

4. The economic outlook

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Summary

- Over the past 10 years, growth and inflation have been relatively stable by the standards of previous decades. But this may be sowing the seeds of future volatility by encouraging consumers and the government to borrow more.
- The Treasury has recently revised up its central estimate of the UK economy's potential growth rate over the next few years from 2½% to 2¾%, but assumes a more 'cautious' rate of 2½% when forecasting the public finances. However, 2½% looks a reasonable central forecast, rather than an obviously cautious one.
- House prices have risen sharply over the past decade, and some falls are rather likely in the next few years. The rise in prices to date has made housing less affordable for younger households and has driven borrowing higher. Disposable income – net of essential spending – looks set to grow only modestly.
- We are more pessimistic than the Treasury about economic growth in the next couple of years. Compared with the Treasury, we expect a smaller contribution from net exports, weaker investment growth next year and weaker consumer spending growth through to 2009.

4.1 Introduction

Whether the government meets its fiscal rules and what tax and spending decisions it makes in the coming years will in part depend on what happens in the wider economy. The evolution of both government spending and tax revenues, and therefore deficits and the stock of outstanding debt, are sensitive to the path for economic activity and its composition.

In this chapter, we assess the outlook for the UK economy and consider the chances that the Treasury's December 2006 Pre-Budget Report assessment of the prospects for economic growth will be accurate. We also analyse in some detail the recent and likely future path of productivity. This is a key determinant of the potential growth rate of the economy and therefore of any assessment of where we lie in the economic cycle.

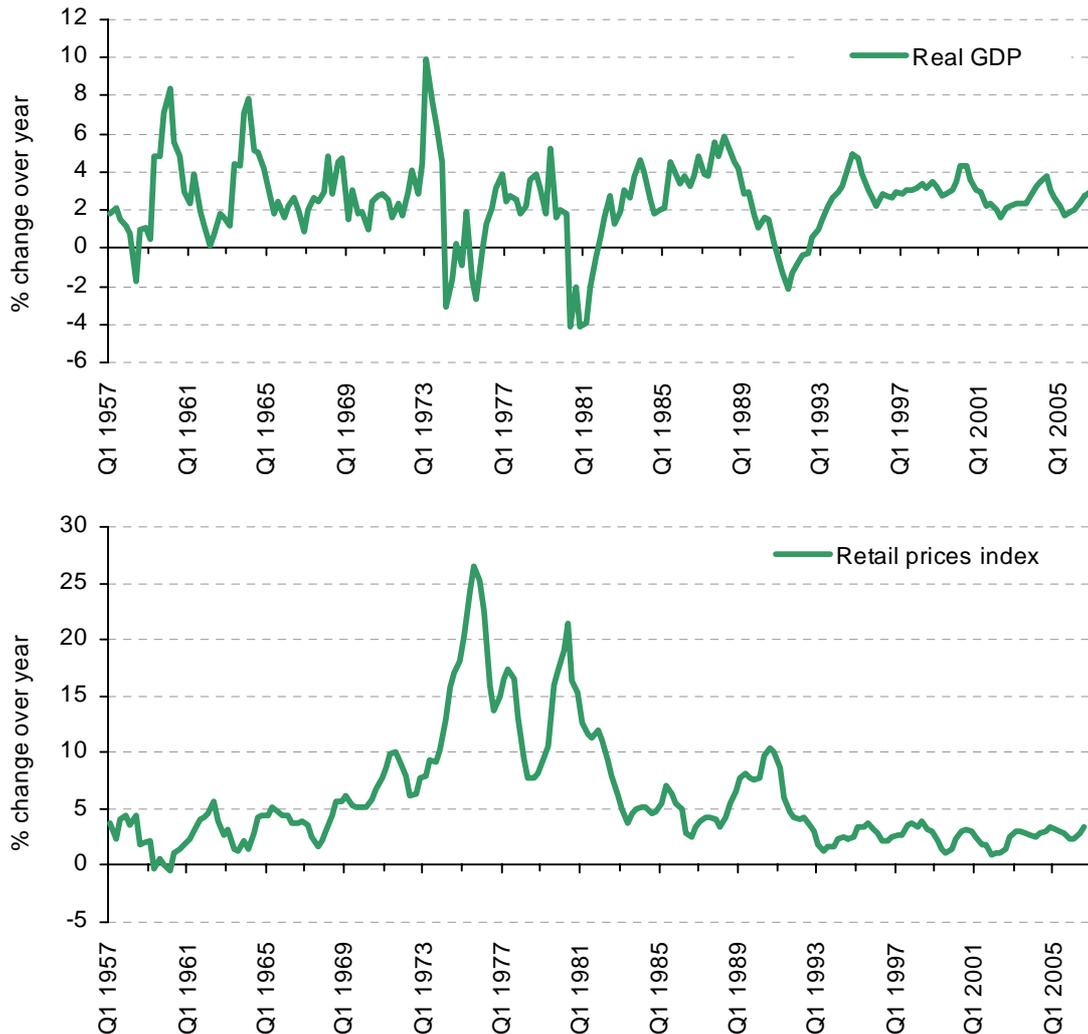
Economic growth has been relatively robust over the past decade. The Treasury expects the economy to pick up, with growth of between 2¾% and 3¼% in 2007 and the output gap closing in early 2007. We see several risks to this benign outlook: high debt levels and a still low saving rate may prevent a significant pick-up in consumer spending growth, while a weaker world economy may slow investment growth and worsen our net exports. Against that backdrop, marginally below-trend growth seems likely to us in 2007. In the medium term, inadequate saving, a volatile housing market, the risks of a slowdown in productivity growth and the unwinding of external imbalances are all threats to hopes of steady growth.

We begin by summarising recent developments in the UK economy (Section 4.2). We then turn to the evolution of productive potential in the economy, contrasting our estimates from structural analysis and statistical filters with those of the Treasury (Section 4.3). We then look at the short-term outlook for the economy (Section 4.4) and present our own medium-term forecasts (Section 4.5).

4.2 Recent developments

2006 looks set to have been a year of solid, rather than spectacular, growth. In 2005, real national income (GDP) grew by 1.9%, the lowest annual growth rate for more than 10 years and significantly below the average rate seen since 1995 of 2.8%. In 2006, GDP growth looks to have been about 2.7%, a touch below the average pace of the past 10 years, but slightly above the longer-run historic trend. Interest rates remain low in nominal and (especially) real terms; the exchange rate has been relatively stable on a trade-weighted basis (though on a more volatile upward path against the dollar); unemployment has edged up (but so has employment); stock prices and house prices have moved up significantly over the past year.

Figure 4.1. Economic growth and inflation since 1957



Source: ONS.

The UK's recent economic performance continues to look remarkably stable by the standards of the past 50 years. Volatility in the pace of overall economic activity and in inflation has been exceptionally low over the past 10 years (Figure 4.1). However, this may have helped sow the seeds for a more volatile period ahead. Less fear of sharp gyrations in the economy may well have contributed to the very rapid rise in household debt and perhaps also the government's willingness to run deficits on a scale not normally associated with periods of extended economic growth. As a result, the UK economy may now be less able to weather an economic shock than a couple of years ago, particularly one that adversely affects the labour market. Crucial to any such assessment are the extent of spare capacity in the economy and the likely rate of growth of productive potential. These are issues we address in the next section.

4.3 Productive potential and the economic cycle

The importance of productive potential

In this section, we consider how the UK's productive potential is likely to evolve. The trend or potential growth rate is the speed at which the economy can grow without inflation rising. It is also the best guess at the growth rate we are likely to experience over a long time horizon, and is a key determinant of the potential growth of tax revenues and therefore of the longer-term sustainability of fiscal policy. Prior to the December 2006 Pre-Budget Report, the Treasury assumed that trend growth would be 2¾% until 2006Q4 and would then fall to 2½% a year until the end of the forecast period. In the Pre-Budget Report, the Treasury revised upwards its assessment of trend growth from 2006Q4 onwards so that it remains at 2¾%. We assess whether this revision is sensible.

Changes in potential output arise from two sources: greater inputs of labour and/or capital; and greater efficiency in the use of those inputs to generate outputs (productivity).

Labour productivity is the simplest and most intuitive way to measure productivity: it is the level of an economy's output divided by the level of employment.¹ One difficulty in analysing the evolution of labour productivity is that it tends to rise when economic growth is strong, as output tends to rise proportionally more than employment. This is why many simple measures of labour productivity tend to be pro-cyclical (or follow the cycle). We are interested in the 'underlying' trends that drive the economy over the medium term, and must therefore abstract from such cyclical forces. To do so, we rely on an approach that aims to extract trends in the economic drivers and inputs that determine the potential output of the economy.

Estimating productive potential: a structural approach

We can split UK GDP *growth* into the (weighted) sum of three components: changes in labour supply; changes in the amount of capital per worker; and technological progress (also known as total factor productivity). To work out the relative contribution of these three

¹ An alternative measure of productivity is the ratio between economic output and the total number of hours worked. This is in principle a better measure of productivity, but it is harder to measure in practice.

components, we use a production function, which relates an economy's output to the available inputs (labour and capital) and the existing technology.

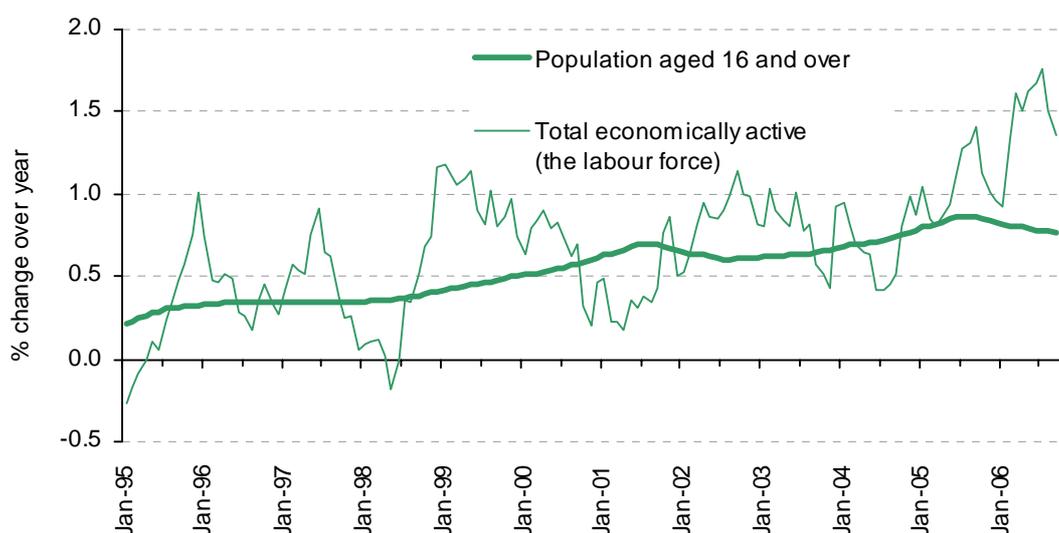
This enables us to assess whether the recent growth of the UK economy reflects special circumstances that are unlikely to be maintained (for instance, unusually strong immigration flows) or whether long-lasting changes might have taken place that should make us revise up estimates of the UK's longer-term economic growth. We will then cross-check this 'bottom-up' structural economic approach with simple statistical approaches that extract the path of trend growth from the evolution of actual GDP.

The labour market: key developments

ONS data show that labour force growth over the past year or two has been particularly strong (Figure 4.2). This reflects three main factors (Figure 4.3):

- Most importantly, an increase in the working-age population. Of the increase in mid-year population between 2004 and 2005, the ONS attributes the main part to net immigration. There were 447,000 applicants to the Worker Registration Scheme (WRS) between 1 May 2004 and 30 June 2006.²
- Next most important, people retiring later and remaining economically active for longer.
- Much less importantly, falling inactivity, potentially partly the result of government initiatives to decrease the numbers of benefit claimants on inactivity-related benefits and to get more such claimants back into the labour force. According to the Department for Work and Pensions (DWP), as of May 2006, the numbers on incapacity benefit were down 54,000 on the year and the numbers of lone parents on income support were down 14,000.

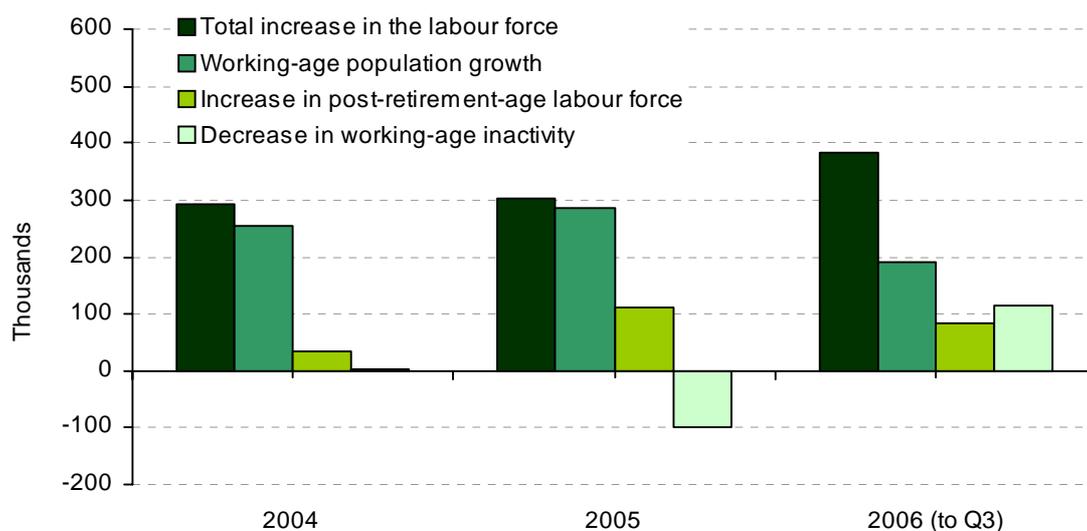
Figure 4.2. Growth in population and the labour force



Sources: ONS; Morgan Stanley Research.

² The WRS requires workers from the 'A8' accession countries (nationals of the 10 countries that joined the EU in May 2004 less Malta and Cyprus) to register when wishing to take up employment in the UK. 447,000 is roughly 0.75% of the 2004 mid-year UK population. This scheme does not pick up the self-employed (however, neither does it require workers to de-register when they leave the country).

Figure 4.3. Drivers of the recent increase in the labour force



Sources: ONS; Morgan Stanley Research.

Although our central assumption is that the rate of labour force growth slows as the pace of net immigration slows, the numbers of working-age people moving from inactivity into employment may continue to rise as the government continues to pursue initiatives to move people off inactivity-related benefits. Workforce growth might also increase following new laws against age discrimination in October 2006, as the ‘baby-boomer’ generation reaches the state pension age, as individuals are allowed to draw an occupational pension while continuing to work for the same employer (from April 2006) and with the continuing trend towards defined-contribution rather than defined-benefit pension schemes. (Surveys suggest that people overestimate their likely income in retirement and thus may wish to work longer to boost them.) The increase in the state pension age for women (to 65 from 60), due to be implemented in April 2010, may also start to have an impact in coming years.

Table 4.1 shows our estimates of the contribution of changes in the population, in the participation rate (the proportion of the working-age population who are employed or unemployed), in the employment rate (the employed as a proportion of the employed plus unemployed) and in average hours worked. The penultimate column on the right of the table shows the total contribution from changing aggregate labour input to GDP growth.

We find that rising labour supply and population growth has added a substantial 0.5 percentage points to GDP growth in the 2001–05 period and almost 0.7 percentage points in 2005 – more than three times its contribution over the period from 1972 to 2005 – only to rise further in the first half of 2006. The question is whether such high contribution rates can be maintained in the future.

Table 4.1 also shows that, within the labour supply aggregate, the main contributors to GDP growth have been increasing labour participation and population growth, with the latter alone adding almost half a percentage point over the last five years. In contrast, hours worked have continued to decline in recent years, albeit at a reduced pace relative to the historical average trend of -0.2% per year. The contribution of the employment rate became slightly negative in 2005 and early 2006.

Table 4.1. GDP growth: the contribution of labour inputs

Factors: (percentage point contributions)	Labour participation	Employment rate	Hours worked	Population growth	Total contribution: labour variables and population	Actual observed GDP growth
1972–2005	0.2	0.0	–0.2	0.2	0.2	2.3
1972–85	0.3	–0.4	–0.3	0.1	–0.3	1.8
1985–95	0.0	0.2	–0.1	0.3	0.4	2.5
1996–2005	0.2	0.3	–0.2	0.4	0.6	2.8
2001–05	0.3	0.1	–0.3	0.4	0.5	2.4
2001	0.2	0.3	–0.4	0.4	0.5	2.3
2002	0.2	0.2	–0.4	0.4	0.4	2.0
2003	0.3	0.1	–0.3	0.4	0.5	2.6
2004	0.3	0.0	–0.2	0.5	0.6	3.2
2005	0.4	–0.1	–0.1	0.5	0.7	1.8
2006 Q1–Q2	0.4	–0.3	0.0	0.6	0.7	2.4
<i>Forecasts</i>						
2007	0.4	0.1	–0.1	0.5	0.9	
2008	0.4	0.1	–0.1	0.4	0.8	
2009	0.3	0.0	–0.1	0.4	0.6	
2010	0.2	0.0	–0.2	0.3	0.3	
2011	0.2	0.0	–0.2	0.3	0.3	

Note: The trend rate of the underlying components from the production functions is calculated using an HP filter, which aims to decompose output into a permanent ('trend') component and a cyclical factor.

Source: Morgan Stanley Research.

Figure 4.4. Labour participation



Note: We define labour participation as employment plus unemployment (aged 16 years and above) divided by the overall population.

Sources: Morgan Stanley Research; ONS.

What of the future? We assume population growth remains strong, increasing at a pace similar to that recorded in 2004 and 2005, and stays above average until 2011. Only from 2010 do we project a slight decline in population growth, from 0.4% to 0.3%.³ For labour participation, we assume the recent pace of growth to be maintained until 2008 and to start slowing only very gradually thereafter. Finally, we assume that after contributing negatively since 2005, the contribution of the employment rate turns positive, and gradually returns to zero by 2009, in line with its historical average. This leaves us with the labour market making a positive, but declining, contribution to growth.

Capital inputs and technical progress

We now turn our attention to the contribution of capital deepening and technical progress, or total factor productivity (TFP). Capital deepening simply means changes in the amount of capital per employee, while TFP reflects improvements in the effectiveness with which output is extracted from a given amount of input. As economic growth cannot rely on ever-increasing amounts of capital and labour, it is TFP growth that ultimately matters the most for driving economic growth on a sustained basis. As Table 4.2 shows, we find no evidence that TFP growth has accelerated in recent years.

Table 4.2. GDP growth: capital deepening and innovation

Factors: (percentage point contributions)	Capital deepening	TFP growth	Total contribution from labour variables and population	Overall potential GDP growth from sum of filtered contributions	Actual observed GDP growth
1972–2005	0.5	1.6	0.2	2.3	2.3
1972–85	0.6	1.6	–0.3	1.9	1.8
1985–95	0.3	1.7	0.4	2.4	2.5
1996–2005	0.8	1.4	0.6	2.8	2.8
2001–05	0.6	1.4	0.5	2.6	2.4
2001	0.9	1.4	0.5	2.8	2.3
2002	0.8	1.5	0.4	2.7	2.0
2003	0.6	1.5	0.5	2.6	2.6
2004	0.4	1.5	0.6	2.5	3.2
2005	0.3	1.4	0.7	2.3	1.8
2006 Q1–Q2	0.2	1.3	0.7	2.2	2.4
<i>Forecasts</i>					
2007	0.3	1.4	0.9	2.6	
2008	0.3	1.5	0.8	2.6	
2009	0.3	1.5	0.6	2.4	
2010	0.5	1.6	0.3	2.4	
2011	0.5	1.6	0.3	2.4	

Note: The trend rate of the underlying components from the production functions is calculated using an HP filter, which aims to decompose output into a permanent ('trend') component and a cyclical factor.

Source: Morgan Stanley Research.

³ While the EU accession in 2004 has boosted immigration into the UK, and therefore population growth, the accession of Bulgaria and Romania this year is unlikely to lead to a significant influx, not just because these two countries account for a much smaller population relative to the 2004 accession, but also because the UK government has decided to curb the employment opportunities for migrants from these newly accessed countries.

Between 1972 and 2005, the average contribution of labour variables to GDP growth has been 0.2 percentage points, compared with 1.6 percentage points for TFP growth. But while the contribution of labour market variables has increased in recent years, the contribution of TFP has been stable, or even slightly below its longer-term average. Even if TFP growth were to pick up towards its historical average of 1.6%, and capital deepening were to pick up from the 0.3% recorded in 2005 to its longer-term average of 0.5% by 2010, our medium-term estimate of UK potential growth would still be only around 2.4%. This suggests that the Treasury's assessment of trend growth of 2¾% is on the optimistic side, and that its 'cautious' estimate of 2½% is central rather than cautious, especially beyond 2008.

Estimating productive potential: statistical filters

While the production function approach of the previous section had to rely on specific economic assumptions,⁴ here we focus on methods that distinguish an underlying trend from transient or cyclical perturbations *directly* from the actual data on economic output, without making any specific assumptions about the nature of the production function or about what is happening to the labour force or capital stock.

We use a statistical approach based on the path of output to look at economic fluctuations and the dating of business cycles. These fluctuations or cycles are characterised by periods when output (typically real GDP, but non-oil gross value added on the Treasury's definition) is above trend and times when it is below trend. The economic cycle is made up of two phases: a period when output is above trend followed by a period when output is below trend. When actual output exceeds potential output, the output gap – the percentage difference between actual output and potential output – is said to be positive. At an on-trend point, the output gap is zero.

To avoid relying excessively on any given method, we compute potential output using a few different statistical approaches. Once this is done, we can estimate how far output is above or below its underlying potential level. This in turn enables us to estimate when economic cycles have started and ended.

Among statistical techniques to identify trends, the most popular is the Hodrick–Prescott (HP) filter. More recent evolutions are the Christiano–Fitzgerald (CF) and the Baxter–King (BK) band-pass filters.⁵ We use the filters to see whether the results they generate match our findings from the production function approach, which suggested at best a short-lived improvement in potential growth to a fraction above 2½% – short of the Treasury's central estimate of 2¾%, but in line with the 'cautious' figure that the Treasury uses to make its fiscal projections.

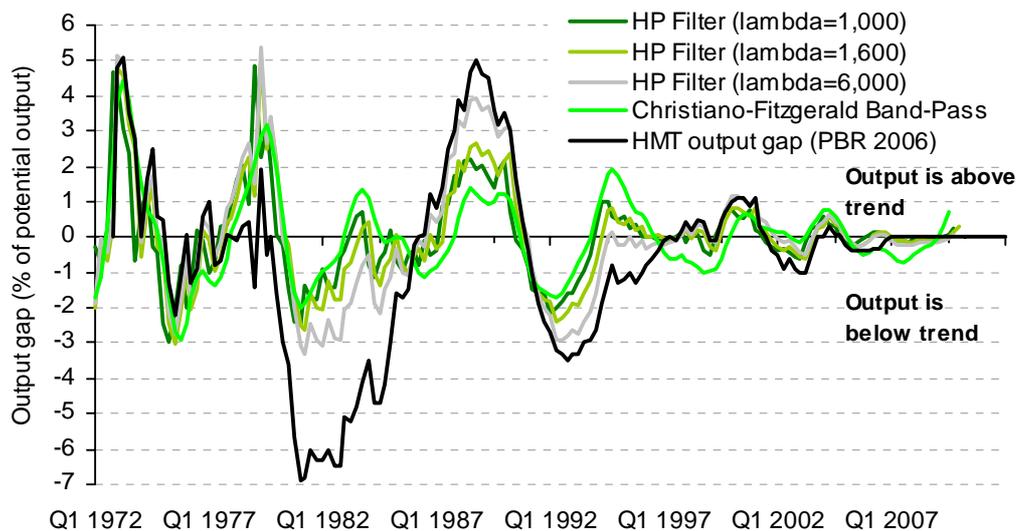
The estimate of the trend that comes from applying the HP filter depends on assumptions about how smooth that trend is. This is a matter of judgement. We show a range of estimates of spare capacity based on different values for the smoothness of the trend. Figure 4.5 shows the paths of potential output corresponding to three different values of lambda (1,000, 1,600

⁴ For instance, we assumed a simple Cobb–Douglas specification where technology enters multiplicatively.

⁵ See, for example, L.J. Christiano and T.J. Fitzgerald, 'The band pass filter', *International Economic Review*, 44(2), 435–65, 2003.

and 6,000) – the parameter controlling the smoothness of the trend. The CF band-pass, like the HP filter with lambda set to 1,000, penalises any deviation from a smooth (i.e. linear) trend relatively mildly, so that potential output tracks actual output relatively closely. When we set lambda at 1,600 – our benchmark case – the estimate of trend growth in output is slightly straighter, because the algorithm penalises deviations from a linear trend more heavily.

Figure 4.5. Cyclical fluctuations in the economy since 1972



Sources: ONS; HM Treasury; Morgan Stanley Research.

Figure 4.5 shows the amount of spare capacity corresponding to these various measures of the trend, and compares it with the Treasury’s own estimate, which tends to show more marked deviations from the trend than most statistical algorithms.

Two key features of the economic cycle are duration and amplitude. The amplitude of the cycle is the vertical distance between the peak (or trough) of the cycle and the level of potential output at the time. Figure 4.5 shows that amplitude peaked in the 1970s, reflecting large economic shocks, notably the sharp rise in oil prices. The severity of these shocks was probably compounded by less effective stabilisation policies, in particular monetary policy failing to bring down inflation swiftly after the shock, making larger interest rate hikes necessary later. This policy response probably increased the persistence of deviations from the trend growth path. The graph shows that output remained below its potential level for a prolonged period of time. Conversely, the switch to inflation targeting and the Bank of England’s increased independence may have helped to reduce the volatility of the cycle in the 1990s, perhaps significantly. Figure 4.5 suggests the amplitude of the cycle has fallen from $\pm 2.5\%$ of potential output in 1980–90 to less than $\pm 1\%$ of potential GDP since the mid-1990s. Our estimates suggest that the output gap is currently close to zero.

Smaller deviations from potential output mean that cycles have become much harder to date, as ‘on-trend’ points are inherently hard to pin down. If the volatility of the UK economic cycle remains as low as it has been over the last decade, we should expect that the Treasury may have to substantially alter its initial dating of cycles.

Table 4.3. Dates of UK economic cycles

HM Treasury	Statistical filters		
	HP 1,600	CF	BK
1972Q4 – 1978Q1 (22Qs)	1972Q4 – 1977Q3 (20Qs)	1972Q3 – 1977Q4 (22Qs)	1972Q3 – 1977Q3 (21Qs)
1978Q1 – 1986Q2 (34Qs)	1977Q4 – 1987Q2 (39Qs)	1978Q1 – 1982Q4 (20Qs)	1977Q4 – 1987Q1 (38Qs)
1986Q2 – 1997Q2 (45Qs)	1987Q3 – 1994Q1 (27Qs)	1983Q1 – 1987Q3 (19Qs)	1987Q2 – 1994Q1 (28Qs)
1997Q2 – F2007H1 (41Qs)	1994Q2 – 2003Q3 (38Qs)	1987Q4 – 1993Q4 (25Qs)	1994Q2 – 1999Q2 (21Qs)
	2003Q4 – F2009Q2 (23Qs)	1994Q1 – 1999Q4 (24Qs)	1999Q3 – 2003Q3 (17Qs)
		2000Q1 – F2009Q1 (37Qs)	2003Q4 – n/a

Sources: Morgan Stanley Research; HM Treasury.

The average duration of a full cycle identified by the statistical filters has been around seven years, slightly less than under the Treasury's methodology. But the estimated duration of economic cycles is sensitive to the technique used and to the choice of the smoothness of the underlying trend.

Estimating productive potential: the Treasury's approach

The Treasury estimates what the potential growth rate of the economy has been in the past by identifying points when the economy has been 'on trend', i.e. when the economy was running exactly at its potential or longer-term growth rate. Having identified these points, the Treasury *assumes* that potential output grows at a constant rate between them,⁶ although the economy's potential output is likely to vary across the business cycle. A problem with this approach is that these estimated 'on-trend' points are liable to shift, partly because data are revised.

To identify these past 'on-trend' points, the Treasury uses a wide range of indicators, including output, business surveys and labour market variables. While there may be value in dating the economic cycle on the basis of both output and labour market variables rather than just output itself, there are also significant drawbacks – for instance, how are different indications of the degree of spare capacity arising from different indicators reconciled?

Spotting on-trend points invariably requires a high degree of subjectivity. Output will never be *exactly* equal to its potential level for a single indicator, let alone for several indicators at the same time. Instead, there will be multiple instances where a given indicator is very close to its trend level, perhaps for a prolonged period of time. This has particularly been the case over the last decade, as economic growth persistently hovered close to its potential rate, as shown in Figure 4.5. Unless the volatility of the economic cycle shifts upwards, dating the UK cycle will remain a difficult and controversial task. To avoid frequent redating of the economic cycle, it is important to develop approaches that are not excessively sensitive to data revisions.

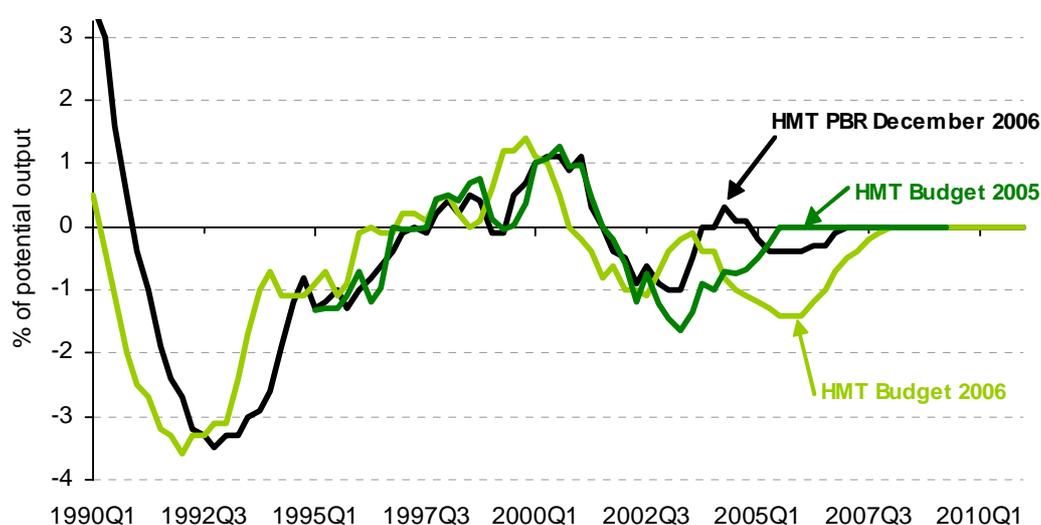
⁶ See HM Treasury, *Trend Growth: New Evidence and Prospects*, December 2006 (http://www.hm-treasury.gov.uk/media/53D/CE/pbr06_trendgrowth_345.pdf).

To date cycles in the past, the Treasury utilises on-trend points; to project potential growth forward, it uses a more transparent ‘bottom-up’ approach. This approach consists of decomposing the evolution of trend growth into contributions from growth in labour productivity (output per hour worked), changes in average hours worked per person, the size of the working-age population and the proportion of the working-age population in employment. The Treasury then judges how growth in these four elements is likely to evolve, to generate a projection for trend growth in potential output.

The assumptions the Treasury makes about trend growth and spare capacity are important in planning the public finances for two reasons. First, they inform its judgement on where we are in the cycle and when the cycle is likely to end, which defines the period over which the golden rule and the sustainable investment rule are assessed (as discussed in Chapter 3). Second, the future rate of trend growth is crucial to the Treasury’s assessment of the outlook up to the end of its forecasting horizon in 2011 and beyond. The evolution of the trend is more important than cyclical deviations from it for long-term fiscal projections.

Figure 4.6 shows that the Treasury sharply reduced its estimate of the size of the negative output gap at the end of last year to 0.3% of potential output in the December 2006 Pre-Budget Report from the 1.2% implied by the March 2006 Budget both for the end of 2006 and for 2005–06. The new figure was in line both with our own estimates and with those of international organisations such as the IMF and the OECD.⁷

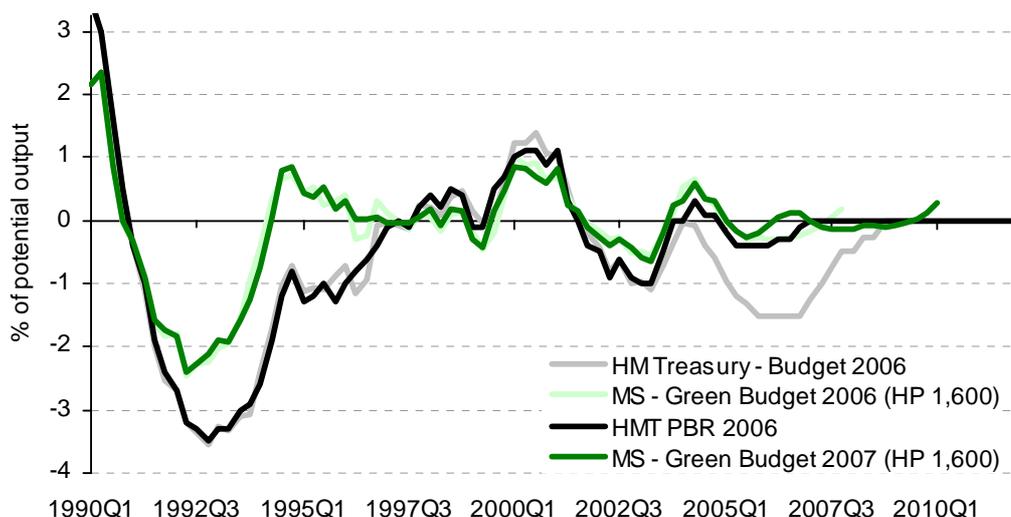
Figure 4.6. Treasury estimates of the output gap



Source: HM Treasury.

⁷ See OECD, *Economic Outlook No. 80*, November 2006 (http://www.oecd.org/document/18/0,2340,en_2649_201185_20347538_1_1_1_1,00.html), and IMF Article IV Staff Report, 2006 (<http://www.imf.org/external/pubs/ft/scri/2006/cr0686.pdf>).

Figure 4.7. Treasury and statistical filter output gap revisions



Sources: Morgan Stanley Research; HM Treasury.

The need for this sharp revision arose from the Treasury's approach to calculating the output gap. Figure 4.7 shows that a simple HP filter based on our GDP forecasts has required much less revision than the Treasury's estimates, despite the fact that output data have been revised, and even though the forecasts on which we compute our HP-based estimates of potential output have been extended by several years in this year's Green Budget.

As shown in Table 4.3, our filter-based estimation of the output gap suggests that, conditional on our own central GDP forecasts, the current cycle started in the second half of 2003 and will not end until 2009. The current cycle would only be slightly shorter than the average past UK cycle. In contrast, the Treasury's assessment is that the current cycle started in 1997 and will last a longer-than-average 10 years, until the first half of 2007.

Conclusion: What is the trend rate of growth now?

Using a production function approach, we concluded that sustained population growth and a small pick-up in the rate of technical progress could push UK potential output growth to 2.6% in 2007 and 2008, before easing back to around 2.4% after 2008. The temporary acceleration this year and next reflects an assumption that population growth remains strong for a few years and then gradually slows, while the employment rate recovers and total factor productivity growth picks up towards its long-term annual average of 1.6% a year. Finally, capital deepening was also assumed to edge back up to its historical average. None of these underlying assumptions is implausible, but we can certainly see some downside risks to this central estimate, especially in the near term.

Turning to the statistical filters, HP filters suggest a potential growth rate of around 2.5% for 2006–10, while the CF band-pass filter suggests a medium-term potential growth rate of just under 2.6%, only marginally above the UK's long-term historical real GDP growth rate of around 2.5%. But, conditional on our GDP forecasts, these filters tend to suggest a gradual deceleration of potential output towards the end of the forecast horizon (2009).

Both techniques suggest that the Treasury's estimate that the growth of productive potential will remain at 2¾% beyond 2007 is slightly optimistic. The 2½% assumption used to forecast the public finances looks central rather than cautious as the Treasury claims.

4.4 The short-term outlook

We are more pessimistic than the Treasury about the economic outlook because of several specific risks. Compared with the Treasury, we expect a smaller contribution to growth from net exports, weaker investment growth (but only next year) and weaker consumer spending growth through to 2009.

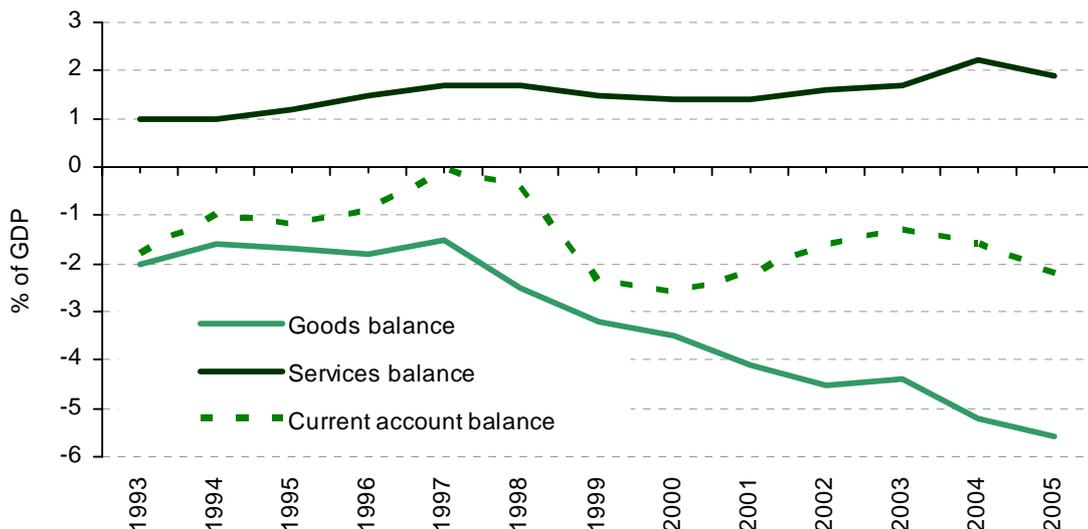
Net exports

The Treasury expects the contribution of net trade to GDP growth to be broadly neutral, with exports growing somewhat faster than imports throughout the forecast period. We are somewhat less optimistic.

Our global economic outlook for 2007 is relatively benign, incorporating a shallow slowdown in global growth. Risks to this profile are probably more on the downside than on the upside, given uncertainties about how the broader US economy will respond to the slowdown in the US housing market and about how growth in the Euro area will be affected by fiscal tightening in Germany and Italy.

Furthermore, structural pressures point to further deterioration in the UK trade and current account balance (Figure 4.8). The elasticity of exports with respect to export partner demand is probably some way below the elasticity of imports with respect to domestic demand.⁸

Figure 4.8. UK goods, services and current account balances



Source: ONS.

⁸ See, for example, A. Senhadji and C. Montenegro, C., 'Time series analysis of export demand equations: a cross country analysis', *IMF Staff Papers*, 43(3), 259–73, 1999, and A. Senhadji, 'Time series estimation of structural import demand equations: a cross country analysis', IMF Working Paper WP/97/132, 1997.

Unless demand is much stronger in the UK's export markets than at home, and/or there is a major depreciation of sterling (not our central forecast), it is difficult to see where a significant improvement in the net trade contribution to economic growth would come from. Further deterioration in the trade balance seems likely. So the risks to our central forecast that net exports deduct 0.2 percentage points from UK GDP growth in 2007 are probably on the downside.

Investment

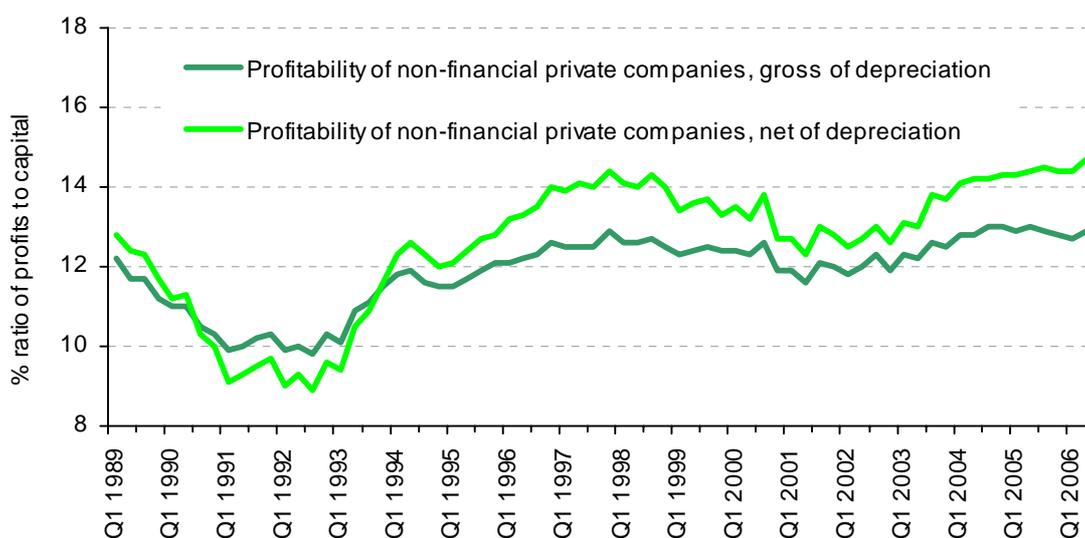
The Treasury describes the outlook for business investment as positive:

Profitability is expected to remain strong and the cost of capital to remain low by historical standards... though the Pre-Budget Report business investment forecast for 2006 has been revised up substantially compared with Budget 2006, there are still significant upside risks in 2007 and beyond.⁹

Our short-term investment projection is somewhat weaker than the Treasury's, where we assume that the very strong investment growth seen in 2006 is not sustainable into 2007 and where a slower global growth environment constrains investment plans somewhat. But we also think that risks to our investment outlook are, if anything, slightly on the upside.

The corporate rate of return looks very healthy (Figure 4.9). We measure this as the ratio of profits (arising from UK activities) to capital, where profits are measured after wages and employers' social contributions, but before dividends, interest and tax. Net and gross of depreciation, pre-tax real rates of return on corporate capital, relative to the comparable measure of capital employed, are around the 40-year highs they reached at the end of the 1990s.

Figure 4.9. Corporate profits



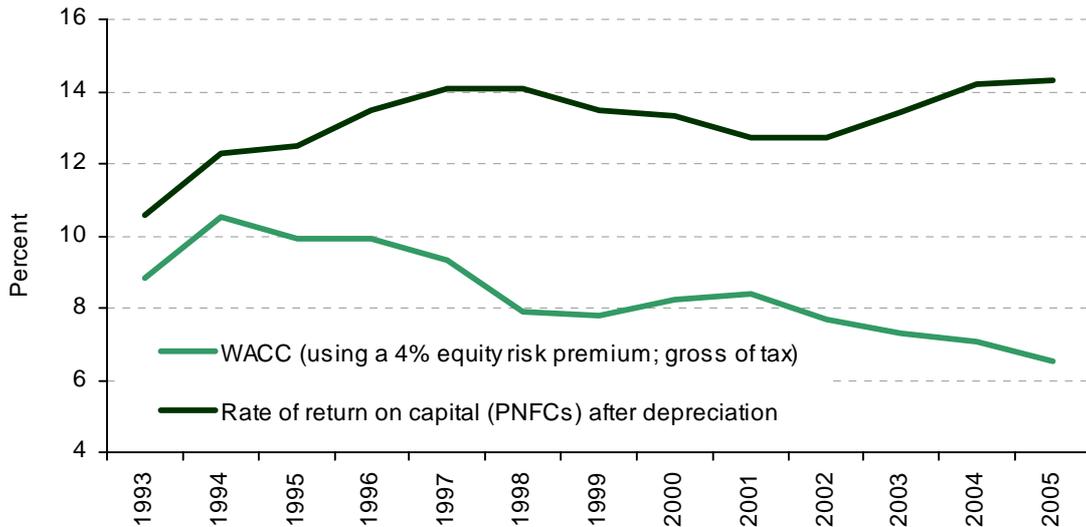
Source: ONS.

⁹ Paragraph A.72, page 206, of HM Treasury, *2006 Pre-Budget Report*, December 2006 (http://www.hm-treasury.gov.uk/pre_budget_report/prebud_pbr06/prebud_pbr06_index.cfm).

Rates of return on investment in the UK continue significantly to outpace the cost of funding, suggesting that fundamental incentives to invest in the UK remain strong. The cost of capital (measured using the weighted average cost of capital – the WACC¹⁰) is low. The gap between the average rate of return on capital and the WACC is now probably greater than at any time in the period since the early 1990s (Figure 4.10).

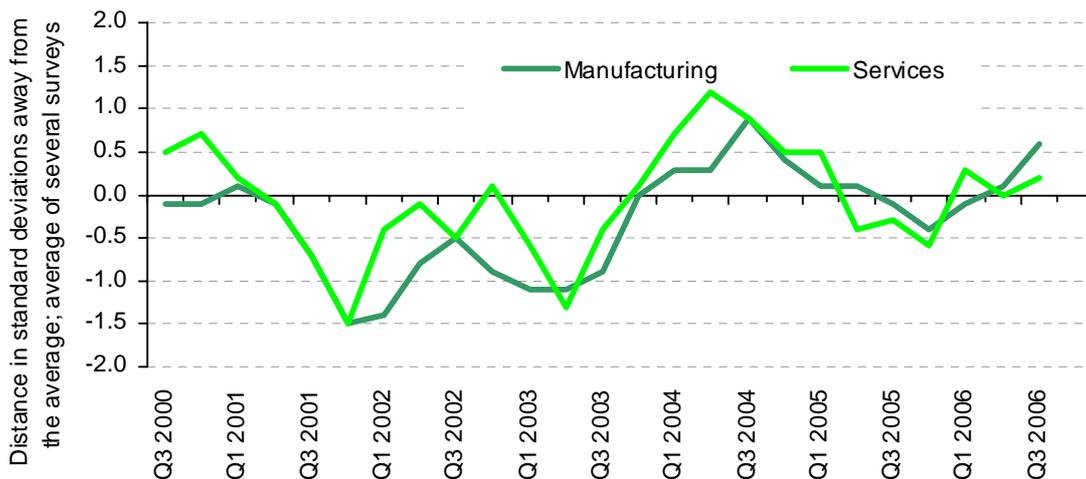
Surveys of investment intentions turned somewhat more upbeat in Q3 2006 (Figure 4.11), also suggesting some upside risk.

Figure 4.10. Investment rewards: the return to and cost of capital



Note: WACC (weighted average cost of capital) is for UK private non-financial corporations (PNFCs). Sources: ONS; Morgan Stanley Research.

Figure 4.11. Investment intentions



Source: See next page.

¹⁰ The WACC is a weighted average of the real cost of debt and of equity. The real cost of debt is an estimate of the average real interest rate paid on public non-financial corporation (PNFC) debt (using the euro-sterling non-banks corporate index spread plus the 10-year index-linked government bond yield). The cost of equity is estimated by using the yield on an index-linked bond plus a 4% assumed equity risk premium. The weights use an estimate of gearing based on PNFC data from the National Accounts.

Sources for Figure 4.11: Haver; Morgan Stanley Research. Manufacturing survey measures used are: BCC manufacturing survey (plant and machinery investment plans); CBI industrial trends (capital expenditure on plant and machinery over next year versus last year); BoE agents' survey on investment intentions in the manufacturing sector. Services survey measures used are: BCC services survey (plant and machinery investment plans); CBI distributive trades survey (expected capital expenditure over the next year); CBI services sector survey – consumer services (information technology capital expenditure over next 12 months and vehicles, plant and machinery capital expenditure over next 12 months); CBI services sector survey – business services (information technology capital expenditure over next 12 months and vehicles, plant and machinery capital expenditure over next 12 months); BoE agents' survey on investment intentions in the services sector.

Consumer spending

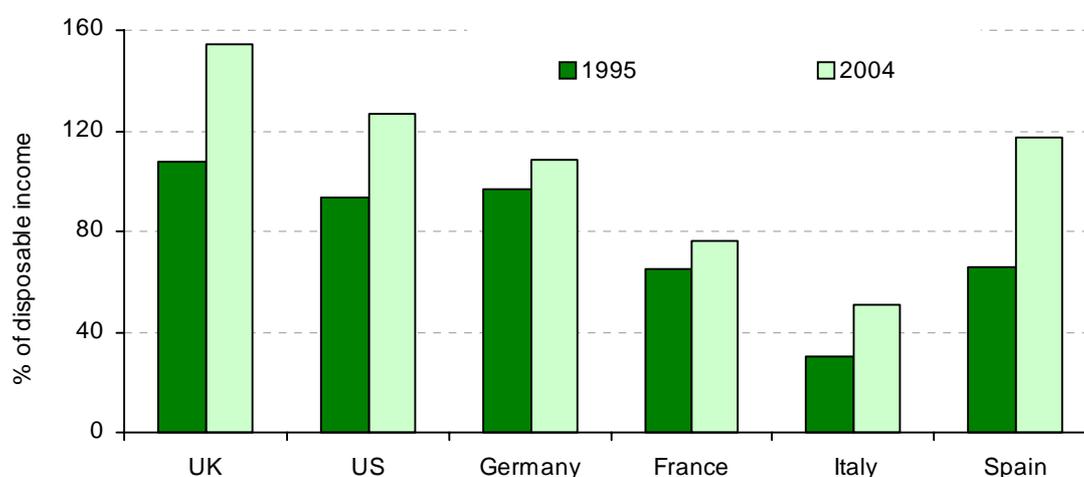
Both we and the Treasury expect the saving ratio to rise further (although the Treasury assumes that this will be largely accounted for by households' net equity in pension funds rather than an increase in more liquid saving). The Treasury suggests that the possibility of a larger increase in the saving ratio represents a downside risk to its consumption forecast.

Our central forecast has a weaker profile for consumption and a higher profile for the saving rate than the Treasury's, but we would agree that the balance of risks to consumer spending is also tilted to the downside. High debt levels, a still low saving rate, relatively high rates of debt service, slower employment growth and the squeeze on consumers' discretionary income that occurred in 2006 suggest to us that 2007 is unlikely to see a strong rebound in consumer spending, and we expect consumer spending growth to remain below average in 2007 (at close to the pace of 2006).

Household indebtedness

UK household financial liabilities were 159% of household disposable income in Q3 2006, up from 111% in Q1 2001. Compared with several other developed economies, this level of debt relative to income looks high, although the sharp rise seen over the past 10 years is not unusual (Figure 4.12). As an offsetting factor, the UK household sector also holds a large amount of financial assets – 446% of household disposable income in Q3 2006, compared with 447% in Q1 2001 (and a very large amount of non-financial assets in the form of

Figure 4.12. Household gross financial liabilities



Sources: Eurostat; Federal Reserve; BEA; Morgan Stanley Research.

Table 4.4. Household financial balance sheet

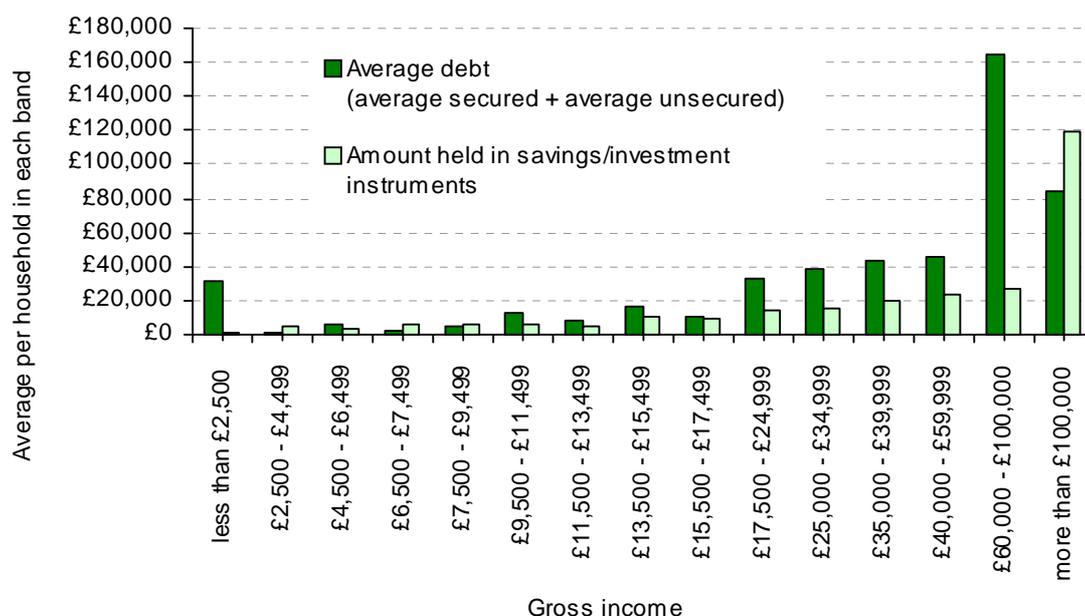
£ billion	Q4 2004	Q4 2005	Q3 2006
Total financial assets	3,152	3,591	3,745
Currency & deposits	855	921	976
Securities other than shares	45	42	48
Share & other equity	506	586	574
Insurance technical reserves	1,641	1,933	2,034
Other accounts payable/receivable	98	102	106
Total financial liabilities	1,172	1,249	1,338
Loans	1,083	1,158	1,246
Short-term loans	183	194	202
Long-term loans	900	964	1,044
<i>of which: secured on dwellings</i>	<i>876</i>	<i>938</i>	<i>1,017</i>
Total net financial assets	1,980	2,342	2,407

Source: ONS.

residential housing). Table 4.4 shows the aggregate UK household sector financial balance sheet – financial assets exceed liabilities for the aggregate household sector.

With households having almost three times as many financial assets as liabilities, there may seem little reason for concern. However, much of the household sector's financial assets are concentrated in the 'insurance technical reserves' category, which is largely the net equity of households in life insurance and pension funds' reserves – both are hard to turn into cash if

Figure 4.13. Distribution of financial assets and liabilities



Notes: Uses survey data. Original sample size is 1,923 and sample size for some income bands is small. Ignores responses that refused to give their income / did not know their income or answered not applicable to that question. Secured debt adds together first and second mortgages.

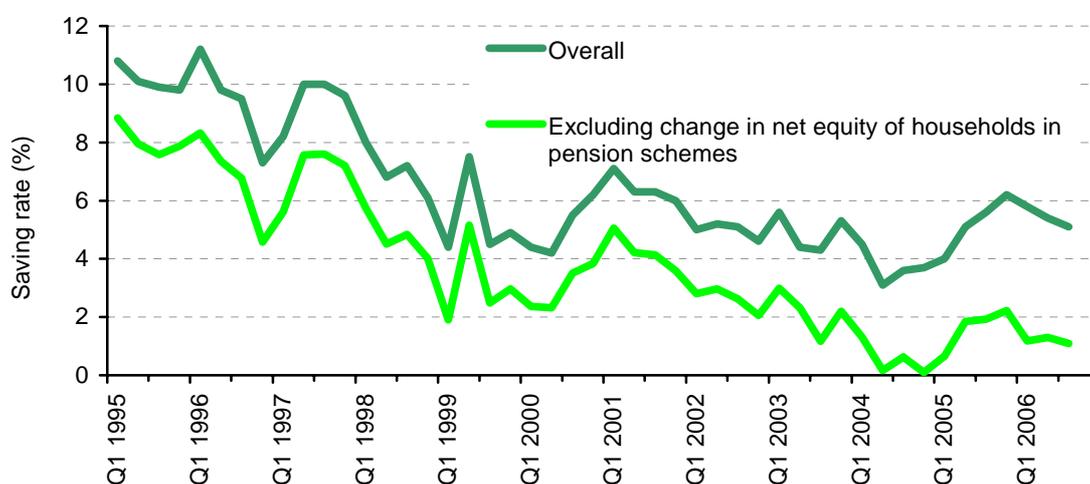
Sources: NMG/Bank of England survey (Spring 2006); Morgan Stanley Research.

required at times of financial difficulty, although households could divert future flows of individual pension saving into liquid assets. Further, there is evidence that financial assets are much more concentrated on a smaller number of households than financial liabilities (Figure 4.13). This suggests that a substantial proportion of households may need to increase the amount of ‘financial cushion’ they have currently against unexpected life events.

The saving rate

The household saving rate in the UK continues to look on the low side, especially if (unlike the official measure) we exclude net contributions into employee pension schemes to focus on liquid saving (Figure 4.14). We continue to think that consumer spending growth will likely remain rather subdued while households build their liquid savings up to levels where they feel more comfortable.

Figure 4.14. Saving rate



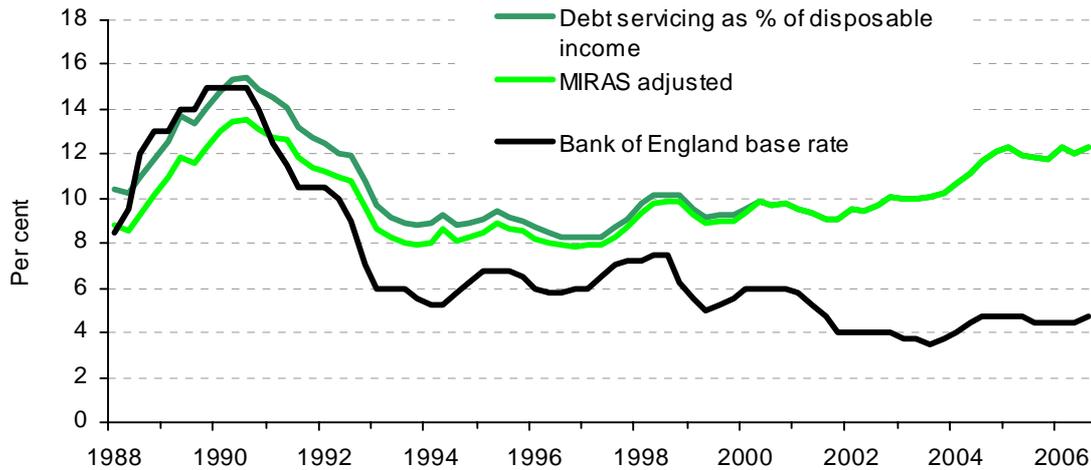
Note: Net equity of households in pension schemes is the balance of contributions to and pensions paid by private funded pension schemes.

Sources: ONS; Morgan Stanley Research.

Debt service ratios

Debt service payments as a percentage of disposable income are now at comparable levels to those of the early 1990s (Figure 4.15), though interest rates were then substantially higher. To some extent, the path of debt service could be a rational reaction by households to a perception of lower economic volatility and permanently lower interest rates. However, that debt service ratios are already so high when interest rates are still low (compared with recent history at least) suggests that many UK households may be vulnerable to economic shocks. Rising levels of insolvency in the UK add weight to this. Many insolvents are now citing expenditure in excess of income rather than, for example, loss of employment as a reason for going insolvent. A rise in unemployment led by job losses (rather than an increasing labour force, as is the case currently) could leave many more households in significant difficulties, although we forecast only a slight increase in the unemployment rate on our central forecast.

Figure 4.15. Debt servicing and interest rates



Notes: Debt servicing is interest payments by households and regular payment of mortgage principal. MIRAS is mortgage interest tax relief (phased out during the 1990s). Sources: ONS; Inland Revenue; Morgan Stanley Research.

Employment growth

The UK unemployment rate has risen substantially, from 4.7% in Q3 2004 to 5.6% in Q3 2006. However, this has been driven by the increase in the labour force, rather than by job losses, with redundancy rates (aside from a short-lived spike in mid-2005) relatively steady and low over that period. Nevertheless, employment growth has slowed somewhat over the past year (Figure 4.16). This looks largely due to public sector employment, which fell by 49,000 over the first three quarters of 2006. We do not anticipate a major pick-up in public sector hiring anytime soon, given the slower rate of spending growth projected by the Treasury from April 2007 to March 2012 (Chapter 7 places these spending plans in historical context and describes the possible implication for spending growth in areas such as health and education).

Figure 4.16. Employment growth



Source: ONS.

Discretionary income

Our analysis suggests that households are now spending a high proportion of their income on ‘core non-discretionary items’ – which we define as tax, debt repayments, interest payments and energy. This proportion is now at close to its highest level since Q1 1988 (which is as far back as our data go) at 35% (compared with around 32% in the late 1980s). This squeeze on discretionary income makes a period of fast consumer spending growth look less likely.

Inflation

Risks to inflation are key to the overall UK economic outlook, particularly in 2007–08. With a central forecast of GDP growth around trend and inflation remaining above target (but gradually declining over 2007), the most likely scenario is that interest rates are held steady during the rest of 2007. However, we see inflation risks on the upside of both our forecasts and the Bank of England’s central projection. This means that the risks for interest rates are skewed more in the direction of further rate rises rather than cuts, particularly in the first half of 2007, when inflationary risks related to wage growth will likely be at their highest.

On our central forecast, we see year-on-year inflation (as measured by the consumer prices index (CPI)) rising into the turn of 2007 before gradually declining back towards 2.0%, the Bank of England’s target. We believe GDP growth is likely to run slightly below potential in 2007 and that current upward pressure on inflation from factors such as electricity and gas bills will fall out of the year-on-year comparison.

In December 2006, year-on-year CPI inflation hit 3.0% and RPI inflation moved above 4%, partly year-on-year petrol price increases (to some extent reflecting the rise in fuel duty announced in the Pre-Budget Report), with RPI additionally boosted by the direct effect of the Bank of England’s rate rises on the mortgage interest payment component.

However, over 2007 and into 2008, we expect a decline in both RPI and CPI inflation, with the latter very close to the Bank of England’s 2.0% target in 2008. This is the result of several specific components whose contribution to year-on-year inflation should become less positive (or more negative) for overall inflation. These include utility bills, clothing and food (the latter two partly as retailers respond to slower consumption growth in 2007). In addition, recent data show that year-on-year consumer goods import price inflation (excluding cars) became negative in October 2006 (after a recent peak of 3.1% in April 2006), possibly reflecting the steady rise in trade-weighted sterling over the past year. Unless we see a sharp unwind in this sterling move in 2007 (which is plausible in our view), it seems likely that this lower import inflation will feed through into CPI inflation.

On balance, however, we see the risks to our central inflation projection as skewed to the upside:

- We think there is little or no spare capacity in the UK economy. Current estimates of spare capacity are subject to greater-than-usual uncertainty because of the uncertain size of migration and uncertainty over the responsiveness of migration to hiring pressures, as the Bank of England has emphasised. Nonetheless, our models indicate that there is slack amounting to less than ¼% of potential GDP. This may leave UK inflation vulnerable to shocks.

- Wage increases may become more inflationary. A number of factors are coinciding at the turn of the year, typically an important time for wage negotiations. First, RPI inflation (more important in wage negotiations than CPI) was at 4.4% in December 2006; second, the national minimum wage rose 5.9% in October 2006; third, discretionary income (the amount of money households have left after paying taxes, interest and energy bills and after debt repayments) has been squeezed, which may persuade some employees to push harder for higher wages; fourth, profit growth has been relatively strong in the UK this year.

Housing market

Our central profiles for UK growth, inflation and the monetary policy outlook face several risks over 2007 and 2008. The risk of significant falls in house prices in the UK is probably the largest source of domestic risk to our outlook in the next few years and also one of the most difficult to factor into our forecasts. Our analysis suggests that significant falls in house prices are rather likely in the next few years. We summarise the main points below.

UK house prices are still rising rapidly on average, having more than doubled in real terms over the past decade. Have we reached a situation where house prices are so high that they cannot be sustained for much longer? Very simple measures of affordability (most obviously the ratio of average house prices to average household incomes) look immensely stretched relative to past levels. But unless we take some account of a much wider range of factors than just incomes, it makes little sense to talk of house prices as being unsustainable.

Explaining UK house price movements

We assume that the demand for housing depends on three factors: average per-capita incomes; the population; and the real ‘user cost’ of home ownership. The third factor depends on the level of real house prices, interest rates and other costs (e.g. house insurance and taxes), net of anticipated changes in house prices. We assume that the new supply of houses depends, to a limited extent, on the price of housing. We use estimates from the large literature on the UK housing market for the sensitivity of demand and supply to these factors.

The major unknown factor in this procedure is figuring out how people decide where they think house prices will be going. We make an assumption that people attach some weight to what has happened to house price inflation in recent years, but that they also attach some weight to a belief that there is a tendency for prices to move towards some long-run average rate of increase. The backward-looking element is potentially destabilising: if people believe that a period of rapid high price growth means further sharp rises in prices, their demand is actually boosted by fast growth in prices, and this adds to price pressures.

We find that in accounting for the change in prices seen over the past 10 years, we need to ascribe some of the rise to changing expectations – it is hard to account for house price appreciation simply in terms of change in incomes, population, interest rates and the pace of house-building. Indeed, changed expectations play a major role in explaining the rise in house prices. Table 4.5 shows the breakdown of the model’s result by component. Using alternative assumptions about housing supply suggests that changing expectations explain between a third and slightly more than half of the rise. Part of that change in expectations may itself be justified in terms of sustainable changes in economic fundamentals. But our reading of the

evidence is that part has been driven by the rapid rise in prices itself and is likely therefore to be a more transient factor.

The fact that one apparently needs to put some considerable weight on changed house price inflation expectations to explain actual house price inflation suggests that the current level of house prices may be rather unstable. When we roll this model forward, assuming that the real interest rate, mortgage spread and ‘other costs’ elements are stable, and assuming steady 2.5% annual growth in household real disposable income, then the model predicts great volatility in house prices going forward.

Table 4.5. Explaining the change in house prices since 1996

Percentage point contribution to change in real house prices	Model I	Model II
Rise in income per capita	28	44
Increase in number of persons	9	15
Change in real interest rate	14	33
Change in expected capital gains	62	39
Change in housing supply	n/a	-16
Total change explained by model	113	115

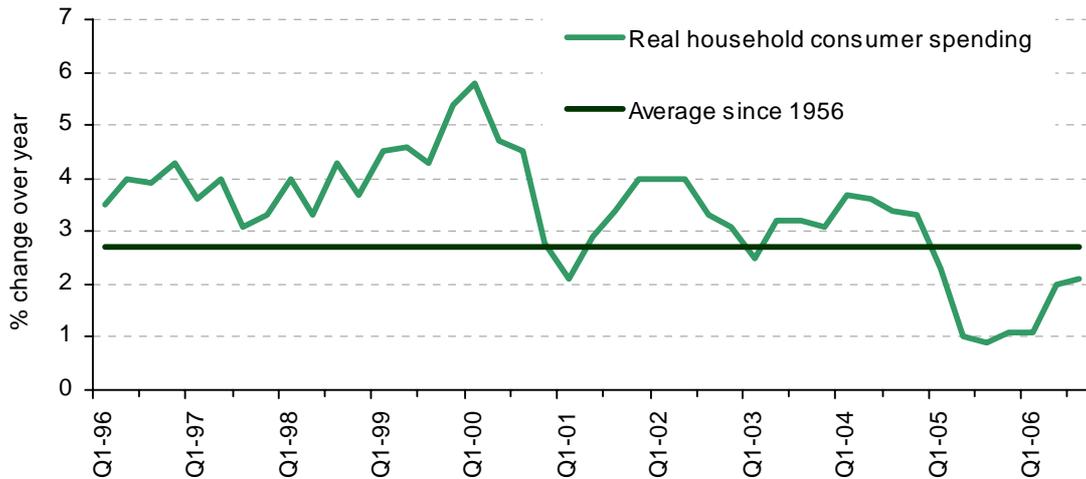
Source: Morgan Stanley Research.

A key question is whether, starting from here, we have to have a period of falling real house prices once those expectations come down, as they will, should real house price inflation move down from the current rate of close to 10% a year in cash terms. We think this is quite likely, but our simulations suggest that we could still get another year or so of rising house prices.

But the model shows why trying to ‘call’ the housing market over the next year or two is pretty much hopeless. We find that very small changes in assumptions about the forward/backward weight in forming expectations, about income growth or changes in real interest rates have a very large effect on the profile of prices and the timing of a downturn. However, most of the profiles we generated do show some falls in real house prices at some point over the next two years.

Although there is a degree of linkage between the state of the housing market and consumer spending (for example, through changes in housing market activity driving purchases of certain types of household goods and through changes in the available collateral for household borrowing), this linkage is probably variable over time and may not even be especially strong. What has been striking about the past 10 years is that a period when house prices have more than doubled in real terms is one over which the average rate of growth of consumer spending has been relatively close to the long-run average, particularly in the second part of the 10-year period, when most of the house price appreciation occurred (Figure 4.17). Based on what has happened over the past 10 years, one would sensibly conclude that the link between the housing market and the wider economy is actually rather weak. While sharp falls in house prices would probably significantly dent consumer spending growth, we do not agree with the conventional wisdom that house price falls will necessarily result in a consumer recession.

Figure 4.17. Real consumer spending growth



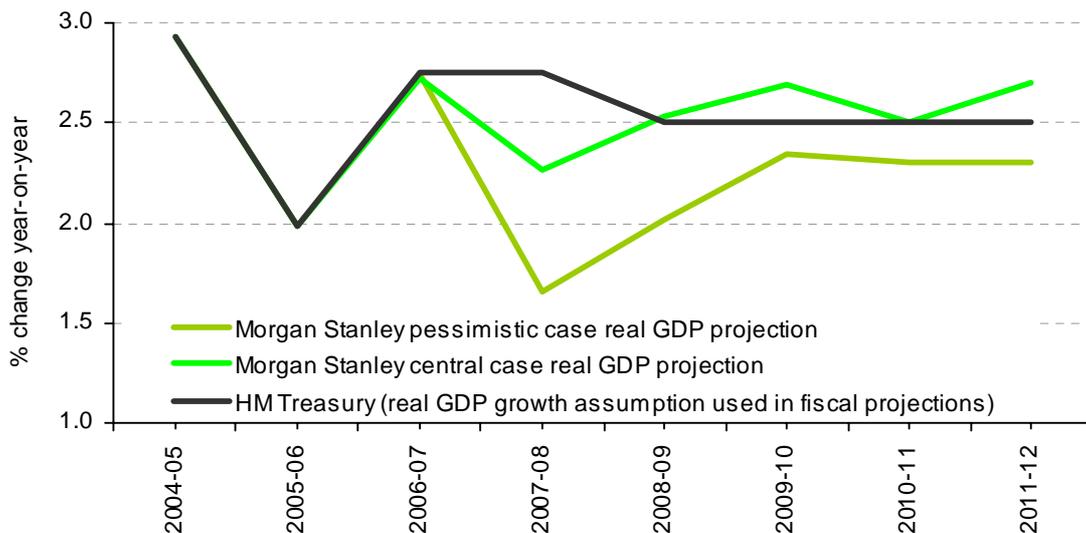
Sources: ONS; Morgan Stanley Research.

Our overall judgement is that risks are likely weighted more to the downside relative to the Treasury’s growth forecasts.

4.5 The medium-term outlook

We now present two scenarios for the economy over the medium term – a central case and a more pessimistic case that reflects upside risks to inflation and interest rates and downside risks to consumer spending and net export growth (Figure 4.18). We would see a roughly 45% probability that the outcome will be better than the central case, 45% that it will be somewhere between the central and pessimistic case, and 10% that it will be worse even than the pessimistic case.

Figure 4.18. Alternative GDP growth scenarios



Sources: HM Treasury; Morgan Stanley Research.

Central case

We do not expect to see growth accelerate significantly over the next two to three years. We expect a negative contribution from net trade in 2007, somewhat weaker investment spending after a very strong 2006 and continued subdued consumer spending growth. As the global economy improves, we forecast slightly stronger growth in 2008. We expect growth close to trend in most years.

Table 4.6. Morgan Stanley central case economic projections

	2004– 05	2005– 06	2006– 07E	2007– 08E	2008– 09E	2009– 10E	2010– 11E	2011– 12E
Real GDP (% annual change)	3	2	2¾	2¼	2½	2¾	2½	2¾
Real consumer spending (% annual change)	3	1	2	2	1¾	2½	2¼	2½
Employment (% annual change)	1	1	¾	¾	¾	1	1	1
CPI inflation (% annual change)	1½	2	2½	2	2	2¼	2	2
Output gap (%)	½	–¼	0	–¼	0	0	0	¼
Saving rate (%)	3½	5¾	5½	5½	6	5¾	5¾	5½
Unemployment rate (%)	4¾	5	5½	5½	5¾	5½	5	4¾
Productivity growth (% annual change)	2¼	1¼	1½	1¾	1¾	2	1¾	1¾

E = Morgan Stanley Research estimates.
Sources: ONS; Morgan Stanley Research.

Consumer spending growth seems likely to recover somewhat in the years ahead. However, we continue to think that a desire to put household finances on a better footing will keep consumer spending growth below its historic average pace for several years to come.

A somewhat stronger contribution from net trade is plausible compared with this central forecast. Sterling probably remains overvalued. Morgan Stanley's currency team see sterling drifting lower in 2007 and 2008. On their forecasts, the sterling exchange rate index (on the Bank of England's 'narrow' trade-weighted measure) would depreciate by around 2% over 2007. This could help (slightly) to boost export growth relative to imports so that the contribution of net trade to overall growth becomes positive.

Investment weakens somewhat on our central forecast, but remains rather strong overall. Aggregate fixed investment growth seems likely to hold up well on continued robust government investment growth and a pick-up in real residential investment partly on the back of the government's drive to increase housing supply (although falls in house prices, should they occur, could offset this factor). There may still be upside risks to our forecast for business investment growth.

This forecast for the UK economy differs from that of the Treasury. In particular, we forecast somewhat weaker GDP growth than the Treasury in fiscal year 2007–08. Beyond that point, the Treasury actually projects similar or slightly weaker output growth than we do for use in its budget projections, as it uses deliberately 'cautious' assumptions in its fiscal projections

(though these are closer to our own central projections rather than a profile that we would recognise as being ‘cautious’).

‘Pessimistic case’

Our ‘pessimistic case’, which we view as a plausible downside scenario for output growth, envisages (in part) one of the earlier highlighted risks playing out. In our pessimistic scenario, inflation and wage pressures rise in the first half of 2007, prompting two more Bank of England rate rises to 5¾% by mid-2007. This also leads to a deterioration in the labour market. The global backdrop is somewhat worse than in our central case. Against that backdrop, consumer spending slows sharply and investment spending slows. The Bank of England cuts rates at the end of 2007.

Compared with our central case, GDP growth (both actual and trend) is somewhat slower in this scenario as the economy responds to interest rate rises.

We consider the public finance implications of this more pessimistic scenario, and of our central forecast, in Chapter 5, where we compare them with forecasts based on the Treasury’s central projection for the economy.

Table 4.7. Morgan Stanley ‘pessimistic case’ economic projections

	2004– 05	2005– 06	2006– 07E	2007– 08E	2008– 09E	2009– 10E	2010– 11E	2011– 12E
Real GDP (% annual change)	3	2	2¾	1¾	2	2¼	2¼	2¼
Real consumer spending (% annual change)	3	1	2¼	1	1¼	2	2	2
Employment (% annual change)	1	1	¾	½	½	1	1	1
CPI inflation (% annual change)	1½	2	2½	2½	2¼	2¼	2	2
Output gap (%)	¼	–¼	0	–¾	–1¼	–1¼	–1¼	–1¼
Saving rate (%)	3½	5¾	5½	6	6½	6¼	6½	7
Unemployment rate (%)	4¾	5	5½	5¾	6	5¾	5½	5
Productivity growth (% annual change)	2¼	1¼	1½	1¼	1½	1¾	1¾	1¾

E = Morgan Stanley Research estimates.

Sources: ONS; Morgan Stanley Research.

Conclusion: the medium-term outlook

Despite relatively good overall economic outcomes over the past 10 years, we see several rather worrying signs of economic weakness in the medium to longer term. Productivity performance has deteriorated somewhat and UK households are probably still saving too little. Nearer term, we see particular downside risks relative to the Treasury’s forecasts in fiscal year 2007–08.