balance of tax revenues is already likely to fall on less mobile activities. Shifting towards taxing those factors more directly would make the tax system more transparent and, quite possibly, more efficient, but is dependent upon the reaction of governments to that prospect. New technologies have been changing the way that people live and work for as long as governments have been trying to levy taxes — it remains to be seen whether the latest developments are simply another test of the ingenuity of tax collectors.

Appendix A: Forecasting public finances

This appendix describes the techniques used for our public finance forecasts. It starts by comparing the forecasts made for borrowing in 1998–99 in last year's Green Budget and the November 1998 Pre-Budget Report with the eventual out-turn. It then goes on to explain in more detail our forecasts for the macro-economy and their impact on the public finances over the medium term.

A.1 The accuracy of our previous forecast

All public finance forecasts are subject to large margins of error. In fact, the forecast of a public sector net borrowing surplus of £2.3 billion made in last year's Green Budget was extremely close to the eventual out-turn of a surplus of £2.5 billion. The forecast of a surplus of £1.5 billion made by the Treasury in the November 1998 Pre-Budget Report also turned out to be very close to the out-turn. This is shown in Table A.1. Both the Treasury and IFS / Goldman Sachs forecast higher levels of government spending than the eventual out-turn. The Green Budget forecast for borrowing was more accurate than that in the Pre-Budget Report due to the Green Budget's over-optimistic forecast of current receipts.

Table A.1. A comparison of last year's IFS / Goldman Sachs Green Budget forecast and the Treasury Pre-Budget Report forecast with the actual out-turn for 1998–99 (£bn)

	HM Treasury Pre-Budget Report forecast, November 1998	IFS / GS Green Budget forecast, January 1999	Out-turn, November 1999 Pre-Budget Report
Current receipts	335.9	336.5	335.5
Current spending	328.6	328.5	326.1
Net investment	4.3	4.3	5.0
Public sector net borrowing (PSNB)	–1.5	–2.3	–2.5

Note: PSNB excludes the windfall tax and associated spending, and hence is not the same as current receipts minus current and net investment spending. More recent figures for the out-turn for 1998–99 are available (see ONS Press Release ONS (99) 457, 'Public sector accounts 3rd quarter 1999', 22 December 1999), although they do not contain the breakdown by individual taxes. Those figures show a PSNB (excluding the windfall tax and associated spending) surplus of £2.6 billion.

Perhaps a better idea of the accuracy of these forecasts is given by the errors made in forecasting the individual elements of government receipts. The Green Budget forecast receipts that were £1 billion higher than the eventual out-turn, mainly because the forecast for corporate tax receipts was £1.5 billion too high. This large error was in part offset by an under-optimistic forecast of income tax receipts of £0.9 billion, as shown in Table A.2. The November 1998 Pre-Budget Report made similar errors. While the actual

errors in forecasting government receipts were £1 billion and £0.4 billion in the January 1999 Green Budget and the November 1998 Pre-Budget Report respectively, these figures disguise the extent to which errors were made on each of the individual taxes. The actual absolute error across all taxes was £13.8 billion in the Green Budget and £14.6 billion in the Pre-Budget Report.

Table A.2. IFS / Goldman Sachs and Treasury main errors in forecasting tax receipts, 1998–99 (£bn)

Tax receipt	IFS / GS Green Budget forecast, January 1999	HM Treasury Pre-Budget Report forecast, November 1998
Income tax[a]	–0.9	–1.4
Corporation tax	1.5	1.4
Value added tax	0.2	0.3
Road fuel duties	0.2	0.2
Social security contributions	0.0	–0.3
Council tax	–0.1	–0.1
Other	0.1	0.3
Total	1.0	0.4
Absolute error[b]	13.8	14.6

[a] Net of tax credits.
[b] Absolute error is not equal to the absolute error in each of the taxes listed in the table, since it considers the absolute error included in each individual tax contained in 'other'.
Source: Out-turn figure for 1998–99 from HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999.

A.2 Techniques used in our forecasts

For the current financial year, three different sources of information are examined before coming to a judgement for each element of government borrowing. In addition to the latest Treasury forecast from the November 1999 Pre-Budget Report, we use information from the revenues implied by a current receipts method, and the IFS modelled approach.[1]

1. **Information from current receipts.** Information on the receipts received so far in the current financial year is compared with receipts received up to the same point in the last financial year. An estimate for the current year's receipts is then provided using the following formula:

$$\textit{1999–00 forecast} = \frac{\textit{Receipts received so far this year}}{\textit{Receipts received to the same point last year}} \times \textit{1998–99 receipts.}$$

   While this is useful when forecasting revenues in the current financial year, it cannot provide projections for borrowing in future years. Caution should also be used when revenues are cyclical or changes have been made that may affect the timing of payments — for example, the effect of

[1] For a more detailed explanation of both these techniques, see C. Giles and J. Hall, 'Forecasting the PSBR: the IFS perspective', *Fiscal Studies*, vol. 19, no. 1, pp. 83–100, 1998.

changing the date at which tobacco duties are increased on the incentives for forestalling.

2. **The IFS modelled receipts approach.** This approach estimates growth in each of the taxes using forecasts for the growth in the relevant tax base, combined with an estimate of the elasticity of revenue with respect to growth in the tax base. Information on the revenue effects of pre-announced tax changes from previous Budgets is then added in order to reach a forecast. Hence modelled receipts can be summarised by the following formula:

   1999–00 forecast = (1998–99 receipts × Tax-base change × Elasticity)+ Tax changes

   This technique enables forecasts to be made for future years. It should be noted that these forecasts become considerably less accurate for later years since forecasts for changes in tax bases, estimates of elasticities and the impact of tax changes all become less accurate.

   The elasticities are largely estimated from TAXBEN, the IFS tax and benefit model. The estimates for income tax elasticities are supplemented by a model of the responsiveness of income tax revenues to changes in employment and wages. For road fuel, an elasticity calculated from previous IFS research is used.[2] Elasticities for beer, spirits, wine and tobacco duties are taken from the median elasticity found in a range of UK studies.[3] For VAT, we take the Treasury assumption that the ratio of VAT receipts to consumer spending falls by 0.05 percentage points each year from April 2000.

A.3 Forecasts for 1999–00

The Green Budget forecast is based on a judgement arrived at by considering the Treasury's latest forecast contained in the November 1999 Pre-Budget Report, the information on current receipts and the IFS modelled approach. All these are presented in Table A.3. Overall, we forecast a very similar pattern of receipts to that in the Pre-Budget Report, which is not surprising, given that very little additional information has become available since that forecast was made.

Inland Revenue receipts

For **income taxes**, we forecast receipts to be £1.8 billion higher than the Treasury. This is due to a higher forecast from both the current receipts and IFS modelled approaches. Our forecast for **corporation tax** is £1.5 billion lower than the Treasury's as a result of consideration of the low forecast from our modelled approach. The high forecast from current receipts is largely

[2] L. Blow and I. Crawford, *The Distributional Effects of Taxes on Private Motoring*, Commentary no. 65, Institute for Fiscal Studies, London, 1997.

[3] M. Chambers, 'Consumers' demand and excise duty receipts equations for alcohol, tobacco, petrol and derv', Government Economic Service Working Paper no. 138, August 1999.

Table A.3. Forecasts for government borrowing in 1999–00 (£bn)

	Pre-Budget Report Nov. 1999	Current receipts	IFS / GS forecast model	IFS / GS forecast judgement
Inland Revenue				
Income tax[a]	90.7	96.4[i]	93.2	92.5
Corporation tax[b]	33.5	33.7	30.7	32.0
Petroleum revenue tax	0.8	0.4	0.5	0.5
Capital gains tax	2.4	See [i]	2.1	2.1
Inheritance tax	2.0	2.0	1.8	2.0
Stamp duties	6.1	6.3	5.3	6.1
Total Inland Revenue (net of tax credits)	**135.5**	**138.8**	**133.6**	**135.2**
Customs and Excise				
Value added tax (VAT)	55.7	56.5	55.5	55.5
Road fuel duties	22.5	22.7	24.0	23.0
Tobacco duties	5.7	6.4	9.0	5.7
Spirit duties	1.7	1.8	1.7	1.7
Wine duties	1.6	1.6	1.6	1.6
Beer and cider duties	3.0	3.0	2.9	3.0
Betting and gaming duties	1.5	1.3	1.6	1.5
Air passenger duty	0.9	0.8	0.9	0.9
Insurance premium tax	1.4	1.2	1.5	1.4
Landfill tax	0.4	0.4	0.5	0.4
Customs duties and levies	2.0	2.0	2.0	2.0
Total Customs and Excise	**96.4**	**97.6**	**101.1**	**96.7**
Vehicle excise duties	4.9	4.8	4.9	4.9
Oil royalties	0.4	0.3	0.3	0.3
Business rates[c]	15.7	15.7	15.7	15.7
Social security contributions	56.2	54.6	56.9	56.0
Council tax	12.8	12.8	12.5	12.8
Other taxes and royalties[d]	7.5	7.5	8.8	7.5
Total taxes and social security contribns[e]	**329.3**	**331.9**	**333.8**	**329.0**
Accruals adjustments on taxes	3.7	3.7	3.7	3.7
less Own resources contribution to EU	–5.9	–5.9	–5.9	–5.9
less PC corporation tax payments	–0.4	–0.4	–0.4	–0.4
Income tax credits[f]	3.3	3.3	3.3	3.3
Interest and dividends	3.6	3.6	3.6	3.6
Gross trading surplus and rent	18.4	18.4	18.4	18.4
Current receipts	**352.1**	**354.6**	**356.5**	**351.7**
Current spending[g]	**343.5**	**339.9**	**339.9**	**339.9**
Windfall tax and associated current sp.	1.0	1.0	1.0	1.0
Current balance[h]	**9.5**	**15.8**	**17.6**	**12.8**
Net investment	6.4	6.4	6.4	6.4
Windfall tax and associated capital sp.	0.3	0.3	0.3	0.3
Public sector net borrowing[h]	**–3.5**	**–9.7**	**–11.5**	**–6.8**

[a]Net of tax credits. [b]Includes advance corporation tax (net of repayments); also includes North Sea corporation tax after ACT set-off, and corporation tax on gains. [c]Includes district council rates in Northern Ireland. [d]Includes money paid into the National Lottery Distribution Fund. [e]Includes VAT and 'traditional own resources' contributions to EU budget; net of income tax credits; cash basis. [f]Excludes children's tax credit, which scores as a tax repayment in the National Accounts. [g]In line with the National Accounts, depreciation has been counted as current spending. [h]Excludes windfall tax and associated spending. [i]Includes capital gains tax.
Source: Treasury forecasts from HM Treasury, *Stability and Steady Growth for Britain: Pre-Budget Report*, Cm. 4479, November 1999; this table is equivalent to Table B9 (p. 154).

discounted since the monthly receipts tend to be extremely lumpy. In particular, around one-fifth of corporation tax revenues are received in January, and these are disproportionately from the manufacturing sector. Information on these receipts will not be available until February. It would be unwise at this stage to assume receipts will continue to grow as strongly in the remainder of the year as they have so far.

Customs and Excise taxes

For **VAT** receipts, we take the figure from our modelled approach, which is very close to the HM Treasury forecast. Less weight is placed on the current receipts forecast since the timing of VAT payments has been very unstable in recent years. For **road fuel duties**, we forecast a slightly higher level of receipts than the Treasury due to the forecasts from both the current receipts model and the modelled approach. For **tobacco duties**, we take the Treasury forecast since there is some evidence of increased smuggling and since the timing of the duty increase will significantly reduce cash receipts in 1999–00 due to forestalling.

Other government receipts

For most other government receipts, we simply take the Treasury forecast. The only significant exception is with **social security contributions**, where we forecast a slightly lower level of receipts due to the low level of current receipts.

Government expenditure

For **current spending**, we forecast £339.9 billion in 1999–00, some £3.6 billion lower than the Treasury. This is almost entirely caused by our assumption that the AME margin will not be needed, given that unemployment has continued to fall. For **capital spending**, we assume the same level as the Treasury Pre-Budget Report, since there is no other additional information available.

Government borrowing

The implication of the differences in our revenue and spending forecasts is that we are forecasting lower levels of borrowing than the Pre-Budget Report. We forecast a **current budget** surplus of £12.8 billion and a repayment of **public sector net borrowing** of £6.8 billion. This compares with Treasury forecasts of a current budget surplus of £9.5 billion and a repayment of public sector net borrowing of £3.5 billion.

A.4 Medium-term forecasts

Any assessment of the fiscal stance, and whether the Chancellor is going to be successful in meeting his two fiscal 'rules', should be judged over the economic cycle. This section presents our central forecast for the path of the economy and the medium-term public finances.

Central forecast

Table A.4 presents the macroeconomic forecasts underlying the central IFS / Goldman Sachs forecasts for government borrowing. In 2001–02, these are slightly more optimistic than those of the Treasury. We forecast GDP growth of 2¾% next year, compared with the 2¼% used by the Treasury. For 2001–02 and 2002–03, we forecast GDP growth of 2% a year. This is slightly lower than the Treasury's 2¼% a year. These differences in GDP forecasts translate into differences in, for example, forecasts of employment and wage growth.

Table A.4. Main macroeconomic assumptions used in our central forecast

% growth in variable	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Gross domestic product (GDP)	2¼	2¾	2	2	2¼	2¼
Consumer spending	3½	3½	2	2	2¼	2¼
Corporate profits (lagged 1 year)	1	¼	3¼	3¾	4	4
Employment (lagged 1 year)	1	½	½	½	¼	¼
Wage growth	5	4½	4½	4½	4½	4½
GDP deflator	2½	2½	2½	2½	2½	2½

Our central forecast for the public finances is presented in Table A.5. For 2000–01, we forecast higher levels of receipts than the Treasury. This is mainly due to higher forecasts for income tax, excise duties and social security contributions. These are caused by our more optimistic economic forecast for 2000–01. For subsequent years, we forecast a very similar level of receipts to the Treasury, despite having higher forecast receipts in 2000–01. This is due to the fact that our forecasts are based on lower levels of economic growth than the Treasury's in 2001–02 and 2002–03.

Table A.5. Medium-term public finances forecasts, based on our central macroeconomic assumptions (£bn)

	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05
Current receipts	**351.7**	**373.9**	**390.1**	**407**	**426**	**446**
Current expenditure	**339.9**	**356.7**	**370.7**	**389**	**407**	**427**
Windfall tax / curr. spending	1.0	1.2	1.3	0	0	0
Surplus on current budget[a]	**12.8**	**18.4**	**20.7**	**18**	**19**	**20**
Windfall tax / cap. spending	0.3	0.3	0.3	0	0	0
Net investment	6.4	8.4	10.4	13	16	17
PSNB[a]	**–6.8**	**–10.3**	**–10.6**	**–6**	**–3**	**–3**

[a] Excludes windfall tax and associated spending.

Appendix B: The revenue effect of cutting excise duties

B.1 The relationship between tax rates and tax revenues

This section shows formally the relationship between tax rates and tax revenues.

Denote the tax rate on the *i*th good by τ_i, total tax revenue from all goods by *R*, the quantity demanded by q_i and the tax-exclusive price by π_i; then the total indirect tax revenue function with n goods is given by

$$(1) \qquad R = \sum_{i=1}^{n} \tau_i \pi_i q_i$$

where q_i is a function of all tax-inclusive prices, the available budget (x) and a set of demographic, regional and other variables $(\mathbf{z})$:

$$(2) \qquad q_i = q(p_1, p_2, p_3, ..., p_n, x, \mathbf{z})$$

where $p_i = \pi_i(1+\tau_i)$.

Differentiating (1) with respect to τ_i, we obtain

$$(3) \qquad \frac{\partial R}{\partial \tau_i} = \pi_i q_i + \sum_{j=1}^{n} \tau_j \pi_j \frac{\partial q_j}{\partial \tau_i}.$$

By definition, assuming no change in the pre-tax price,

$$(4) \qquad \frac{\partial q_j}{\partial \tau_i} = \frac{\partial q_j}{\partial p_i} \pi_i$$

and

$$(5) \qquad \frac{\partial q_j}{\partial p_i} = \varepsilon_{ji} \frac{q_j}{p_i}$$

where ε_{ji} is the elasticity of demand for good *j* with respect to a change in the price of good *i*; then, by substitution,

$$(6) \qquad \frac{\partial R}{\partial \tau_i} = \pi_i q_i + \sum_{j=1}^{n} \frac{\varepsilon_{ji} q_j \pi_j \tau_j}{1+\tau_i} \quad .$$

Where revenue is maximised, $\partial R / \partial \tau_i = 0$. When we have estimates of the cross-price elasticities, ε_{ji}, we can calculate $\partial R / \partial \tau_i$ and test whether it is equal to zero. We can then determine whether revenue is at a maximum and, if

it is not, whether cutting duty would lead to an increase or decrease in revenue.

Setting $\partial R / \partial \tau_i = 0$ and solving for the own-price elasticity of demand, and the corresponding tax-inclusive prices at which total tax revenue is maximised (denoted ε_{ii}^* and p_i^* respectively), we obtain

$$(7) \quad \varepsilon_{ii}^* = -\left[\frac{p_i^*}{p_i^* - \pi_i} + \sum_{j=1, j \neq i}^{n} \varepsilon_{ji} \frac{q_j}{q_i} \left(\frac{p_j - \pi_j}{p_i^* - \pi_i} \right) \right].$$

This equation tells us what the elasticity would have to be (the critical elasticity) if current tax rates and prices were revenue-maximising. We do not have estimates of the cross-price effects for cigarettes but, if we ignore the cross-price effects, the equation for the critical elasticity is given by

$$(8) \quad \varepsilon_{ii}^* = -\left[\frac{p_i^*}{p_i^* - \pi_i} \right].$$

So, using information on prices and tax rates, it is possible to carry out a preliminary analysis of the revenue effect of cutting duty by comparing an estimate of the current elasticity with this critical level.

B.2 Estimated elasticities of alcohol for the UK

The 'true' elasticities for the whole population of the UK are unknown and so we estimate them from a sample — the Family Expenditure Survey, which is a survey of around 7,000 households per year. The standard error of the elasticity estimate is a measure of the accuracy of the estimate. Table B.1 reports the same elasticities found in Table 7.4, but also reports the standard errors in parentheses.

Table B.1. Estimated elasticities for the UK, 1993–96

Change in price of:	Change in quantity of					
	Beer		**Wine**		**Spirits**	
Beer	–0.76	(0.09)	–0.60	(0.28)	–0.59	(0.33)
Wine	–0.17	(0.09)	–1.69	(0.46)	0.66	(0.45)
Spirits	–0.20	(0.12)	0.77	(0.53)	–0.86	(0.76)

Source: I. Crawford, Z. Smith and S. Tanner, 'Alcohol taxes, tax revenues and the Single European Market', *Fiscal Studies*, vol. 20, no. 3, pp. 287–304, 1999.

Appendix C: Budgets since 1979

This appendix summarises the main tax measures introduced in each Budget since 1979. Statutory indexation of thresholds and limits is not included.

1979 Budget, Geoffrey Howe

Income tax	Basic rate cut from 33% to 30%.
	Top rate cut from 83% to 60% on earned income and from 98% to 75% on unearned income.
VAT	Two-tier rates of 8% and 12.5% replaced by single 15% rate.
Excise duties	Alcohol and tobacco duties reduced; petrol duty increased.
Company taxes	Petroleum revenue tax rate increased from 45% to 60%.

1980 Budget, Geoffrey Howe

Income tax	Reduced rate of 25% abolished.
National Insurance	Employee rate increased from 6.5% to 6.75% (contracted in).
	Employer rate increased from 10% to 10.2% (contracted in).
Capital taxes	Stamp duty threshold on property increased from £15,000 to £20,000.
	Capital transfer tax threshold doubled from £25,000 to £50,000.
Company taxes	Petroleum revenue tax rate increased from 60% to 70%.

1981 Budget, Geoffrey Howe

Income tax	Personal allowances frozen in cash terms, implying a cut in real terms.
National Insurance	Employee rate increased from 6.75% to 7.75% (contracted in).
Excise duties	Sharp increases (beer and petrol up 24%, cigarettes up 16%).

1982 Budget, Geoffrey Howe

Income tax	Personal allowances increased in real terms.
National Insurance	Employee rate increased from 7.75% to 8.75% (contracted in).
	Employer National Insurance surcharge reduced from 3.5% to 2%, and to 1.5% from April 1983.
Capital taxes	Indexation provisions introduced for capital gains tax.
	Stamp duty threshold on property increased from £20,000 to £25,000.
Company taxes	Petroleum revenue tax rate increased from 70% to 75%.

1983 Budget, Geoffrey Howe

Income tax	Personal allowances increased in real terms.
	Mortgage interest relief ceiling raised from £25,000 to £30,000.
National Insurance	Employee rate increased from 8.75% to 9% (contracted in).
	Employer National Insurance surcharge cut from 1.5% to 1%.
Company taxes	Licence royalties abolished for all new oilfields.

1984 Budget, Nigel Lawson

Income tax	Personal allowances increased in real terms.
	Investment income surcharge abolished.
	Relief on life assurance premiums abolished for new policies.
National Insurance	Employer National Insurance surcharge abolished.
Excise duties	Duty on wine cut sharply; increases on beer and cigarettes.
Capital taxes	Stamp duty threshold on property increased from £25,000 to £30,000.
	Highest rate of stamp duty reduced from 2% to 1%.
	Top rate of capital transfer tax cut from 75% to 60%.
Company taxes	Corporation tax rate to be reduced from 52% in 1982–83 to 50% in 1983–84, 45% in 1984–85, 40% in 1985–86 and 35% in 1986–87.
	Stock relief abolished.
	First-year allowances to be phased out and replaced by 25% writing-down allowances.

1985 Budget, Nigel Lawson

Income tax	Personal allowances increased in real terms.
National Insurance	Employee and employer contributions restructured, with reduced rates for lower earners.
	Upper ceiling on employer contributions abolished.
Company taxes	Development land tax abolished.

1986 Budget, Nigel Lawson

Income tax	Basic rate reduced from 30% to 29%.
	Announcement of the introduction of tax relief for profit-related pay (PRP) schemes in 1987.
	Tax relief for Personal Equity Plans (PEPs) introduced.
Capital taxes	Capital transfer tax replaced with inheritance tax.
	Stamp duty for shares reduced from 1% to 0.5%.

1987 Budget, Nigel Lawson

Income tax	Basic rate reduced from 29% to 27%.
Excise duties	Duties held constant in cash terms, implying a real cut.
Capital taxes	Inheritance tax threshold increased from £71,000 to £90,000.
	Number of inheritance tax rates cut from seven to four.
	New arrangements to encourage personal pensions.

1988 Budget, Nigel Lawson

Income tax	Personal allowances increased in real terms.
	Basic rate reduced from 27% to 25%.
	All rates above 40% abolished.
	Announcement of separate taxation of husband and wife from 1990.
	Company car scale charges doubled.
Capital taxes	Capital gains accruing before 1982 written off for capital gains tax purposes.
	Capital gains tax rates changed to equal marginal income tax rates.
	Inheritance tax threshold increased from £90,000 to £110,000.
	Inheritance tax rates reduced to a single rate of 40%.

1989 Budget, Nigel Lawson

Income tax	Limit for higher age relief reduced to 75.
	Age allowance taper reduced to 50%.
	Pensioner ‘earnings rule’ abolished.
	Personal Equity Plans (PEPs) extended.
National Insurance	Employee 5% and 7% bands abolished.
	Lower 2% rate for employees introduced on earnings below lower earnings limit.
Excise duties	Petrol duties adjusted to favour unleaded fuel.

1990 Budget, John Major

Income tax	Basic-rate limit frozen.
	Employer-provided work-place nurseries exempted from tax.
	Introduction of Tax-Exempt Special Savings Accounts (TESSAs).
	Abolition of composite rate of tax announced.
Capital taxes	Plans for abolition of stamp duty on shares announced.
Company taxes	Corporation tax rate cut from 35% to 34%.

1991 Budget, Norman Lamont

Income tax	Married couple’s allowance frozen.
	Mortgage interest relief restricted to the basic rate of tax.
	Personal Equity Plans (PEPs) extended.
	Company car scale charges raised by 20%.
National Insurance	Employer contributions to be charged on company cars and free fuel from 1992–93.
VAT	Standard rate of VAT raised from 15% to 17.5%.
Company taxes	Corporation tax rate cut from 34% to 33%.

Local taxes	Community charge bills subsidised by £140 per adult.

1992 Budget, Norman Lamont

Income tax	Reduced rate of 20% introduced on first £2,000 of taxable income. Married couple's allowance frozen. Basic-rate limit frozen. Personal Equity Plans (PEPs) limit on investment and unit trusts raised from £3,000 to the overall limit, £6,000.
Excise duties	Further widening in leaded–unleaded petrol duty differential. Car tax halved from 10% to 5% and abolished from November 1992.

1993 Spring Budget, Norman Lamont

Income tax	20% band widened to £3,000 by April 1994. Personal allowances and basic-rate limit frozen. Married couple's allowance and mortgage interest relief restricted to 20% from April 1994.
National Insurance	Contribution rates for employees and self-employed up 1 percentage point from April 1994.
VAT	Extended to domestic fuel at 8% from April 1994 and at 17.5% from April 1995.
Excise duties	Duties increased above inflation, except spirits (frozen). Announced commitment to increase duties on road fuel by at least 3% p.a. in real terms.
Capital taxes	Stamp duty threshold doubled to £60,000.
Company taxes	Advance corporation tax (ACT) rate reduced to 22.5% from April 1993 and to 20% from April 1994. Dividend 'tax credit' down to 20%. Basic rate of tax on dividends reduced to 20%.
Local taxes	Community charge abolished, council tax introduced.

1993 Autumn Budget, Kenneth Clarke

Income tax	Personal allowances frozen and basic-rate limit frozen. Married couple's allowance and mortgage interest relief restricted to 15% from April 1995.
National Insurance	Main rate for employer contributions reduced by 0.2 percentage point to 10.2%. Lower rates of employer contributions reduced by 1 percentage point.
Excise duties	No increase on spirits and beer. Most other duties increased above indexation. Commitment to raise tobacco duties by at least 3% p.a. in real terms. Commitment to raise road fuel duties by at least 3% p.a. in real terms increased to 5% in real terms. Insurance premium tax and air passenger duty introduced.

1994 Budget, Kenneth Clarke

Income tax	All age-related personal allowances increased above inflation.
VAT	Abandonment of second stage of VAT on domestic fuel — rate to stay at 8%.
Excise duties	Alcohol duties raised by an average of 4%. Tobacco duties increased by more than inflation. Duties on road fuel increased above inflation; diesel duties brought in line with duties on unleaded petrol.
Other	Landfill tax planned for 1996 and businesses to be compensated through lower employer National Insurance contributions.

1995 Budget, Kenneth Clarke

Income tax	Basic rate of income tax reduced from 25% to 24%. Personal allowances increased above inflation. Lower-rate band and basic-rate limit increased by more than indexation. Tax on savings income cut from 25% to 20% for basic-rate taxpayers.

National Insurance	Tax relief on Class 4 National Insurance contributions withdrawn.
	Main rate for employers cut from 10.2% to 10% from April 1997.
	Rate of Class 4 contributions reduced from 7.3% to 6%.
Excise duties	Beer, wine and most cider duties frozen; spirits cut by 4%.
	Most tobacco duties up by 3% in real terms.
	Petrol and diesel tax (duty and VAT) raised by 3.5p per litre, or 5% real increase.
Capital taxes	Inheritance tax threshold raised to £200,000, £40,000 more than indexation.
Company taxes	Small companies' rate cut from 25% to 24%.
Other taxes	Landfill tax introduced at two rates of £2 and £7 per tonne.

1996 Budget, Kenneth Clarke

Income tax	Personal allowances increased by more than inflation.
	Basic-rate limit and married couple's allowance indexed.
	Basic rate cut to 23%.
	Tax relief for profit-related pay phased out from 1998–99.
Excise duties	Beer, wine, cider frozen; spirits cut by 4%.
	Air passenger duty doubled, insurance premium tax up to 4%.
	Tobacco up by 5% in real terms, hand-rolling tobacco indexed.
	Petrol and diesel up by 5% in real terms.
Company taxes	Small companies' rate cut to 23%.
	Capital allowances cut for long-lived assets.
Local taxes	Transitional relief for small companies extended.

1997 Summer Budget, Gordon Brown

Income tax	Mortgage interest relief cut to 10% from April 1998.
VAT	Rate on domestic fuel cut from 8% to 5%.
Excise duties	Road fuel duties commitment raised from 5% p.a. to 6% p.a. real increase.
	Tobacco duty commitment raised from 3% p.a. to 5% p.a. real increase.
Capital taxes	Graduated stamp duty introduced: 1% for properties between £60,000 and £250,000; 1.5% between £250,000 and £500,000; 2% over £500,000.
Company taxes	Windfall tax on privatised utilities.
	Main corporation tax rate cut from 33% to 31% from April 1997.
	Small companies' rate cut from 23% to 21% from April 1997.
	Dividend tax credits for pension funds and other companies abolished immediately, for all others from April 1999.

1998 Spring Budget, Gordon Brown

Income tax	Working families tax credit from October 1999.
	Allowances and bands indexed.
	Married couple's allowance restricted to 10% from April 1999.
	Individual Savings Accounts (ISAs) from April 1999.
	Tax on company cars increased.
National Insurance	'Entry fee' abolished for employees from April 1999.
Excise duties	Differential widened between diesel and unleaded petrol.
Capital taxes	Personal capital gains tax reformed: indexation abolished and taper introduced.
Company taxes	Advance corporation tax (ACT) abolished from April 1999 and quarterly payments system introduced.
	Main rate cut to 30%, smaller companies' rate to 20% from April 1999.

1999 Budget, Gordon Brown

Income tax	Basic rate cut from 23% to 22% from April 2000.
	Most allowances indexed.
	New 10% starting rate from April 1999, 20% rate abolished.
	Married couple's allowance abolished from 2000 for under-65s.
	Children's tax credit announced from April 2001.
	Real increase in child benefit of 3% in April 2000.
	Mortgage interest relief abolished from April 2000.
	High mileage discounts for company cars reduced.

National Insurance	Starting-point for payment of employee National Insurance contributions aligned with income tax by April 2001. Upper earnings limit raised above inflation for next three years. Self-employed structure reformed from April 2000. Employer contributions on all benefits in kind. Employer rate cut by 0.5 percentage point from April 2001.
Capital taxes	Stamp duty raised to 2% on properties between £250,000 and £500,000, 3% on properties over £500,000.
Company taxes	Climate Change Levy from 2001–02.

Appendix D: Headline tax rates and thresholds

	Current system 1999–00 level	Indexed 2000–01 level[a]
Income tax		
Personal allowance: under age 65	£4,335 p.a.	£4,385 p.a.
aged 65–74	£5,720 p.a.	£5,790 p.a.
aged 75 and over	£5,980 p.a.	£6,050 p.a.
Married couple's allowance: under age 65	£1,970 p.a.	abolished
aged 65–74	£5,125 p.a.	£5,185 p.a.
aged 75 and over	£5,195 p.a.	£5,255 p.a.
Lower rate	10%	10%
Basic rate	23%	22%
Higher rate	40%	40%
Lower-rate limit	£1,500 p.a.	£1,520 p.a.
Basic-rate limit	£28,000 p.a.	£28,400 p.a.
Pension earnings cap	£90,600 p.a.	£91,600 p.a.
Tax rates on interest income	10%, 20%, 40%	10%, 20%, 40%
Tax rates on dividend income	10%, 32.5%	10%, 32.5%
Mortgage interest tax relief: ceiling	£30,000	abolished
restricted to	10%	
National Insurance		
Lower earnings limit	£66 p.w.	£67 p.w.
Upper earnings limit (UEL)	£500 p.w.	£535 p.w.
Primary earnings threshold (employee)	£66 p.w.	£76 p.w.
Secondary earnings threshold (employer)	£83 p.w.	£84 p.w.
Class 1 contracted-in rate: employee	10%	10%
employer	12.2%	12.2%
Class 1 contracted-out rate: employee	8.4%	8.4%
employer — below UEL	9.2%	9.2%
employer — above UEL	12.2%	12.2%
Corporation tax		
Rates: lower rate		10%
small companies' rate	20%	20%
standard rate	30%	30%
Capital gains tax		
Annual exemption limit: individuals	£7,100 p.a.	£7,200 p.a.
trusts	£3,550 p.a.	£3,600 p.a.
Tax rates (vary according to holding period)		
Non-business assets: top-rate taxpayers	24%–40%	24%–40%
basic-rate taxpayers	14%–23%	13%–22%
Business assets: top-rate taxpayers	10%–40%	10%–40%
basic-rate taxpayers	6%–23%	5.5%–22%
Inheritance tax		
Threshold	£231,000	£234,000
Rate for transfer at or near death	40%	40%

Continues

[a] 2000–01 figures assume no discretionary changes apart from indexation and pre-announced measures.

	Current system 1999–00 level	Indexed 2000–01 level[a]
Value added tax		
Standard rate	17.5%	17.5%
Rate on domestic fuel	5%	5%
Excise duties		
Beer (pint)	25p	25p
Wine (75cl bottle)	112p	113p
Spirits (70cl bottle)	548p	555p
20 cigarettes: specific duty	165p	167p
ad valorem (22% of retail price)	86p	87p
Petrol (litre)	53p	53p
Unleaded petrol (litre)	47p	48p
Diesel (litre)	50p	51p
Air passenger duty		
Low rate (for destinations within the EU)	£10	under review
High rate (for destinations outside the EU)	£20	under review
Betting and gaming duty		
General betting duty (applies only to off-course bookmakers)	6.75%	6.75%
Pool betting duty	17.5%	17.5%
Insurance premium tax		
Standard rate	5%	5%
Higher rate (for insurance sold accompanying certain goods and services)	17.5%	17.5%
Stamp duty		
Land and buildings: threshold	£60,000 p.a.	
rate: up to £60,000	0%	0%
£60,000–£250,000	1%	1%
£250,000–£500,000	2.5%	2.5%
above £500,000	3.5%	3.5%
Stocks and shares: rate	0.5%	0.5%
Vehicle excise duty		
Standard rate	£155 p.a.	
Small cars rate (engines up to 1,100cc)	£100 p.a.	
Heavy goods vehicles (varies according to vehicle type and weight)	£155–£9,250 p.a.	
Landfill levy		
Standard rate	£10 per tonne	£11 per tonne
Low rate (inactive waste only)	£2 per tonne	
Local taxes[b]		
Average rate band D council tax: England	£798.23	n/a
Wales	£601.70	n/a
Scotland	£849.00	n/a

[a] 2000–01 figures assume no discretionary changes apart from indexation and pre-announced measures.
[b] Figures for 1998.
Sources: Various HM Treasury, Inland Revenue and HM Customs and Excise press releases, March 1999; HM Customs and Excise *Annual Report 1998–99*; HM Treasury, *Tax Ready Reckoner and Tax Reliefs*, November 1999.

Appendix E: Tax revenues ready reckoner

Table E.1. Direct effects of illustrative changes in taxation to take effect April 2000

	Cost/yield (non-indexed base) 2000–01 (£m)
Income tax	
Rates	
Change starting rate by 1p[a]	390
Change basic rate by 1p[a]	2,650
Change higher rate by 1p	720
Change basic rate in Scotland by 1p[a]	240
Allowances	
Change personal allowance by £100	560
Starting-rate limit	
Increase starting-rate limit by £100	290
Basic-rate limit	
Change basic-rate limit by 1%	140
Change basic-rate limit by 10%:	
increase (cost)	1,250
decrease (yield)	1,600
Allowances and limits	
Change all main allowances, starting- and basic-rate limits:	
increase/decrease by 1%	460
increase by 10% (cost)	4,400
decrease by 10% (yield)	5,000
Working families tax credit	
Change basic tax credit by £1	70
Change child tax credits by £1	140
Change 30-hour tax credit by £1	35
Change withdrawal threshold by £1	30
Change withdrawal threshold by 5%:	
increase	250
decrease	325

Continues

[a] Excludes savings income.

	Cost/yield (non-indexed base) 2000–01 (£m)
Corporation tax	
Change main rate by 1 percentage point	1,100
Change smaller companies' rate by 1 percentage point	160
Capital gains tax	
Increase annual exempt amount by £500 for individuals and £250 for trustees	25
Inheritance tax	
Change rate by 1 percentage point	60
Increase threshold by £5,000	40
Excise duties[a]	
Beer up 0.3p a pint	30
Wine up 1.3p a bottle (75cl)	10
Spirits up 6.4p a bottle (70cl)	5
Cigarettes up 3p a packet (20 king-size)	60
Petrol up 0.5p a litre	115
Derv up 0.5p a litre	95
Change insurance premium tax (both standard and higher rates) by 1 percentage point	235
VAT	
Change both standard and reduced rates by 1 percentage point	3,175
VAT coverage	
Extend VAT to:	**1999–00**
food	7,800
domestic and international passenger transport	3,550
construction of new homes	2,750
books, newspapers, etc.	1,300
water and sewerage services	950
children's clothing	1,100
prescriptions	650

[a] Figures are calculated given the price and tax charged on a typical item. All changes are assumed to be implemented in April 2000, except the change to the insurance premium tax (July 2000).
Note: The revenue effect is computed for changes to the 2000–01 tax system and relates to the full-year effect.
Source: HM Treasury, *Tax Ready Reckoner and Tax Reliefs*, November 1999.