Office for
Budget Responsibility

Pre-Budget forecast

June 2010

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Foreword

The interim Office for Budget Responsibility (OBR) was launched by the Chancellor of the Exchequer on 17 May. Under the Terms of Reference agreed with the Chancellor, we now present our first report, a forecast of economic and fiscal developments up to 2014-15. It will be used, along with many other sources of information and analysis, to inform the Chancellor in setting his first Budget, to be presented on 22 June.

As a pre-Budget forecast, it incorporates all the policy measures introduced or announced by the previous Government but it does not include any measures announced by the Coalition Government. The work has been conducted according to the Terms of Reference for the OBR set out in Chapter 1 of this report.

The interim OBR consists of a Budget Responsibility Committee (BRC) of three and a secretariat of eight, on detachment from their previous roles in the Treasury. The production of the forecast has used resources from the Treasury, HMRC and DWP. All judgements in the forecast have been made or agreed by the BRC and are its responsibility. There has been no ministerial involvement at any stage.

In the body of the report we describe certain departures from previous forecasting practice and we emphasise three in particular. The first is our stress on the uncertainty of the forecasts, particularly of the fiscal forecasts. We illustrate this principally by the use of fan charts. The second is that we have based the range of fiscal outcomes around our central view of prospects. The previous Government used deliberately cautious assumptions for some key variables in its fiscal projections. We have departed from that practice and, as we have said, have used other methods to illustrate uncertainty. Finally, we have provided more detail than hitherto in relation to the fiscal forecasts. This improvement in transparency will, we hope, make it easier for commentators to understand our forecasts and should provide them with more information if they wish to make forecasts of their own. As far as possible, we shall meet requests for further background information.

In our report we state that we have used market expectations for short-term and long-term interest rates. We shall do the same in the forecasts that we publish alongside the Budget, which will incorporate the impact of Budget measures. We recognise that this produces a possible inconsistency. Current market rates reflect investors' expectations about the measures that may be introduced in the Budget and the possible response of the Monetary Policy Committee to such measures. It can therefore be said that market rates (to the extent that investors' expectations about the Budget are correct) are not appropriate for a pre-Budget forecast. In present conditions the likely result is that these economic forecasts are biased upwards: to the extent that market expectations factor in tighter fiscal policy than assumed in these projections, then following the fiscal path assumed here would lead to higher interest rates and so lower economic activity than set out in this projection.

We acknowledge, with deep gratitude, the energy, enthusiasm and professionalism of the officials who have helped us in this pioneer endeavour.



Alan Budd | Geoffrey Dicks | Graham Parker

1 Office for Budget Responsibility

The role of the Office for Budget Responsibility

1.1 On 17 May 2010, the Chancellor announced the establishment of a new Office for Budget Responsibility (OBR).

1.2 The OBR will provide independent forecasts of the public finances and the economy to inform fiscal policy decisions. The Chancellor has said that he will use the forecasts to inform the Government's policy decisions.

1.3 The OBR will also assess the prospects for achieving the fiscal policy mandate, to be determined by the Chancellor.

Responsibilities of the interim OBR

1.4 For the June Budget, the OBR is operating on an interim basis. In due course, the OBR will be put on a permanent, statutory footing. The interim OBR consists of a Budget Responsibility Committee (BRC) of three and a secretariat of eight, on detachment from their previous roles in the Treasury.

1.5 On 8 June 2010, we agreed Terms of Reference (TOR) with the Chancellor. They are set out in full below. Under the TOR, we have agreed, in advance of the June Budget, to make an independent assessment of the public finances and the economy based on existing policy. This document has been produced in response to that requirement.

1.6 The TOR also set out the interim OBR's role for the Budget on 22 June 2010. For the Budget, we will publish:

- an updated forecast for the public finances and the economy, incorporating the impact of policy measures announced at the Budget; and
- a judgement on whether the Government's policy is consistent with a better than fifty per cent chance of achieving the fiscal policy mandate set by the Chancellor.

1.7 We will also present advice to the Chancellor on the arrangements for the permanent OBR.

Terms of Reference for the interim Office for Budget Responsibility

Role in the forecast

1 The interim OBR will make an independent assessment of the public finances and the economy for the June Budget. The interim OBR will be given direct control over the forecast and make all the key judgments that drive it.

2 The interim OBR's first forecast, reflecting existing policy, will be published in advance of the Budget.

3 The interim OBR will also produce a forecast at the Budget, incorporating the impact of policy measures announced at the Budget.

The public sector balance sheet and sustainability

4 The interim OBR has a role in beginning an independent assessment of the public sector balance sheet and fiscal sustainability, including assessing the impact of ageing, public service pensions and PFI contracts.

5 The interim OBR will provide an initial discussion of public sector liabilities and their implications for the public finances alongside the first forecast.

The fiscal mandate

6 The Chancellor will retain responsibility for fiscal policy and will set the fiscal mandate.

7 In the Budget, the interim OBR will make a judgment on whether the Government's policy is consistent with a better than fifty per cent chance of achieving the fiscal mandate.

Advice on the permanent OBR

8 The interim OBR will provide advice to the Chancellor on the appropriate arrangements for the permanent OBR.

9 This advice should include the interim OBR's recommendation for the permanent OBR's roles and responsibilities, aims and objectives, and appropriate size, status, and funding.

10 The interim OBR will report to the Chancellor around the time of the Budget.

Independence and relationship with the Treasury

11 The Treasury will be accountable to Parliament for ensuring the interim OBR is properly and efficiently run. However, the Treasury will not intervene in the decision-making of the interim OBR.

12 The Treasury will provide the interim OBR with full access to the data, analysis and resources necessary to fulfil the roles set out in this Terms of Reference.

13 The Budget Responsibility Committee should make the key judgments and assumptions underpinning the interim OBR's forecasts, analysis and advice.

14 The interim OBR will have discretion over what material is published in fulfilling the remit set out in this Terms of Reference.

15 The interim OBR may choose to consult the Chancellor in preparing documents but is not obliged to do so.

Accountability to Parliament

16 It is expected that the interim OBR will be accountable to Parliament for the delivery of the tasks set out in this Terms of Reference. The Treasury will arrange for the interim OBR's documents to be made available to Parliament. Members of the Budget Responsibility Committee will be available to give evidence to the relevant Parliamentary committees.

2 Constructing the forecast

2.1 This document sets out our forecast for the economy and the public finances, and an initial discussion of public sector liabilities and future pressures relevant to the sustainability of the public finances. The Chancellor has said that he will use the forecasts to inform the Government's policy decisions in the June Budget.

2.2 The forecast has been produced with full access to all relevant Government data and expertise. We have used the latest data provided by the Office for National Statistics as the starting point of our forecasts. The forecast has been produced using the Treasury's economic and fiscal forecasting resources, but all key judgements have been taken or agreed by the Budget Responsibility Committee (BRC).

Central forecast view

2.3 The forecast is based on a range of possible outcomes around a central view. Subject to the point that we have made about our assumptions on interest rates,[1] it is our best view of the economic and fiscal outlook for the UK. We believe it broadly balances risks to the up and downside to produce a central forecast. This differs from previous practice under which some assumptions were designed to add caution to the fiscal forecast, implying that the central view was for outcomes to be better. Under the Finance Act 1998 and the Code for Fiscal Stability, the National Audit Office (NAO) was asked to audit a number of these cautious assumptions.

2.4 For this pre-Budget forecast we have moved from the NAO-audited assumptions designed to provide caution to our own, un-audited, central assumptions. Moving to a central view and quantifying uncertainty around it is intended to provide a more transparent approach to risk than the use of a selection of cautious assumptions. This change in approach tends to reduce forecast borrowing relative to the forecast in the March Budget. It makes comparisons with the March Budget difficult.

2.5 The forecast includes all policy announcements made by the previous Government but does not include any measures announced or introduced by the Coalition Government.

Dealing with uncertainty

2.6 The forecasts for the economy and public finances set out in this document represent the BRC's best view of future prospects. But we emphasise the inevitable uncertainties that apply to all forecasts at all times, and particularly to fiscal forecasts at the present time. The degree of uncertainty increases over the forecast horizon.

2.7 We attempt to quantify the range of uncertainty in the hope that we can thereby help to promote transparency and illustrate the uncertainty that the Government faces in planning its fiscal policy, and in meeting any numerical target. Explicit recognition of uncertainty can help commentators assess the Government's fiscal plans.

[1] See Foreword and paragraph 3.11.

Use of fan charts

2.8 We discuss our approach to quantifying the range of uncertainty in Annex A. The approach is based on the use of past forecast errors. In time, the OBR will develop its own record of forecasting errors but this is clearly impossible for the interim OBR's first forecast. We therefore use the distribution of errors in Treasury forecasts as an initial guide.

2.9 This approach allows us to create a "fan chart" showing the probability distribution of outcomes, and thereby assess the likelihood of a given fiscal target being met. At the time of the June Budget, we shall use these fan charts to inform our judgment on whether the Government's policy is consistent with a better than fifty per cent chance of achieving its fiscal mandate.

2.10 While we believe the use of fan charts is a significant step forward in promoting understanding of the risks to the fiscal and economic forecast, this approach has certain limitations. In particular, it is mechanical and backward-looking, and so may not always provide a complete representation of current risks. It should be noted that the economic and fiscal shocks experienced in the recent past were beyond the outer limits of the probability distributions set out in the fan charts used by other forecasters.

Transparency

2.11 We have provided more detail than hitherto in relation to the fiscal forecasts. This improvement in transparency will, we hope, make it easier for commentators to understand our forecasts and should provide them with more information if they wish to make forecasts of their own. As far as possible, we shall meet requests for further background information.

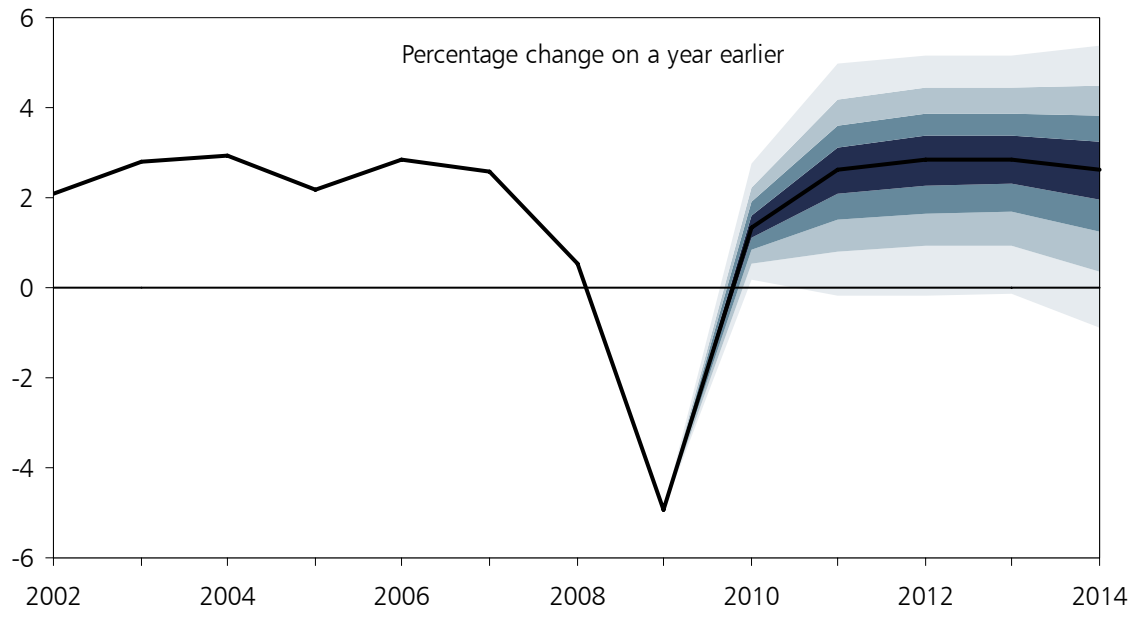
3 The economy

3.1 This chapter sets out the forecast for the economy to 2014. It describes the GDP growth profile, before discussing the key judgements and describing the central forecast and risks in more detail.

3.2 Economic forecasting, by its very nature, is subject to uncertainty. Our judgement is that, at this stage of the economic cycle, the outlook is even more uncertain than usual. In order to capture this uncertainty, our assessment is presented in the form of a probability distribution. It shows a range of different possible outcomes, not a point forecast. The fan chart below, which shows our projection of the path of GDP growth to 2014, is derived from the Treasury's historical forecast errors and incorporates a downward skew.

3.3 In the fan chart the central, median, GDP forecast is shown in black. Pairs of probability bands show the range of risks surrounding the central projection. Each band represents 10 per cent of the probability distribution.[1]

Chart 3.1: GDP growth fan chart



[1] The top and bottom 10 per cent of the distribution are not shown in the chart.

3.4 The distribution suggests that the probability of growth in 2010 being within one percentage point of our central forecast (i.e. between ¼ per cent and 2¼ per cent) is 70 per cent. The probability of growth being within one percentage point of our central forecast in 2011 (i.e. between 1½ per cent and 3½ per cent) falls to below 40 per cent and to around 30 per cent in 2014. It should be noted that the economic and fiscal shocks experienced in the recent past were beyond the outer limits of the probability distributions set out in the fan charts used by other forecasters. Annex A describes the construction of the fan charts and sets out some data on the distribution of past forecast errors.

Central forecast

3.5 The forecast for the public finances is based on our central economic forecast, which is presented below. A major uncertainty relates to developments in credit and financial markets, in particular whether the banks are able or willing to supply credit in the amount that is normally required in the recovery phase of the economic cycle; and, if not, whether that credit can be obtained elsewhere. Another major area of uncertainty is whether, and to what extent, private sector spending and employment are able to fill the gap that the cuts in public spending in our forecast leave. The prospects for external demand are also uncertain since the outlook for the euro area is particularly opaque at this time.

3.6 We expect the economic recovery to strengthen in 2010 and beyond, as private sector demand continues to pick up. We estimate that trend output will grow at just over 2¼ per cent over the next three years, slowing to just over 2 per cent from 2014 as demographic changes reduce the growth of the potential labour supply. From 2011 onwards, GDP is expected to grow at an above-trend rate as the economy rebalances away from consumption towards investment and net exports. Towards the end of the forecast, GDP growth eases back in line with lower trend growth. Specifically:

- GDP growth rises from 2010, reaching 2¾ per cent in 2012. Growth then eases in 2014;
- consumption growth rises in the forecast and grows by 2 per cent from 2013, below the rate of growth of GDP;
- business investment started 2010 on a strong note and is forecast to pick up further as the year progresses, though in 2010 as a whole it rises by only 1¼ per cent. The recovery is maintained in 2011, although it takes until 2013 before investment returns to its pre-recession peak. From 2011 onwards business investment rises at an 8-11 per cent rate;
- real general government consumption continues to grow in 2010. From 2011 onwards, the fiscal consolidation envisaged by the previous government implies that government consumption falls, with an increasing rate of decline throughout the forecast. General government investment falls sharply in 2011 and continues to decline until 2013, although at a decreasing rate. Government investment returns to growth in 2014;
- net trade is forecast to subtract from growth in 2010, as relatively robust import growth outweighs still sluggish exports. As the recovery in UK export markets strengthens and sterling's past depreciation boosts UK export volumes, net trade is forecast to contribute positively to growth;
- CPI inflation stays above 3 per cent in the near term, before easing and falling back below target in 2011, after the VAT rate change drops out of the annual comparison. CPI inflation then rises, reaching the 2 per cent target by the end of 2012;

- employment stabilises this year and then rises from 2011 onwards, reaching just under 30 million in 2014. The ILO unemployment rate peaks in 2010, before falling back to 6¼ per cent in 2014. Claimant count unemployment continues to fall throughout the forecast; and
- whole economy average earnings growth rises gradually in the forecast as productivity recovers. Growth of wages and salaries, which combine employment with average earnings, also picks up, reaching 5¼ per cent in 2014.

Table 3.1: Summary of central forecast[1]

	Percentage change on a year earlier, unless otherwise stated					
		Forecast				
	2009	2010	2011	2012	2013	2014
Output at constant market prices						
Gross domestic product (GDP)	-4.9	1.3	2.6	2.8	2.8	2.6
Expenditure components of GDP at constant market prices						
Household consumption[2]	-3.2	0.4	1.6	1.8	2.0	2.0
Business investment	-19.3	1.3	8.0	9.8	10.6	9.1
General government consumption	2.2	1.9	-0.5	-1.5	-2.0	-2.3
General government investment	15.7	-3.1	-19.0	-8.5	-6.6	0.6
Net trade[3]	0.7	-0.5	0.7	0.8	0.6	0.5
Inflation						
CPI (Q4)	2.1	2.3	1.6	2.0	2.0	2.0
Labour market						
Employment (millions)	29.0	28.8	29.0	29.3	29.6	29.9
Wages and salaries	-1.0	1.2	2.8	3.5	4.9	5.3
Average earnings[4]	1.0	2.1	2.2	2.6	3.8	4.3
ILO unemployment (% rate)	7.6	8.1	7.9	7.4	6.8	6.3
Claimant count (Q4, millions)	1.6	1.5	1.4	1.3	1.2	1.1

[1] The forecast is consistent with output, income and expenditure data for the first quarter of 2010, released by the Office for National Statistics on 25 May 2010.

[2] Includes households and non-profit institutions serving households.

[3] Contribution to GDP growth, percentage points.

[4] Wages and salaries divided by employees.

Key forecast judgements

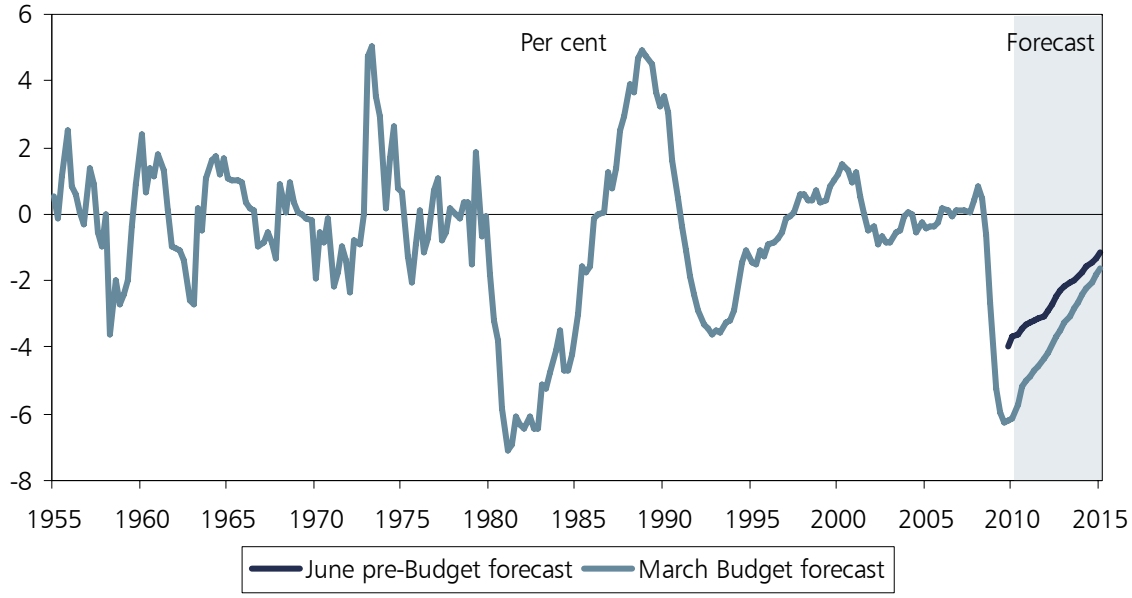
3.7 The key assumptions for the economic forecast are described below. The key inputs to the fiscal forecast are shown in Table 4.2.

Trend growth and the output gap

3.8 Estimates of the underlying supply potential of the economy and the amount of spare capacity are uncertain at the best of times. In the aftermath of the financial crisis, which is likely to have had an adverse effect on the supply potential of the economy, such estimates are subject to greater uncertainty than usual. In order to deal with this uncertainty we have reviewed a wide range of indicators (see Annex B for details). Our conclusion is that there is a smaller amount of spare capacity and that future trend growth is likely to be weaker than was estimated in the March Budget.

3.9 Our best estimate is that the output gap was around -4 per cent at the end of 2009 (see Chart 3.2 below), and that the current level of trend output is also lower than was estimated at the time of the March Budget. We also judge that the financial crisis will have a persistent effect on trend growth over the medium term. We estimate that trend output will grow at just over 2¼ per cent over the next three years, slowing to just over 2 per cent from 2014 as demographic changes reduce the growth of the potential labour supply. Taken together with the judgement that the output gap was around -4 per cent at the end of 2009, the projected level of trend output at the start of 2015 is around 3¾ per cent below that implied by the assumption used for the March Budget economic forecast and around 2½ per cent below that implied by the assumption used for the March Budget public finances forecast.

Chart 3.2: The output gap[1]



[1] Output gap estimates on a quarterly basis, based on the latest National Accounts data and expressed as actual output less trend output as a percentage of trend output (non-oil basis).

Interest rates

3.10 We have assumed that short-term and long-term interest rates move in line with market expectations. Rates used in this forecast are the average for the 10 working days ending 25 May. Short-term interest rates are defined as the 3-month sterling interbank rate (LIBOR).

3.11 We recognise that this can produce a possible inconsistency in the case of a pre-Budget forecast. Market expectations will reflect predictions of the future policy of the Monetary Policy Committee (MPC), but those policies in turn may be affected by changes in fiscal policy. Thus market prices already reflect expectations about changes in fiscal policy and may be more appropriate for the Budget forecast than for the pre-Budget forecast. To the extent that this inconsistency is significant the short-term pre-Budget forecast for activity may be biased upwards, with consequential effects for the public finances.

MPC reaction function

3.12 Since the forecast starts with a significant output gap, the economy can grow more rapidly than trend without inflation increasing. The MPC has the responsibility for setting monetary policy to achieve the Government's inflation target and will make its own assessment of the degree of spare capacity in the economy. Our forecasts assume that monetary policy will permit above-trend growth and that the expected level of GDP will be around 1 per cent below trend by the start of 2015. The actual level of GDP will, of course, be subject to the normal range of uncertainty.

Equity prices

3.13 Equity prices are assumed to rise from their present level with nominal GDP growth. The present level is taken from the average of the closing price of the FTSE All-Share index over the 10-day period ending 26 May 2010. Our assumption reflects the rationale that, in the long run, equity prices represent an expectation of future profits. To the extent that the profits share of GDP remains constant in the long run, it is reasonable to assume that equity prices increase in line with nominal GDP.

Exchange rates

3.14 The sterling exchange rate moves in line with the uncovered interest parity condition, consistent with the interest rates underlying the forecast. The theory posits that the difference between domestic and foreign interest rates is directly related to the expected change in the exchange rate – and therefore that an expected path for the exchange rate can be derived from market interest rates.

Oil prices

3.15 Oil prices are assumed to move in line with the prices implied by futures markets as at 25 May 2010.

Credit conditions

3.16 The forecast assumes that credit conditions will continue to improve throughout 2010. This view is consistent with survey evidence from the Bank of England, which suggests credit availability to firms and households has eased slightly, although it remains tight compared to pre-crisis levels. Credit conditions could remain constrained or even tighten further if banks make substantial adjustments to their balance sheets or continue to face funding pressures. The instability in financial markets caused by concerns over fiscal sustainability within Europe may hold back credit growth in the near term.

The central forecast in detail

World economy

3.17 The world economy continues to strengthen, having returned to growth in the second quarter of 2009. Emerging Asia is leading the recovery and has already surpassed pre-crisis growth rates. By contrast, growth in advanced countries, particularly in Europe, remains well below pre-crisis rates. There is currently substantial uncertainty over the outlook for the euro area as imbalances unwind and continued risks persist in sovereign debt markets. In early May, spreads between German Bunds and sovereign bonds in some countries in a number of euro area countries reached record levels and global financial markets remain volatile. Overall we expect world GDP to rise by 4 per cent in 2010 and to pick up slightly to its long-run average of 4½ per cent by the end of the forecast, while euro area GDP rises at a lower rate, by ¾ per cent this year, before strengthening over the forecast to 2¼ per cent by 2014.

3.18 The strengthening world recovery combined with its uneven nature has implications for UK export market growth. The outlook for world trade in goods and services has improved. This reflects upward revisions to 2009 and a better than expected outturn in the first quarter of this year. World trade is forecast to rise by 6 per cent this year followed by 6¼ per cent in 2011 and around 7¼ per cent in 2012-14, in line with its long-run average rate.

3.19 The forecast for UK export markets growth (a measure of world trade weighted to reflect the geographical pattern of UK exports) is weaker than that for world trade throughout the forecast period, particularly in 2010 and 2011. This reflects the relatively weaker outlook for advanced economies compared with emerging countries and, in particular, the UK's main trading partner, the euro area. UK export markets are forecast to grow by 4 per cent in 2010, 4¾ per cent in 2011, and by close to 6½ per cent thereafter, in line with its long-run average.

UK demand

3.20 The central GDP forecast embodies a rebalancing between external and domestic sources of demand. Private sector demand contracted sharply in the recession, while government spending contributed positively to GDP growth. Although recent data suggest that private sector final demand has started to recover, we expect it to remain relatively weak in 2010. For this year it is government consumption and inventory accumulation that make the largest contribution to growth. Over the year as a whole, we expect GDP growth to remain subdued, with output rising by 1¼ per cent. On a quarterly basis, growth increases from 0.3 per cent in 2010Q1 to 0.6 per cent in Q2 and holds in the 0.6-0.7 per cent range throughout 2010 and 2011 (Table 3.2).

Table 3.2: Quarterly GDP growth profile

	Percentage change on previous quarter											
					Forecast							
	2009				2010				2011			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
GDP	-2.6	-0.7	-0.3	0.4	0.3	0.6	0.7	0.7	0.6	0.6	0.6	0.7

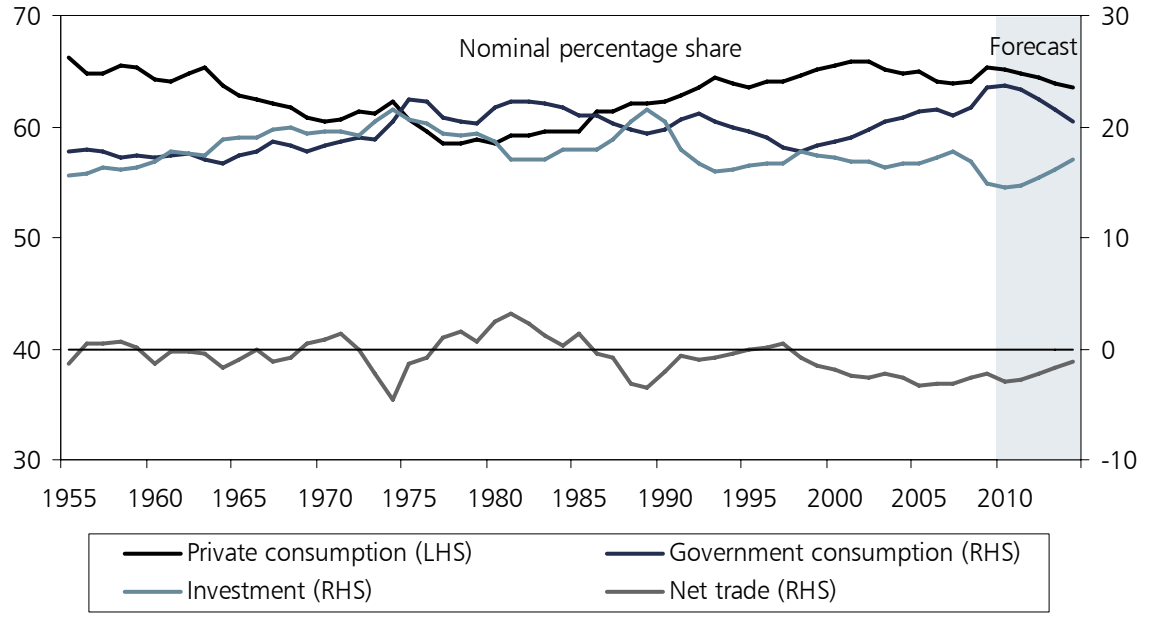
3.21 GDP growth rises to 2½ per cent in 2011 and again to 2¾ per cent in 2012 as credit conditions ease and uncertainty subsides. All components of private sector demand are expected to strengthen, while government expenditure detracts from growth. Private consumption growth is forecast to rise from ½ per cent in 2010, to rates slightly below its long-run average and below the rate of GDP growth. Investment remains weak in 2010, but then recovers strongly as the recovery in business and dwelling investment gathers pace. Investment is expected to grow by around 8 per cent from 2012. This, together with a relatively stable

household saving ratio, means the private sector financial surplus eases slightly throughout the forecast, as the government deficit contracts.

3.22 The depreciation of sterling and the recovery in world demand provide the conditions for the rebalancing of demand between domestic and external sources and net trade is forecast to make a positive and significant contribution to GDP growth from 2011 onwards (Table 3.4).

3.23 The rebalancing of demand takes the share of consumer spending in GDP from over 65 per cent in 2009 to under 64 per cent by the end of the forecast period while government consumption falls by 3 percentage points, to around 21 per cent. This is balanced by net trade and investment. The share of investment in GDP rises from around 15 per cent to 17 per cent and the share of net trade increases from –2¼ per cent to just over –1¼ per cent in 2014 (Chart 3.3).

Chart 3.3: GDP expenditure shares



Consumer spending

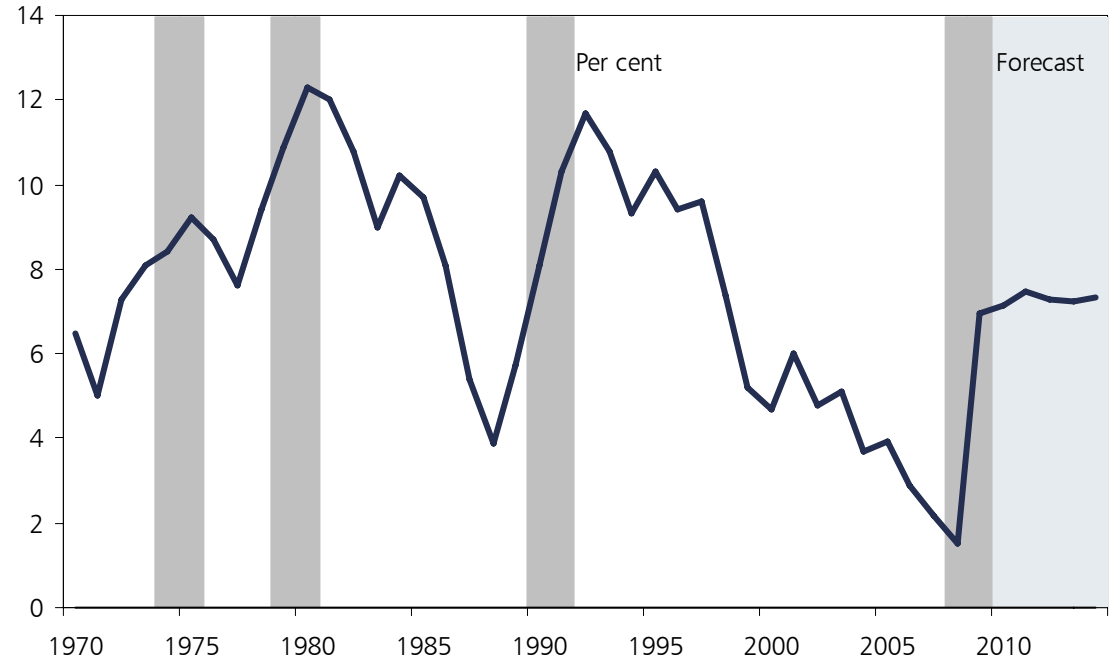
3.24 Real household disposable income was relatively strong through the recession, as weaker wages and salaries were supported by tax changes, such as the temporary cut in VAT, and the automatic stabilisers provided by the benefit system. Lower interest payments also supported household incomes as interest rates declined. Despite real disposable income remaining resilient, household consumption fell markedly. The by-product of the resilience in disposable incomes and the fall in consumption is that the household saving ratio rose sharply in 2008 and 2009.

3.25 The saving ratio has typically risen during and immediately following recessions and fallen during periods of economic expansion (Chart 3.4)[2] as rising asset prices, easier credit conditions and relatively low levels of uncertainty encourage lower saving (increase borrowing). The sharp rise in the UK saving ratio in the recent recession, by around 5 percentage points on annual data, was of a similar order of magnitude to the rise in the 1980s and 1990s recessions. Recent data suggest the saving ratio has stopped rising and, on the basis of experience, in previous recoveries, it could be expected to fall. But the saving ratio fell significantly in the lead-up to the

[2] The exception is after the 1970s recession, when the saving ratio continued to rise, as high inflation eroded the value of non-indexed financial assets.

recession, to a near 50-year low in 2008 Q1, and was far below its level at a similar stage prior to the 1980s and 1990s recessions. Part of the fall can be explained by the rise in asset prices, which allowed households to maintain their net financial wealth while accumulating significant levels of debt (largely to fund house purchases). Given the high level of debt that households are carrying, they may want to adjust their balance sheets further. This suggests the saving ratio may continue to rise.

Chart 3.4: The saving ratio[1]



[1] Recessions are highlighted by the grey bars.

3.26 The forecast balances the upside risk from further balance sheet adjustment and the downside risk from the normal cyclical increase in borrowing as the economy recovers. As a result the saving ratio holds fairly steady at a level broadly in line with its long-run average. It then stays at this level for longer than in previous recoveries.

3.27 If the saving ratio remains close to its current level over the forecast period, household consumption will move in line with disposable income. Household disposable income growth is forecast to remain below its long-run average throughout the forecast period, as the automatic stabilisers ease and wages and salaries growth remains subdued. A stable saving ratio and relatively weak income growth produce weak consumption growth throughout the forecast. The uncertainty surrounding both these factors, the saving ratio and household disposable income, compounds the uncertainty around the outlook for consumption.

3.28 House prices started to rise in the spring of 2009, following a significant decline in the previous 18 months. House prices continued to increase in the first quarter of 2010, although at a slower pace, and are now around 10 per cent above last year's trough. A pick up in new buyer enquiries relative to weak additional supply appears to have driven the recent rise in house prices, with total transactions remaining subdued.

3.29 While prices have risen over the last year, credit conditions remain relatively tight for those without large deposits and weak income growth in the near term could curtail demand. The

Royal Institute for Chartered Surveyors' housing market survey points to a small increase in properties for sale, which is possibly due to the recent rise in house prices. The extent to which this will be sustained is uncertain and will depend on a number of factors including expectations of future house prices and interest rates.

3.30 For the purposes of the public finances, we assume that house prices follow the median of independent forecasts over the next two years, before growing at a rate that is broadly in line with long-run average earnings growth.

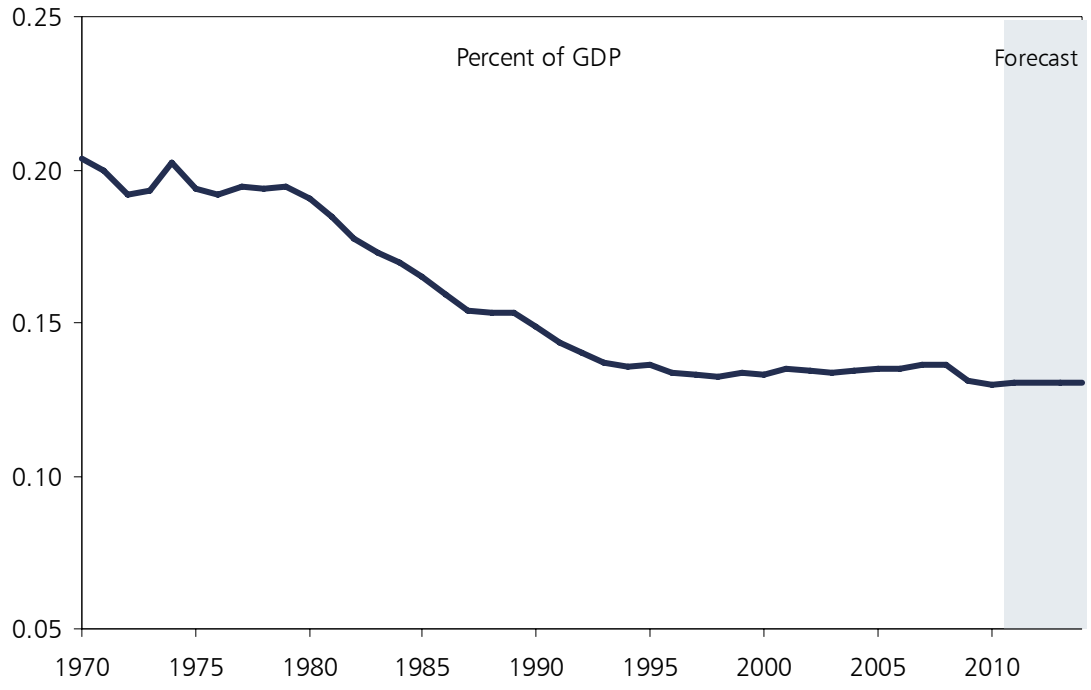
3.31 Dwellings investment fell sharply in the recession and continues to fall as credit conditions remain tight and uncertainty over future house prices curbs activity. Dwellings investment is expected to stabilise this year, before rising at a steady rate throughout the forecast, as uncertainty recedes and credit conditions ease.

Corporate sector

3.32 Having fallen very sharply in the recession, corporate spending is showing signs of recovery. This is true of both fixed investment and inventories. In our central forecast the build-up in inventories mainly happens in 2010. It is not until 2011 that the recovery in fixed investment gathers momentum.

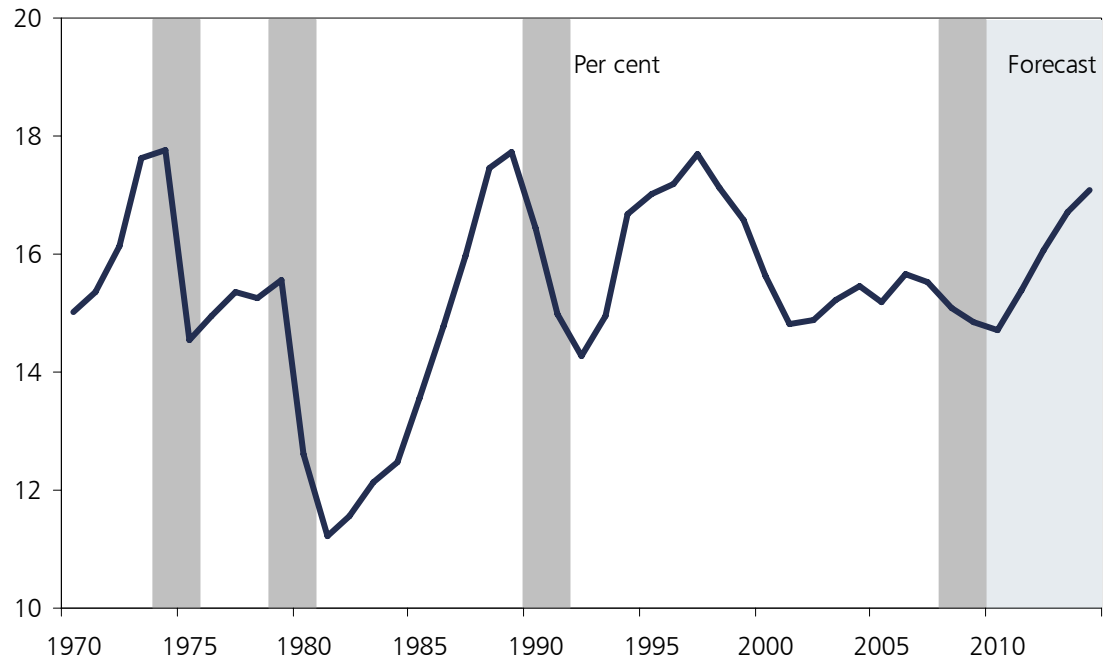
3.33 The rate of destocking eased in the last two quarters, such that changes in the level of inventories added to GDP growth. At the economy-wide level the stock rundown appears to be nearly complete (manufacturers have started to rebuild their stocks), so it is likely that whole-economy stockbuilding will turn positive in the coming quarters. In any case, inventories will make a significant and positive contribution to GDP growth this year. In the near term there is considerable scope for the rebound in inventories to be significantly stronger or weaker than in the central forecast. Over the medium term, the forecast is anchored on a stable stock-output ratio (Chart 3.5).

Chart 3.5: Stocks to output ratio



3.34 Prior to the recession, profits of private non-financial corporations (PNFCs) were rising as a share of GDP and the sector entered the recession with a financial surplus. In the recession, credit conditions tightened and uncertainty increased, leading to a collapse in business investment and the financial surplus (as a share of GDP) rose still further. The forecast of below-trend employment dampens real wage growth so that profits continue to rise as a share of GDP (Chart 3.6).

Chart 3.6: Non-oil PNFC[1] profits as a share of GDP[2]

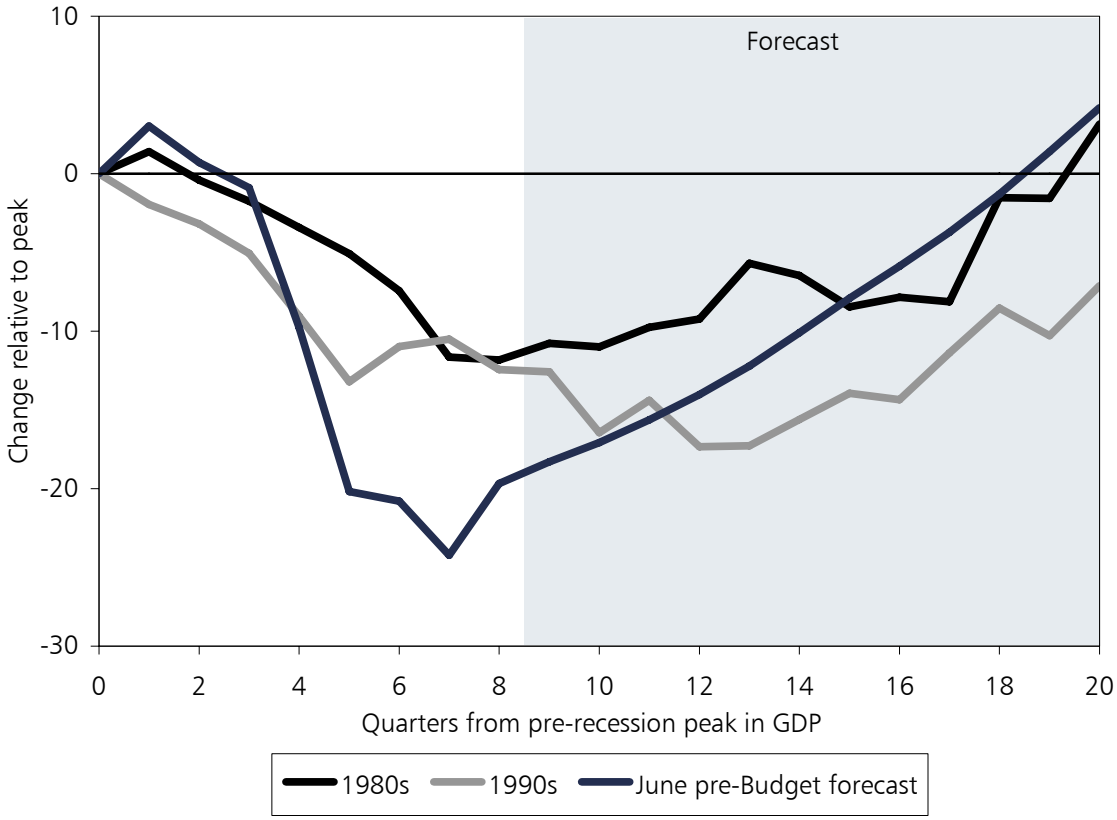


[1] Private non-oil, non-financial corporations.

[2] Recessions are highlighted by the grey bars.

3.35 Capital market conditions are expected to allow UK PNFCs to continue to rebalance the liability side of their balance sheets away from bank loans towards equity and bonds. This, together with a strong flow of internal finance, underpins our assumption that investment spending picks up as the recovery builds momentum. Business investment is forecast to recover strongly from 2011, in line with previous recoveries, so that as a share of GDP it rises throughout the forecast period. Despite strong rates of growth, investment only returns to its pre-recession peak in 2013 (see Chart 3.7).

Chart 3.7: The path of business investment through recoveries



3.36 The future path of investment will depend on the overall influence from several competing factors. The observed recovery in investment could be stronger than we expect should factors that constrained investment during the recession, such as uncertainty over demand, fall back more sharply than assumed in the forecast. Investment may be weaker than forecast if uncertainty remains high, credit conditions stay constrained for longer than assumed, or companies, particularly in the real estate sector, continue to reduce their levels of debt.

3.37 The uncertainty over the margin of spare capacity in the economy (see Annex B) compounds the uncertainty over the future path of investment. The large fall in demand may have caused firms to reduce their output below capacity temporarily, leaving them with surplus capital. The extent to which this has happened is unclear, but the Bank of England Agents recently reported that around half of respondents could increase output without increasing investment. This suggests there might be downside risks to investment.

3.38 Bringing dormant capital back on line will require some level of investment and, as the recovery continues, firms will expand their capacity once again to meet rising demand. A reallocation of resources towards sectors that have typically observed relatively high levels of investment would also imply a stronger investment outlook.

3.39 As the recovery in demand develops and conditions in the financial sector ease, the contribution from inventories is expected to diminish, and the contribution from (business and dwellings) investment to increase. The precise timing of the inventory cycle and the point at which business investment takes over from stockbuilding as the mainstay of company spending is impossible to predict. Our assessment is that the turnaround in inventories is largely complete by the end of this year and that, next year, business investment comes through strongly.

Government

3.40 Real general government expenditure rose significantly through the recession, providing a partial offset to the sharp fall in private sector demand. Our forecast is conditioned on the fiscal consolidation set out by the previous government. Government consumption falls throughout the forecast period, at an increasing rate. Government fixed investment declines slightly in 2010, before falling sharply in 2011. The pace of decline in investment eases, before growth is resumed in 2014. Chapter 4 provides more information on the spending assumptions used in the forecast.

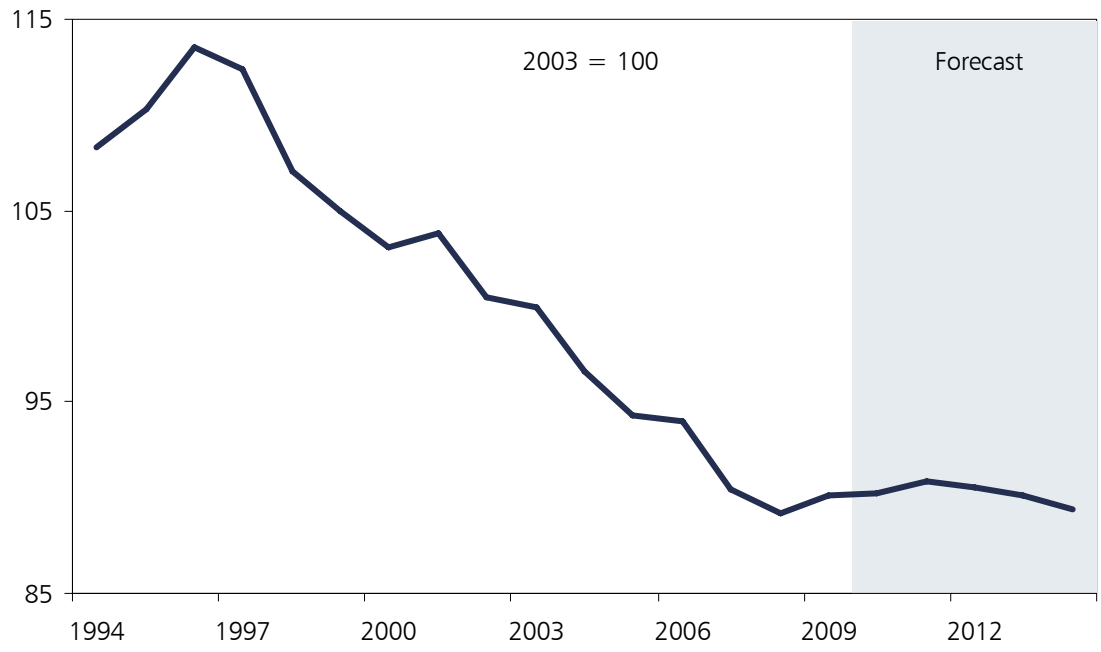
UK trade and the balance of payments

3.41 Following a collapse in trade volumes over the course of the recession, world trade increased rapidly at the end of 2009. We expect this strong growth to continue, and our forecast for world trade is above that in the March Budget. We also expect UK export markets to expand more quickly in 2010. There are continued concerns associated with sovereign debt market developments in a number of euro area countries, both directly (as a destination for UK exports) and indirectly, through their effect on key trading partners.

3.42 Since its peak in early 2007, sterling has depreciated by around 25 per cent on a trade-weighted basis. Initially UK firms appear to have responded more by increasing their profit margins, less by increasing market share. Consequently the UK share within export markets has barely risen (Chart 3.8). Over the next year or so, exporters are likely to adjust their pricing strategies and to increase output, and new firms might be tempted to enter the market. There are significant uncertainties surrounding the speed at which this will occur, particularly given recent developments in the euro area. The outlook for one of the UK's key exports, financial services, is also clouded. Nevertheless, a range of survey evidence, such as the British Chamber of Commerce Quarterly Economic survey and the Confederation of British Industry monthly Industrial Trends survey, points to robust export growth.

3.43 Our central forecast is for export growth to pick up progressively over the course of 2010, before rising relatively rapidly. We expect UK export market share to increase in the near term, as the boost to competitiveness from the lower pound stimulates a positive response from UK exporters. UK export market share remains broadly stable thereafter, in contrast to its pre-crisis downward trend.

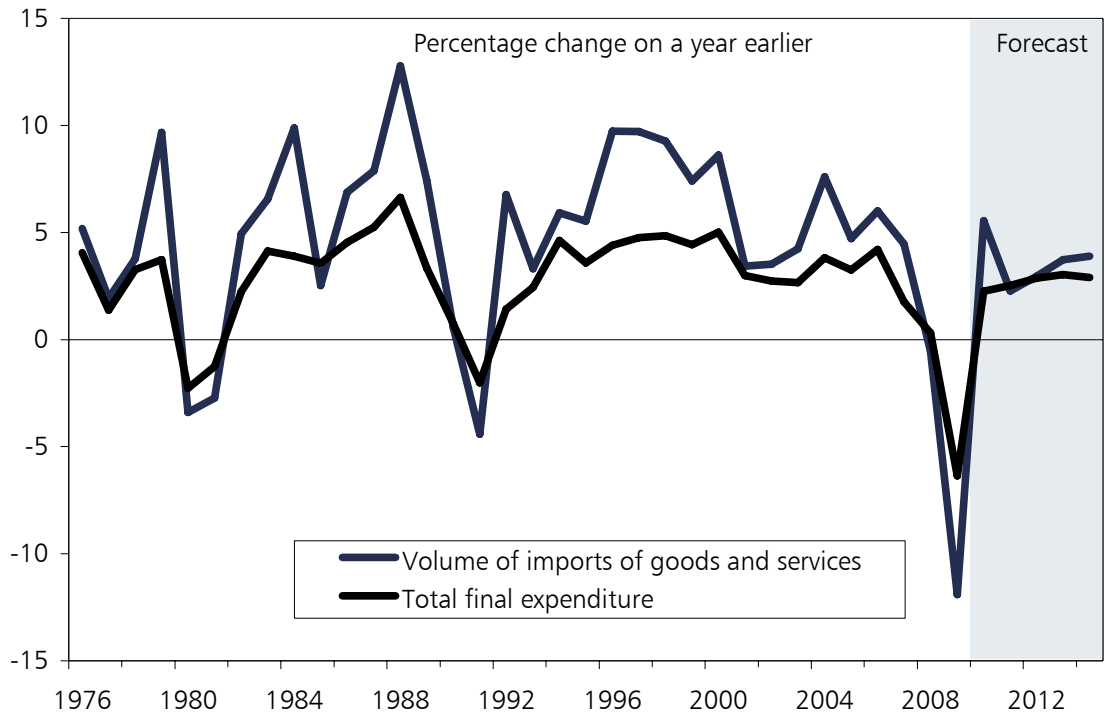
Chart 3.8: UK export markets share[1]



[1] Excluding the effects of activity relating to Missing Trader Intra-Community (MTIC) fraud.

3.44 Net trade has acted as a drag on GDP growth since mid-2009, as imports have increased more rapidly than exports. This is surprising given movements in relative prices, although it is possible that the recent turn in the inventory cycle and government policies such as the car scrappage scheme have temporarily boosted demand for imports. We expect the weaker real exchange rate to feed through gradually and to depress growth in import volumes. Relatively weak domestic demand growth in the near term should also bear down on demand for imports (Chart 3.9). With imports expected to increase more slowly than exports, our forecast is for net trade to boost GDP growth by around ¾ percentage point in 2011 and 2012 and to continue to contribute positively throughout the forecast period.

Chart 3.9: Imports[1] and total final expenditure



[1] Volumes excluding the effects of activity relating to Missing Trader Intra-Community (MTIC) fraud.

3.45 The effect of a narrower real trade balance on the current account is expected to be partly offset by a deterioration in the terms of trade, as the impact of sterling depreciation continues to feed through. The current account narrowed sharply in the final quarter of 2009, reflecting a significant rise in net income. Volatility in net income has increased recently, but the surplus is assumed to fall to more normal levels in the next few quarters, leading to a widening of the current account deficit. Over the medium term there is an underlying narrowing trend in the current account arising from an improvement in the trade balance, which lowers the deficit from 2 per cent of GDP in 2011 to ¾ per cent in 2014.

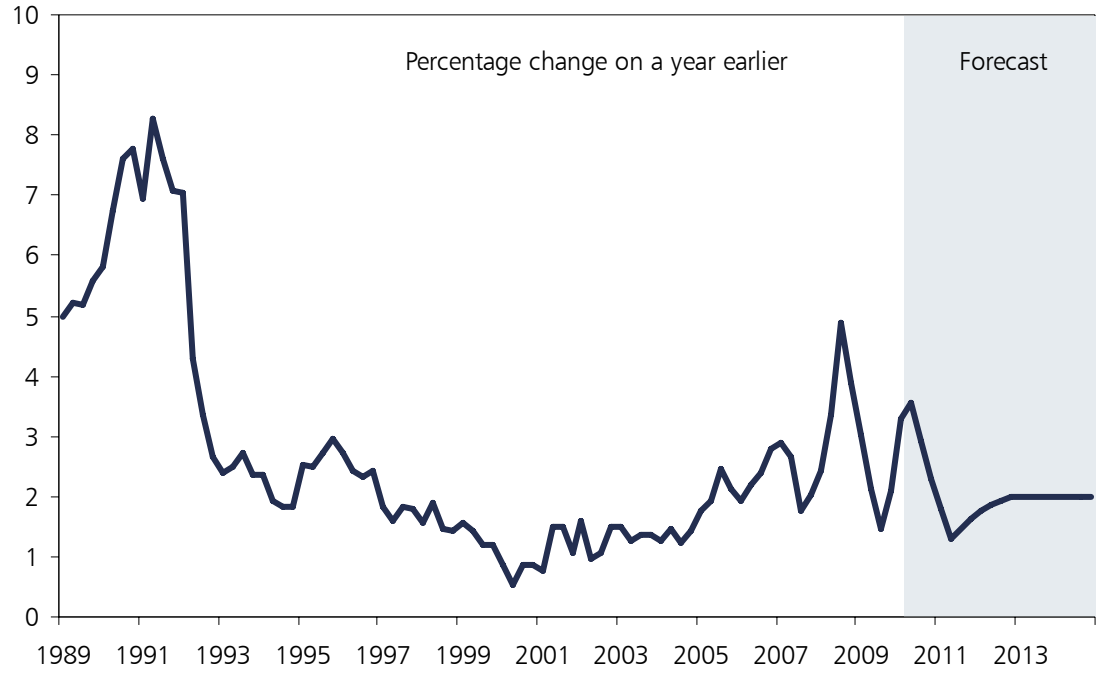
Inflation

3.46 CPI inflation has generally surprised on the upside relative to forecasters' expectations over the past 18 months. CPI inflation has increased since September 2009, reaching 3.7 per cent in April despite a significant output gap. The pass-through of higher import prices and the reversal of the VAT cut have boosted inflation. Oil prices, driven largely by rising emerging market demand, have also contributed to the rise in inflation and the futures curve suggests that prices may continue to rise, although remain relatively subdued compared to recent highs. Identifying the relative role each of the factors above has had on past inflation is uncertain. This raises the uncertainty over inflation's future path. Nevertheless, we expect that these factors will continue to place upward pressure on prices, so that inflation remains above 3 per cent in the near term.

3.47 CPI Inflation is expected to fall to around 2¼ per cent by the end of the year as the upward pressure from higher import and fuel prices moderates, and as the degree of spare capacity in the economy has a stronger effect. CPI Inflation falls further in the first half of 2011 as the VAT cut reversal falls out of the annual comparison, before rising back to target by the end of 2012 (Chart 3.10).

3.48 The inflation forecast is based on our assessment of the output gap and the sensitivity of inflation to its size. Both elements of the calculation are subject to a wide margin of error. A larger output gap and/or a greater response to it would produce a sharper fall in inflation. The reverse would hold, especially if the inflation overshoot led to an increase in inflation expectations.

Chart 3.10: CPI[1]



[1] Outturns until 2010Q1; forecasts for every second quarter from 2010Q2 to 2014Q4.

3.49 RPI inflation is forecast to follow a similar path to that of CPI inflation, but, unlike the CPI, the RPI is subject to additional upward pressure from the housing depreciation and mortgage interest payments components. These components will provide some counterweight to the downward drag on inflation from the large degree of spare capacity in 2010 and 2011.

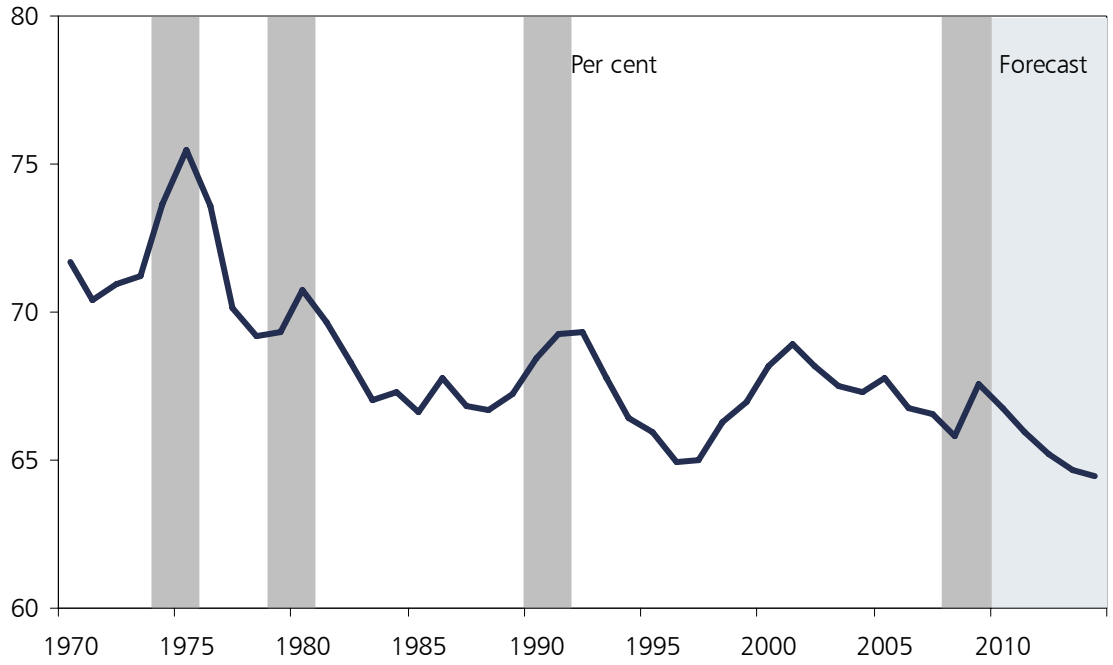
Labour market

3.50 Labour market indicators are stabilising. On the Labour Force Survey (LFS) measure, employment is still falling although private business surveys of employment intentions suggest employment will be broadly constant or rising marginally in the coming months. The International Labour Organisation (ILO) unemployment rate has been broadly stable over the last year at or below 8 per cent and the claimant count – a measure of the number of unemployed claiming unemployment benefits – has fallen in five of the past six months. Vacancies had started to pick up (from record lows), although they fell back in the three months to April 2010. Redundancies fell sharply in the second half of 2009, although they rose slightly in the first quarter of 2010. Growth in earnings including bonuses picked up markedly in the first quarter of 2010 (in part driven by a recovery in financial sector bonuses). Private sector regular earnings growth, while still low by historical standards, has picked up to 1.2 per cent, driven by strong growth in manufacturing pay.

3.51 The labour share falls back in the periods following a recession, as the economy remains below its trend level of output (Chart 3.11). For a given path of output, this adjustment can take place through three channels: stronger inflation (as firms pass an increase in labour costs

forward onto prices), lower employment (raising productivity per worker), and lower nominal earnings growth. Given the experience of the last few years, we expect most of the adjustment to continue to come through lower real hourly labour costs, rather than employment.

Chart 3.11: The labour share[1, 2]

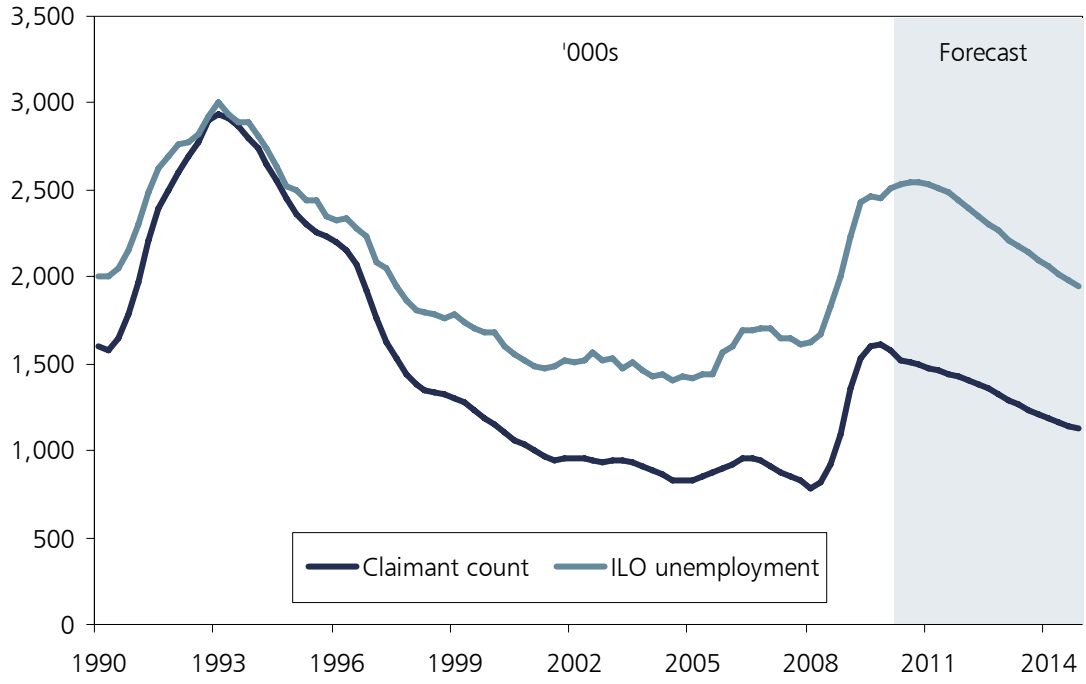


[1] Mixed income and total compensation of employees as a share of nominal GVA.

[2] Recessions are highlighted by the grey bars.

3.52 We expect employment to stabilise this year and to start rising in 2011. The ILO unemployment rate is expected to peak at just over 8 per cent in 2010, before falling gradually throughout the forecast period, to just over 6 per cent in 2014. The claimant count continues to decline, from 1½ million in 2010Q1 to just over 1 million by the end of 2014 (Chart 3.12).

Chart 3.12: Unemployment levels



3.53 We expect whole economy average earnings growth to remain subdued in the near term, at 2 per cent this year, but to pick up as productivity growth recovers. Wages and salaries growth (a measure of aggregate labour income) follows a broadly similar path to average earnings in the forecast. Aggregate wages and salaries are expected to rise by 1¼ per cent this year, below average earnings, as employment stabilises. Growth then picks up through the forecast, reaching 5¼ per cent by 2014.

3.54 The forecast suggests a reversal of the experience in both the 1980s and 1990s recessions, when real hourly labour costs increased. Employment also continued to fall well after the end of recession. It is still possible that employment falls further if the recovery in demand weakens. Employees could seek higher pay settlements as the demand for labour recovers, making it more difficult for firms to contain real hourly labour costs.

Nominal demand

3.55 Nominal GDP has risen strongly over recent quarters, reflecting relatively high inflation. In the near term the balance is expected to change; temporary inflationary factors such as the reversal of the VAT cut will diminish and spare capacity is expected to bear down on prices, while real GDP growth picks up. As inflation returns to target through 2012 and real GDP growth remains above trend, nominal demand is expected to continue rising by over 5 per cent a year from 2012 onwards.

Table 3.3: Detailed summary of central forecast[1]

	Percentage change on a year earlier, unless otherwise stated					
		Forecast				
	2009	2010	2011	2012	2013	2014
World economy						
World GDP at purchasing power parity	-0.8	4.0	4.2	4.5	4.5	4.6
Euro Area GDP	-4.0	0.7	1.4	1.7	1.9	2.3
World trade in goods and services	-11.0	6.1	6.2	7.2	7.3	7.3
UK export markets[2]	-11.5	4.1	4.7	6.4	6.6	6.5
UK economy						
Gross domestic product (GDP)	-4.9	1.3	2.6	2.8	2.8	2.6
Expenditure components of GDP						
Domestic demand	-5.3	1.7	1.8	2.0	2.2	2.1
Household consumption[3]	-3.2	0.4	1.6	1.8	2.0	2.0
General government consumption	2.2	1.9	-0.5	-1.5	-2.0	-2.3
Fixed investment	-14.9	-0.3	4.0	7.7	8.5	7.8
Business	-19.3	1.3	8.0	9.8	10.6	9.1
General government	15.7	-3.1	-19.0	-8.5	-6.6	0.6
Private dwellings	-19.7	-6.8	6.2	8.4	8.6	7.1
Change in inventories[4]	-1.2	1.2	0.4	0.0	0.0	0.0
Exports of goods and services[5]	-10.6	4.3	5.3	6.1	6.0	5.7
Imports of goods and services[5]	-11.9	5.6	2.3	2.9	3.7	3.9
Balance of payments current account						
£ billion	-18	-25	-30	-25	-20	-15
Per cent of GDP	-1.3	-1.7	-1.9	-1.6	-1.2	-0.8
Inflation						
CPI (Q4)	2.1	2.3	1.6	2.0	2.0	2.0
RPI (Q4)	0.6	3.3	2.6	3.3	3.3	3.5
Terms of trade[6]	-0.8	-0.9	-2.3	-1.0	-0.1	0.0
GDP deflator at market prices	1.3	3.2	1.5	2.1	2.7	2.7
Labour market						
Employment (millions)	29.0	28.8	29.0	29.3	29.6	29.9
Wages and salaries	-1.0	1.2	2.8	3.5	4.9	5.3
Average earnings[7]	1.0	2.1	2.2	2.6	3.8	4.3
ILO unemployment (% rate)	7.6	8.1	7.9	7.4	6.8	6.3
Claimant count (Q4, millions)	1.6	1.5	1.4	1.3	1.2	1.1
Household sector						
Real household disposable income	3.2	0.6	2.0	1.6	1.9	2.0
Saving ratio (level, per cent)	7.0	7.2	7.5	7.3	7.2	7.3
House prices	-7.8	5.9	1.6	3.9	4.5	4.5
Nominal indicators						
Nominal GDP	-3.6	4.6	4.2	5.0	5.6	5.4
Non-oil PNFC profits[8]	-5.1	3.6	8.9	9.8	9.7	7.7

[1] All growth rates in this table are rounded to the nearest 1 decimal place. This is not intended to convey a degree of unwarranted accuracy.

[2] Other countries' imports of goods and services weighted according to the importance of those countries in the UK's total exports.

[3] Includes households and non-profit institutions serving households.

[4] Contribution to GDP growth, percentage points.

[5] Trade levels are distorted by MTIC fraud.

[6] Ratio of export to import prices.

[7] Wages and salaries divided by employees.

[8] Private non-oil non-financial corporations' gross trading profits.

Table 3.4: Contributions to GDP growth[1]

	Percentage points, unless otherwise stated					
		Forecast				
	2009	2010	2011	2012	2013	2014
GDP growth, per cent	**-4.9**	**1.3**	**2.6**	**2.8**	**2.8**	**2.6**
Main contributions						
Private consumption	-2.1	0.3	1.0	1.2	1.3	1.3
Business investment	-2.1	0.1	0.7	1.0	1.1	1.0
Dwellings investment[2]	-0.6	-0.2	0.2	0.2	0.3	0.2
Government[3]	0.8	0.4	-0.6	-0.5	-0.5	-0.5
Change in inventories	-1.2	1.2	0.4	0.0	0.0	0.0
Net trade	0.7	-0.5	0.7	0.8	0.6	0.5

[1] Components may not sum to total due to rounding, omission of transfer costs of land and existing buildings, and the statistical discrepancy.

[2] The sum of public corporations and private sector investment in new dwellings and improvements to dwellings.

[3] The sum of government consumption and general government investment.

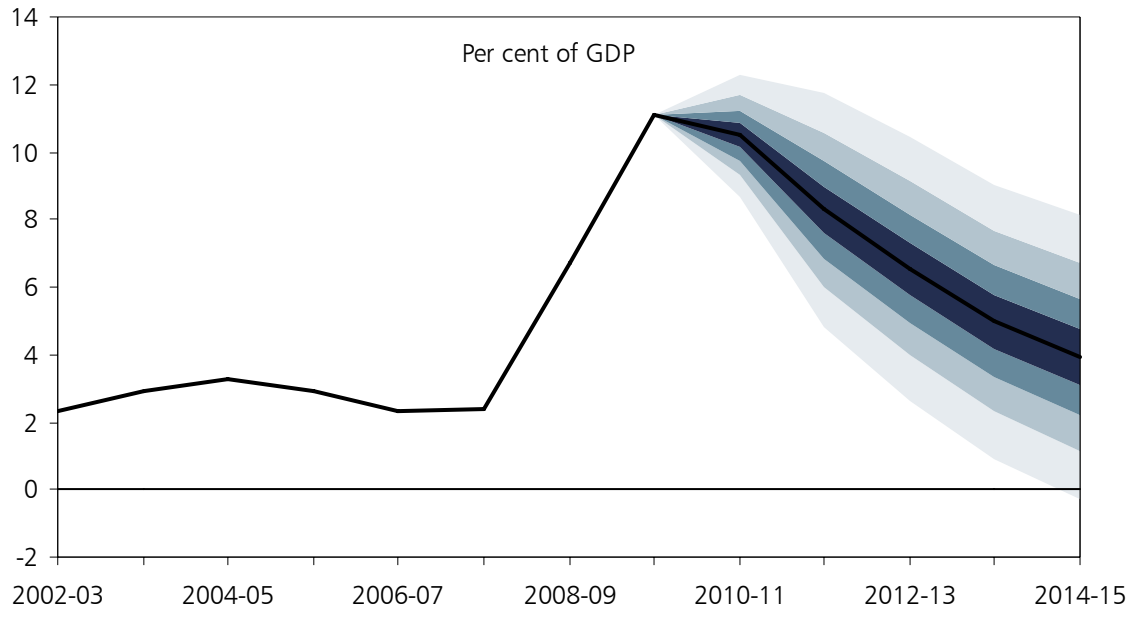
4 The public finances

4.1 This chapter sets out our forecast of the public finances to 2014-15. There are huge uncertainties associated with any forecast of the public finances. The headline measure of public sector net borrowing (PSNB) represents the difference between total public sector receipts and expenditure. These are very large aggregates composed of many different streams of receipts and items of expenditure. Public sector receipts are highly dependent on the path of the economy and so projections are subject to all the risks and uncertainties set out in Chapter 3. Equally, while a portion of public expenditure is typically set in firm multi-year plans, a substantial portion, such as social security and debt interest payments, is also closely linked to the economy. In addition, each individual line of receipts and expenditure will be subject to a wide range of specific uncertainties, for example around the behaviour of taxpayers or benefit claimants in response to changes in the tax or benefit system.

Fiscal forecast overview

4.2 To illustrate these uncertainties Chart 4.1 shows our forecast of PSNB from 2010-11 to 2014-15 in the form of a fan chart. The chart shows our central forecast for PSNB – the solid black line – and the probability of outcomes deviating from that forecast, based on the distribution of past forecast errors. The successive pairs of lighter shaded areas represent 10 per cent probability bands, implying that there is an 80 per cent probability that the actual outturn will lie within the range captured by the lightest band shown in the chart.[1]

Chart 4.1: Public sector net borrowing



[1] The top and bottom 10 per cent bands are not shown on the chart.

4.3 The distribution shows that the probability of PSNB in 2010-11 being within one percentage point of our central forecast (i.e. between 9.5 per cent and 11.5 per cent) is around 50 per cent. The probability of PSNB being within one percentage point of our central forecast in 2011-12 (i.e. between 7.3 per cent and 9.3 per cent) falls to around 30 per cent and to around 20 per cent in 2014-15. The chart shows that there is also a 50 per cent probability of borrowing being 3.9 per cent of GDP or lower in 2014-15.

4.4 Table 4.1 shows our central view of the five-year projections for the current budget, PSNB and public sector net debt (PSND). Our central forecast is that borrowing will fall from 11.1 per cent of GDP (£156.1 billion) in 2009-10 to 3.9 per cent of GDP (£71 billion) in 2014-15. The deficit on the current budget falls from 7.6 per cent of GDP to 2.7 per cent of GDP over the same period. These improvements are driven by the expected recovery of the economy over this period and by the policy measures announced by the previous Government to reduce the deficit.

Table 4.1: Fiscal forecast overview

	Per cent of GDP						
	Outturn	Estimate	Forecasts				
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Surplus on current budget	-3.4	-7.6	-7.7	-6.4	-5.0	-3.7	-2.7
Public sector net borrowing	6.7	11.1	10.5	8.3	6.6	5.0	3.9
Public sector net debt[1]	44.0	53.5	62.2	68.2	71.8	73.7	74.4
Cyclically-adjusted surplus on current budget	-3.1	-5.3	-5.2	-4.2	-3.1	-2.3	-1.6
Cyclically-adjusted net borrowing	6.4	8.8	8.0	6.1	4.7	3.5	2.8

[1] *Debt at end March; GDP centred on end March.*

4.5 The high, but declining, levels of borrowing over the forecast period mean that PSND rises to 74.4 per cent of GDP in 2014-15.

4.6 The table also shows the cyclically-adjusted measures of borrowing and the current budget. These attempt to strip out the effect of the economic cycle to provide an estimate of the underlying or 'structural' level of borrowing. Cyclically-adjusted borrowing falls from 8.8 per cent of GDP in 2009-10 to 2.8 per cent in 2014-15.

4.7 The remainder of the chapter describes our approach to the forecast and the key assumptions and judgements we have made, and then sets out our central forecast in more detail.

Forecast approach

4.8 As discussed in Chapter 2, our economic and fiscal forecasts are based on a central approach. This differs from previous practice under which some assumptions were designed to add caution to the fiscal forecast. For example, our fiscal forecast is based on the central forecast for economic growth, rather than on the lower end of the growth forecast range as was the case for the March Budget. This change in approach tends to reduce forecast borrowing relative to the forecast in the March Budget. Our assumptions and judgements therefore represent our best view of the path of the economy and public finances. However, there are many plausible alternative judgements, reflecting the uncertainty inherent in economic and fiscal forecasting.

Spending assumptions

4.9 Our forecast of expenditure in 2010-11 uses the previous Government's published Departmental Expenditure Limit (DEL) plans and our updated Annually Managed Expenditure (AME) forecast. After 2010-11 there are no published DEL plans on which to base our forecasts for expenditure. Therefore, we have chosen to use the March Budget assumptions for public sector current expenditure (PSCE) and public sector net investment (PSNI) as the basis for our

pre-Budget forecasts. Specifically, we assume that PSCE grows from our updated base at the same nominal rate as in the March Budget, and that PSNI remains at the same share of GDP as in the March Budget.

4.10 Both PSCE and PSNI are split into DEL and AME components. We have produced central forecasts for current and capital AME on the basis of existing policy commitments and our central forecast for the economy. We have then derived current and capital DEL totals from 2011-12 onwards by subtracting the relevant AME forecast from the projections of PSCE or PSNI. These DELs do not represent the Government's plans for DEL from 2011-12 onwards, which have not yet been set.

Cyclical adjustment methodology

4.11 We present cyclically-adjusted versions of key fiscal aggregates, which attempt to adjust for the effect of the economic cycle on the public finances. Forecasts of cyclically-adjusted aggregates are subject to particular uncertainty, as they depend on projections of the current position of the economy relative to trend. They also rely on analysis of the effect of the economic cycle on borrowing from previous cycles, which may not hold in the future, partly because of changes in the composition of both receipts and expenditure. Although we recognise the potential shortcomings, we have used the Treasury's approach to cyclical adjustment as set out in *Public finances and the cycle*. [2]

Basis of the fiscal aggregates

4.12 The forecast presents the fiscal aggregates on the basis which excludes the temporary effects of the financial interventions. The Office for National Statistics (ONS) publishes outturn data for borrowing and debt on this basis. These aggregates remove the temporary and distortionary effects of the interventions on the public finances and capture the permanent effects, essentially by treating the public sector banks and schemes such as the Special Liquidity Scheme and the Asset Purchase Facility as part of the private sector. This means that transactions between government and the banks or schemes, such as fee payments or any loss payouts, will score in these measures when they occur.

4.13 The fiscal aggregates are based on National Accounts, and use the National Accounts approach to contingent liabilities. Chapter 5 discusses the role of the OBR in assessing the effect of contingent liabilities on sustainability in future work.

4.14 All the public finances data for 2009-10 are labelled as estimates because they contain a mixture of outturn statistics and estimates. Outturn statistics for the main public finance aggregates were released most recently in the Public Sector Finances statistical bulletin on 21 May. [3] Details of all data sources for historical data in tables and charts in this document will be contained in the June Budget Data Sources document.

Forecast assumptions and judgements

4.15 This section sets out the main assumptions and judgements we have made in producing our central fiscal forecast. Table 4.2 shows the path of the key determinants, consistent with our commitment to increased transparency. Chapter 3 includes a discussion of determinants from the economy forecast, such as GDP, its components, and inflation and claimant count unemployment.

[2] *Public finances and the cycle: Treasury Economic Working Paper No. 5*, HM Treasury, November 2008.
[3] Joint ONS/HM Treasury release, available online at: www.hm-treasury.gov.uk/d/psf.pdf

4.16 For some determinants in this section, ready-reckoners are presented. These are approximate estimates which are produced by varying the level of the determinant in the appropriate receipts or expenditure model. These estimates should be treated with caution as they estimate only the direct effect of a change in the determinant and not any wider indirect effects. The actual effect of a change in the value of a determinant will depend on the particular set of economic circumstances at the time of the change.

Table 4.2: Determinants of the fiscal forecast

	Percentage change on previous year unless otherwise specified						
	Outturn	Estimate	Forecasts				
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
GDP and its components							
Real GDP	-1.4	-3.7	2.1	2.6	2.9	2.7	2.6
Nominal GDP (£ billion)[1]	1434	1408	1476	1538	1620	1710	1802
Nominal GDP[1]	1.1	-1.8	4.9	4.2	5.4	5.5	5.4
Wages and salaries[2]	1.9	-0.6	1.8	2.9	3.9	5.1	5.2
Non-oil PNFC profits[2,3]	0.6	-5.1	3.6	8.9	9.8	9.7	7.7
Consumer spending[2,3]	4.0	-1.9	4.4	3.8	4.4	4.8	4.8
Prices and earnings							
GDP deflator	2.5	1.9	2.8	1.6	2.4	2.7	2.7
RPI (September)[4]	5.0	-1.4	4.1	2.5	3.1	3.3	3.4
Rossi (September)[5]	6.3	1.8	4.3	1.8	2.4	2.5	2.5
Whole economy earnings growth	1.8	1.5	2.1	2.2	2.9	4.0	4.3
Key fiscal determinants							
Claimant count unemployment (Q4, millions)[6]	1.10	1.62	1.50	1.43	1.32	1.21	1.12
VAT gap (per cent)	15.3	13.3	12.6	12.6	12.6	12.7	12.7
Financial and property sectors							
Equity prices (index)[7]	2383	2619	2706	2819	2971	3135	3303
HMRC financial sector profits[1,3,8]	-17.1	3.1	8.9	6.0	6.0	6.0	6.0
Residential property prices[9]	-5.6	-3.0	4.1	2.3	4.2	4.5	4.5
Residential property transactions[10]	-47.4	14.0	5.2	22.6	17.0	12.1	4.3
Commercial property prices[11]	-27.3	5.9	7.8	8.0	9.2	6.1	4.3
Commercial property transactions[11]	-21.0	-17.5	9.3	6.8	4.8	5.2	4.8
Oil and gas							
Oil prices ($ per barrel)[3]	98.4	62.3	74.8	75.5	78.2	80.0	81.8
Oil production (million tonnes)[3,12]	71.5	67.8	64.6	61.5	58.2	55.6	52.7
Gas production (billion cubic metres)[3,12]	25.5	21.6	20.3	19.3	18.4	17.5	16.8
Interest rates							
Market short-term interest rates (per cent)[13]	4.6	0.8	1.1	1.8	2.5	3.4	4.0
Market gilt rates (per cent)[14]	3.8	3.1	3.6	4.2	4.6	4.9	5.1

[1] *Not seasonally adjusted.*

[2] *Nominal.*

[3] *Calendar year.*

[4] *Used for revalorising excise duties in current year and uprating income tax allowances and bands and certain social security benefits in the following year.*

[5] *RPI excluding housing costs, used for uprating certain social security benefits.*

[6] *UK seasonally-adjusted claimant count.*

[7] *FTSE All-share index.*

[8] *HMRC Gross Case 1 trading profits.*

[9] *Outturn data from Communities and Local Government (CLG) property prices index.*

[10] *Outturn data from ONS property transactions series.*

[11] *Outturn data from HMRC information on stamp duty land tax.*

[12] *DECC forecasts available at www.og.decc.gov.uk*

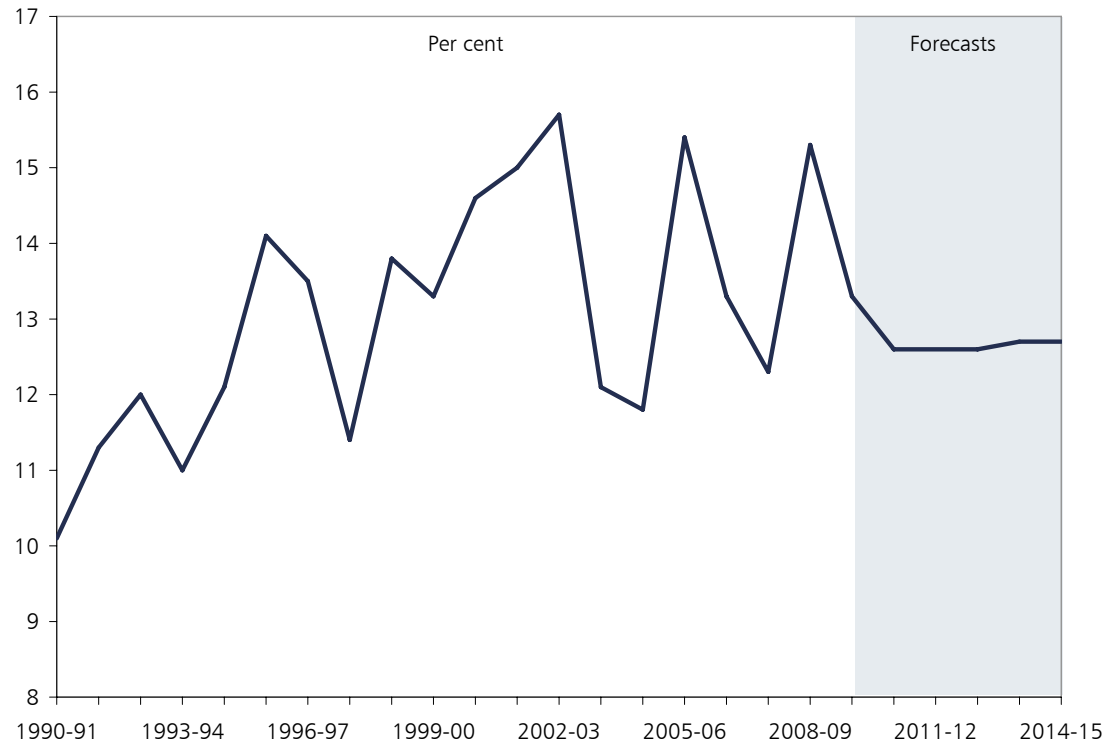
[13] *3-month sterling interbank rate (LIBOR).*

[14] *Weighted average interest rate on conventional gilts.*

VAT gap

4.17 The judgement about the VAT gap[4] is a critical element of the VAT forecast. The VAT gap is the difference between the theoretical level of VAT liability and actual receipts. It can be ascribed to error, avoidance, evasion, MTIC[5] and VAT debt. The approach we have taken is to assume a constant percentage level for the underlying VAT gap over the forecast period after adjusting for the expected effect of changes in VAT debt in 2010-11.

Chart 4.2: VAT gap



4.18 This differs from the previous Government's assumption that the underlying VAT gap would increase by 0.5 percentage points per year, which was designed to add caution. The change reflects the move to a central forecast, and a judgement that the present gap represents a return to a steady state. Although the gap is volatile, over time the trend level has remained reasonably constant, with a small average decline of 0.1 percentage points over the ten years to 2009-10. The gap was at or below 12 per cent until 1995, and much of the increase in the years up until 2002-03 and again in 2005-06 can be explained by attacks of MTIC fraud.

4.19 In the recent recession VAT debt increased significantly, and this is estimated to account for more than half of the increase in the gap between 2007-08 and 2008-09. VAT debt's contribution to the gap is thought to have fallen by 0.4 percentage points in 2009-10. We judge that this fall is likely to continue as the economy recovers. Our forecast for a 0.5 percentage point fall in debt's contribution to the underlying gap in 2010-11 underpins our judgement on the total gap for 2010-11.

4.20 On an approximate ready-reckoner basis, if the VAT gap were to be 1 percentage point lower, VAT receipts would be around £1 billion higher.

[4] More information on the definition of the VAT gap is available in *Measuring tax gaps 2009*, HM Revenue & Customs, March 2010.

[5] Missing Trader Intra-Community fraud.

Equity prices

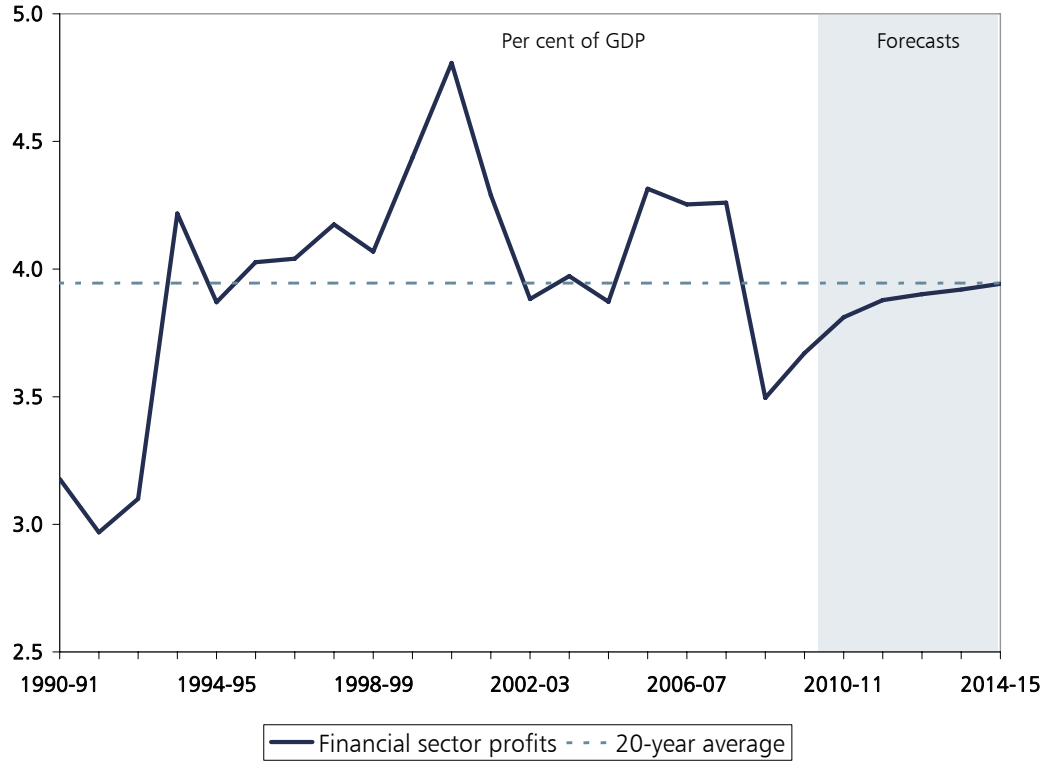
4.21 Equity prices are assumed to rise from their present level with nominal GDP growth, in line with the previous assumption. The present level is taken from the average of the closing price of the FTSE All-Share index over the 10-day period ending 26 May 2010. Our assumption reflects the rationale that, in the long run, equity prices represent an expectation of future profits. To the extent that the profits share of GDP remains constant in the long run, it is therefore reasonable to assume that equity prices increase in line with nominal GDP.

4.22 Equity prices are amongst the more volatile and unpredictable determinants of the forecast. On an approximate ready-reckoner basis, if equity prices were to be 1 per cent higher than assumed, receipts from capital taxes and corporation tax from life insurers would increase by around £100 million a year once the change had fully worked through.

HMRC financial sector profits

4.23 HMRC financial sector profits[6] are assumed to return to their long-run level as a percentage of GDP towards the end of the forecast period. The long-run level is taken to be the 20-year average, which is just under 4 per cent of GDP. This is much the same level as observed following the 1990s recession and during the period from 2002-03 to 2004-05 but much lower than the peak levels seen in 1999-2000 and 2000-01 and between 2005-06 and 2007-08. The forecast allows for a moderate recovery in 2010-11, after the 17 per cent fall in 2008-09 and 3 per cent rise in 2009-10. We recognise that the outlook for the financial sector is subject to particular uncertainty from a range of factors, including the effect of future national and international regulatory reforms.

Chart 4.3: HMRC financial sector profits



[6] Financial sector profits are represented by the Gross Case 1 trading profits series from HM Revenue & Customs.

Residential property prices and transactions

4.24 On residential property prices, we assume that prices follow the median of independent forecasts for the next two calendar years, implying 2.8 per cent growth in the year to 2010 Q4 and 3.0 per cent growth in the year to 2011 Q4. From 2012, house price inflation of 4.5 per cent is assumed, broadly in line with the long-term average for earnings growth. While prices grew over the course of 2009, there is some risk that the return of sellers and continued credit constraints could place downward pressure on prices during 2010 and into 2011.

4.25 Residential property transactions are forecast to return to their trend level in the medium term. The trend level is informed by a model of the equilibrium average duration of home ownership. In the short term, transactions growth is forecast to be relatively low, reflecting current credit conditions.

Commercial property prices and transactions

4.26 The commercial property prices forecast is based on HMRC outturn data on property prices and transactions subject to Stamp Duty Land Tax. The forecast incorporates a judgement that the commercial property sector will face more constraints on its access to credit than it did prior to the crisis. It suggests that prices will grow by 7.8 per cent in 2010-11, following the 5.9 per cent rise in 2009-10. Commercial property transactions are forecast to rise by 9.3 per cent in 2010-11, continuing the recovery recorded at the end of 2009-10 after the sharp falls during the recession. From 2012-13, transactions are expected to grow by 4 to 5 per cent a year.

Oil prices

4.27 Oil prices are assumed to move in line with the prices implied by futures markets as of 25 May 2010. On an approximate ready-reckoner basis, if oil prices were to be $1 higher than assumed, direct North Sea receipts would rise by around £150 million. There would however be offsetting effects on the public finances from the wider effects of an oil price rise on GDP and inflation.

Oil and gas production

4.28 The forecast uses the detailed central projections for oil and gas production published by the Department for Energy and Climate Change (DECC). They are based on survey data provided by oil and gas producers.

Short-term interest rates

4.29 Short-term interest rates are assumed to move in line with market expectations. Rates used in this forecast are the average for the ten working days ending 25 May 2010. Short-term interest rates are defined as the 3-month sterling interbank rate (LIBOR).

4.30 Increases in short-term rates are broadly neutral for the public finances as higher receipts from tax on savings income, corporation tax and interest receipts offset higher debt interest payments.

Gilt rates

4.31 Gilt rates are also assumed to move in line with market expectations. Rates used in this forecast are the average for the ten working days ending 25 May 2010. We realise that, other things being equal, markets may respond to June Budget announcements to the extent that they differ from expectations. We also recognise that market expectations of interest and gilt rates may currently incorporate expectations of potential June Budget announcements and therefore may not truly represent a pre-Budget view. As it is not possible to judge the extent to which this is the case, we have not attempted to make any allowance for these effects.

4.32 The approximate ready-reckoner effect on net borrowing of a 1 percentage point rise in gilt rates throughout the forecast period would be around £8 billion in 2014-15 through higher debt interest spending. This is a compound ready-reckoner effect, taking into account the second-round effect of higher borrowing caused by increased debt interest payments.

Fiscal aggregates

4.33 Table 4.3 sets out our central forecast of the fiscal aggregates in more detail. Table 4.4 sets out the composition of our central forecast of net borrowing. Table 4.5 shows the key fiscal aggregates in our central forecast compared with the March Budget forecast.

Table 4.3: Fiscal aggregates

	Per cent of GDP						
	Outturn	Estimate	Forecasts				
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Receipts and expenditure							
Public sector current receipts	37.2	36.6	37.0	37.8	38.3	38.5	38.7
Total managed expenditure	44.0	47.7	47.5	46.1	44.8	43.5	42.6
Deficit							
Surplus on current budget	-3.4	-7.6	-7.7	-6.4	-5.0	-3.7	-2.7
Public sector net borrowing	6.7	11.1	10.5	8.3	6.6	5.0	3.9
Cyclically-adjusted surplus on current budget	-3.1	-5.3	-5.2	-4.2	-3.1	-2.3	-1.6
Cyclically-adjusted net borrowing	6.4	8.8	8.0	6.1	4.7	3.5	2.8
Financing							
Central government net cash requirement	11.3	14.1	10.3	8.7	6.6	5.3	3.8
Public sector net cash requirement	4.2	8.8	10.6	9.0	6.9	5.6	4.0
Sustainability							
Public sector net debt[1]	44.0	53.5	62.2	68.2	71.8	73.7	74.4
Net worth[2]	22.4	13.8	6.7	1.6	-2.6	-5.5	-7.0
Primary balance	-5.1	-9.1	-7.9	-5.6	-3.6	-1.9	-0.7
Stability and Growth Pact							
Treaty deficit[3]	6.8	11.5	10.5	8.3	6.6	5.1	4.0
Cyclically-adjusted Treaty deficit[3]	6.4	9.2	8.0	6.1	4.8	3.7	3.0
Treaty debt ratio[4]	55.8	71.2	79.0	84.7	87.5	88.4	88.2
	£ billion						
Surplus on current budget	-49.3	-106.4	-114	-98	-80	-63	-48
Net investment	47.2	49.7	41	29	26	22	23
Public sector net borrowing	96.5	156.1	155	127	106	85	71
Central government net cash requirement	162.4	198.8	152	134	107	90	68
Public sector net debt	617.0	772.0	936	1076	1196	1294	1376
Memo: Output gap (per cent of GDP)	*-1.0*	*-4.1*	*-3.4*	*-3.1*	*-2.4*	*-1.9*	*-1.4*

Note: All measures are shown on the basis which excludes the temporary effect of the financial interventions except the aggregates shown in the Financing and Stability and Growth Pact sections.

[1] *Debt at end March; GDP centred on end March.*

[2] *Estimate at end December; GDP centred on end December.*

[3] *General government net borrowing on a Maastricht basis.*

[4] *General government gross debt on a Maastricht basis.*

Table 4.4: Components of net borrowing

	£ billion						
	Outturn	Estimate	Forecasts				
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Current budget							
Current receipts	534.0	515.3	546	582	620	659	697
Current expenditure	564.5	602.1	640	658	678	699	721
Depreciation	18.7	19.6	21	22	22	23	24
Surplus on current budget	**-49.3**	**-106.4**	**-114**	**-98**	**-80**	**-63**	**-48**
Capital budget							
Gross investment[1]	65.9	69.3	61	51	48	45	47
Less Depreciation	-18.7	-19.6	-21	-22	-22	-23	-24
Net investment	**47.2**	**49.7**	**41**	**29**	**26**	**22**	**23**
Net borrowing	**96.5**	**156.1**	**155**	**127**	**106**	**85**	**71**

[1] *Net of asset sales.*

4.34 Chart 4.4 shows the path of public sector current receipts (PSCR) and total managed expenditure (TME). PSNB is the difference between these two aggregates. As set out in Table 4.4, PSNB can also be expressed as the deficit on the current budget plus net investment. Our forecasts for receipts and expenditure are set out in more detail in subsequent sections of this chapter.

Chart 4.4: Receipts and expenditure

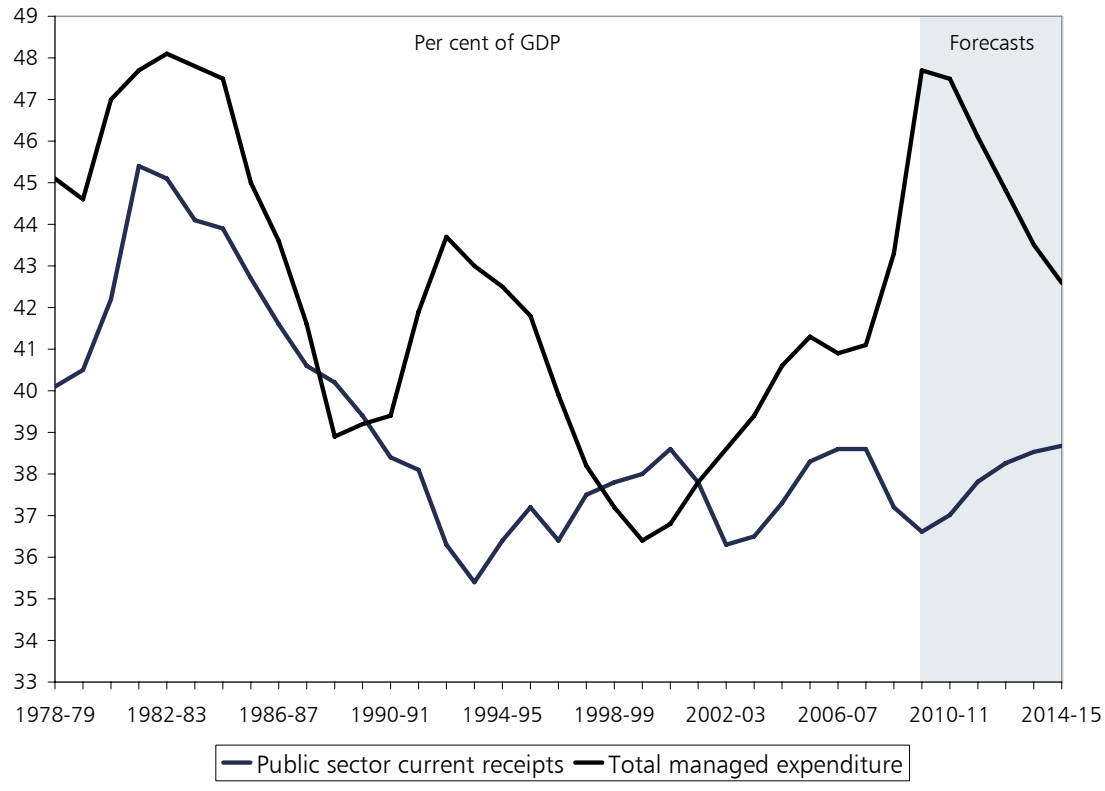


Table 4.5: Changes to the fiscal forecast

	Outturn	Estimate	Forecasts				
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
Surplus on current budget (£ billion)							
March Budget	-48.9	-116.6	-124	-102	-84	-67	-51
Change	-0.4	10.2	10	4	3	3	3
OBR pre-Budget forecast	**-49.3**	**-106.4**	**-114**	**-98**	**-80**	**-63**	**-48**
Net investment (£ billion)							
March Budget	47.2	50.0	40	29	26	22	23
Change	0.0	-0.3	1	0	0	0	0
OBR pre-Budget forecast	**47.2**	**49.7**	**41**	**29**	**26**	**22**	**23**
Net borrowing (£ billion)							
March Budget	96.1	166.5	163	131	110	89	74
Change	0.4	-10.4	-8	-4	-3	-4	-3
OBR pre-Budget forecast	**96.5**	**156.1**	**155**	**127**	**106**	**85**	**71**
Net borrowing (per cent of GDP)							
March Budget	6.7	11.8	11.1	8.5	6.8	5.2	4.0
Change	0.0	-0.8	-0.7	-0.3	-0.2	-0.2	-0.1
OBR pre-Budget forecast	**6.7**	**11.1**	**10.5**	**8.3**	**6.6**	**5.0**	**3.9**
Cyclically-adjusted surplus on current budget (per cent of GDP)							
March Budget	-2.5	-4.8	-4.6	-3.4	-2.5	-1.8	-1.3
Change	-0.6	-0.5	-0.6	-0.8	-0.7	-0.5	-0.3
OBR pre-Budget forecast	**-3.1**	**-5.3**	**-5.2**	**-4.2**	**-3.1**	**-2.3**	**-1.6**
Cyclically-adjusted net borrowing (per cent of GDP)							
March Budget	5.8	8.4	7.3	5.3	4.1	3.1	2.5
Change	0.6	0.5	0.6	0.8	0.7	0.5	0.3
OBR pre-Budget forecast	**6.4**	**8.8**	**8.0**	**6.1**	**4.7**	**3.5**	**2.8**
Net debt (per cent of GDP)[1]							
March Budget	43.8	54.1	63.6	69.5	73.0	74.5	74.9
Change	0.2	-0.6	-1.5	-1.3	-1.1	-0.8	-0.5
OBR pre-Budget forecast	**44.0**	**53.5**	**62.2**	**68.2**	**71.8**	**73.7**	**74.4**

Note: Totals may not sum due to rounding.

[1] *GDP centred on end March.*

Net borrowing

4.35 Net borrowing falls from £156.1 billion (11.1 per cent of GDP) in 2009-10 to £71 billion (3.9 per cent of GDP) in 2014-15. These improvements are driven by the expected recovery of the economy over this period and by the policy measures announced by the previous Government to reduce the deficit.

4.36 The latest outturn data published by the ONS have revised PSNB in 2009-10 to £156.1 billion compared with a forecast of £166.5 billion in the March Budget. Current receipts in 2009-10 are now £7.8 billion higher than forecast in the March Budget, in large part due to a large surplus in Pay As You Earn (PAYE) and National Insurance Contribution (NIC) receipts in March and April. Although it is uncertain at this stage, there is reasonable evidence to suggest that a significant portion of this surplus could be due to taxpayers bringing forward payments ahead of the end-year changes to the tax system. The remainder of the surplus may be due to a stronger underlying tax base than forecast in March, in particular in the financial sector. These factors are discussed further in the receipts section of this chapter.

4.37 Our central forecast is for PSNB in 2010-11 to be £8 billion lower than in the March Budget since some of the underlying strength in the tax base in March and April is likely to

continue into next year. We have also increased the forecasts for VAT and corporation tax in 2010-11 compared with the March Budget. This is due to higher expected inflation this year and to revised judgements on the VAT gap and corporate profits that are discussed further in the receipts section.

4.38 By 2014-15 PSNB is forecast to be £3 billion lower than in the March Budget. The forecast judgement that growth will be lower than assumed in the March Budget, as set out in Chapter 3, leads to less medium-term strength in the key determinants of the tax base such as labour income and consumption. The March Budget public finances forecast used a trend rate of growth ¼ percentage points lower than the March central case. Compared with the low case used in the March Budget, the level of trend output in our central forecast is 2¼ per cent lower in 2014-15. This is the appropriate comparison for the impact of lower trend growth, working through actual growth, on the fiscal aggregates.

4.39 The effect of the reduction in growth on borrowing is offset by the following factors:

- the adoption of a central forecast path. The March Budget receipts forecast was partly based on assumptions that were designed to add caution;
- the relative strength in receipts seen since the Budget. We assume that a portion of this is a temporary windfall which will be reversed in 2010-11. The remainder could represent greater underlying strength in the receipts base than assumed at the March Budget, and so raises expected receipts through the forecast; and
- the medium-term public sector current expenditure projections, which are around £4 billion lower than in the March Budget. Forecast current spending in 2010-11 is around £4.1 billion lower than in the March Budget, because of lower forecast social security spending, the removal of the previous margin for caution in the AME projections, and the inclusion of an estimate of fee income from the financial sector interventions. This reduces expenditure through the forecast period since from 2011-12 onwards the projections use the same nominal growth rates for total current expenditure as assumed in the March Budget.

Cyclically-adjusted net borrowing

4.40 As set out previously, forecasts of cyclically-adjusted aggregates are subject to particular uncertainty. On the pre-Budget basis, cyclically-adjusted borrowing falls from 8.8 per cent of GDP in 2009-10 to 2.8 per cent in 2014-15.[7] The decline in cyclically-adjusted borrowing is less sharp than the decline in headline PSNB. This is because part of the decline in PSNB is driven by our forecast of a recovery in economic growth, which does not reduce cyclically-adjusted borrowing.

4.41 Cyclically-adjusted net borrowing is now forecast to be higher than the March Budget throughout the forecast period, by 0.3 per cent to 0.8 per cent of GDP from 2010-11 onwards. The higher projection for cyclically-adjusted borrowing is primarily driven by the central assumption that there is less spare capacity than assumed in the March Budget, as described in further detail in Chapter 3 and Annex B. This implies that less borrowing is cyclical and so increases the projections of cyclically-adjusted borrowing.

[7] We have not made an assessment of the output gap in 2008-09 or earlier years. Figures for cyclically-adjusted net borrowing in that year are based on a mechanical extrapolation of trend output from HM Treasury's estimate in mid-2007 to our trend output estimate for the end of 2009.

Current budget

4.42 The deficit on the current budget falls from £106.4 billion in 2009-10 to £48 billion in 2014-15. Compared with the March Budget, changes to the forecasts of receipts and current expenditure lead to a reduction of £10 billion in the current budget deficit in 2010-11 and smaller reductions in subsequent years. The changes to the cyclically-adjusted current budget mirror those to cyclically-adjusted net borrowing.

Net debt

4.43 The high, albeit declining, levels of borrowing over the forecast period mean that PSND rises to 74.4 per cent of GDP in 2014-15. Changes in the forecast of PSND as a percentage of GDP are driven by changes to the expected net cash requirement and by changes to nominal GDP. Although the total net cash requirement over the forecast period is £32 billion lower than in the March Budget, PSND in 2014-15 is forecast to be only ½ per cent of GDP lower. This reflects changes in the level of nominal GDP, which is 1.2 per cent lower than in the March Budget.

Receipts

4.44 Table 4.6 sets out our central forecast for receipts and Table 4.7 shows changes since the March Budget. Forecasts for HM Revenue & Customs (HMRC) taxes have been produced by HMRC using their detailed models for each individual tax, while other taxes are forecast by the Treasury. The forecasts are based on our central economic forecast and we have made or agreed all key judgements.

Tax-by-tax analysis

Income tax and NICs

4.45 Receipts of PAYE and NICs were around £6 billion stronger in March and April than assumed in the March Budget forecast. The stronger receipts relate to February and March incomes and consequently reduced 2009-10 PSNB. The higher receipts are likely to reflect a number of factors. They include:

- stronger receipts from financial sector bonuses (up about 40 per cent on the previous year);
- a stronger than expected recovery in bonuses outside the financial sector;
- an improvement in the underlying tax base; and
- the effect of some taxpayers bringing forward taxable income ahead of changes in the tax system from the start of 2010-11 (the practice known as forestalling).

4.46 In particular, it is likely that there was a rise in the number of individuals exercising share options prior to the introduction of the 50 per cent rate of income tax on incomes above £150,000 and the restriction of the personal allowance for incomes over £100,000.

4.47 The key judgement in assessing 2010-11 PAYE and NIC receipts is the extent to which the stronger receipts since the Budget are assumed to persist. The forecast assumes that around 40 per cent of the higher receipts were brought forward from the rest of 2010-11 and 2011-12 and so receipts in those years will be lower on this account. Financial sector bonuses are assumed to rise broadly in line with financial sector profits. In 2010-11, income tax receipts are £3.9 billion above the March Budget forecast, reflecting the effect of financial and non-financial sector bonuses and forestalling. By 2014-15, income tax receipts are £1.6 billion below the March Budget forecast, reflecting changes in the composition of the economic forecast.

4.48 Earnings growth is assumed to remain weak in the near term, before gradually rising towards its trend rate by 2014-15. This means growth in wages and salaries (i.e. employment multiplied by earnings) is expected to grow substantially more slowly than overall growth in nominal GDP throughout the forecast period. The effective tax rate for PAYE and NICs[8] rises from 34.1 per cent in 2010-11 to 36.6 per cent by 2014-15, reflecting tax measures introduced by the previous Government such as the rise in National Insurance contributions as well as fiscal drag.

4.49 Self assessment receipts are expected to fall further in 2010-11, reflecting the fact that they relate to 2009-10 liabilities and incomes. Thereafter, self assessment receipts are expected to pick up strongly as both savings and dividend income recover from their substantial falls during the downturn. Measures enacted by the previous Government such as the 50 per cent rate of income tax and the restriction on tax relief on pension contributions for those on gross incomes above £150,000 also start to boost self assessment receipts from 2011-12.

Value added tax

4.50 VAT receipts in 2010-11 are expected to be £10.6 billion higher in 2010-11 than 2009-10, reflecting the reversal of the temporary VAT cut and the forecast recovery in nominal consumer expenditure, in part reflecting higher inflation. The judgement that VAT debt is likely to continue to fall as less new VAT debt is created and firms repay debts built up during the recession means that the VAT gap is forecast to fall in 2010-11 from 13.3 per cent to 12.6 per cent, which raises receipts further. Partially offsetting this are repayments relating to the judicial rulings, including the Fleming and Condé Nast cases which are estimated to total £3.2 billion in 2010-11.

4.51 The underlying VAT gap is assumed to remain flat from 2011-12 onwards, but growth in VAT receipts is held back by slow growth in the consumer spending and government elements of the VAT tax base. The percentage of consumer spending which is taxed at the standard rate of VAT is assumed to fall from 2011 onwards, reflecting the weak growth in spending on consumer durables, and this further reduces growth in receipts across the period.

4.52 Compared with the March Budget, the forecast is higher across the period, by £2.6 billion in 2010-11 and just under £2 billion in subsequent years. The main reason for higher VAT receipts is our judgement on the central path for the VAT gap, as set out in paragraphs 4.17 to 4.20. Lower central forecasts for consumer expenditure and spending on consumer durables partially offset this.

Corporation tax

4.53 Onshore corporation tax was particularly affected by the recession, with receipts falling by around a quarter in 2008-09 and 2009-10 from their 2007-08 level. The decline was most acute in the financial sector where receipts were down over 50 per cent from their pre-crisis level. However, the final quarterly instalment payments made by large companies in April 2010 on their 2009 profits were stronger than expected. We expect onshore corporation tax receipts to rise by around 17 per cent in 2010-11. This in part reflects the reversal of some factors that depressed net receipts in 2009-10, notably the ending of the enhanced capital allowances measure for 2009-10 and the fact that repayments are expected to fall back towards more normal levels. Repayments in 2009-10 were boosted by loss-making firms carrying back losses against recently paid tax. Receipts in 2010-11 will also be boosted by the resumption of profit growth in the non-oil, non-financial sector.

4.54 The economic forecast assumes that non-oil, non-financial profits will rise as a proportion of GDP over the forecast period, as the economy rebalances towards investment and exports.

[8] Class 1 National Insurance contributions. Effective tax rate calculated by dividing the PAYE and NIC1 receipts forecast by wages and salaries.

This is the key determinant of the rise in receipts to around 2.8 per cent of GDP by 2014-15. Financial sector profits are expected to recover to their 20-year average as a percentage of GDP towards the end of the forecast period. Even so, receipts from the financial sector are expected to remain below their pre-crisis peak throughout the forecast period. Compared to the March Budget, receipts are £4.0 billion higher by 2014-15, which is largely due to greater rebalancing toward corporate profits in the composition of the economy forecast.

UK oil and gas revenues

4.55 UK oil and gas revenues from offshore corporation tax and petroleum revenue tax (PRT) are expected to be £2.2 billion higher in 2010-11, compared with 2009-10. Oil prices are expected to average $74.8 a barrel in 2010, around $12.5 a barrel higher than in 2009. In addition, oil prices in sterling terms have been boosted by the depreciation of sterling against the dollar. This more than offsets the effect of declining oil and gas production and a rise in capital expenditure in the industry.

4.56 With oil prices assumed to move in line with prices implied by futures markets as of 25 May, prices are expected to rise gradually to around $81.8 a barrel by 2014-15. The effect of the rise in oil prices over the forecast period broadly offsets the effect of declining production, with DECC survey data indicating a fall in oil and gas production of around 5 per cent per year. Consequently UK oil and gas revenues are expected to remain at around £9 billion a year over the rest of the forecast period. Compared to the March Budget, the forecast is around £0.8 billion stronger by 2014-15, largely reflecting changes in the exchange rate.

Taxes on capital

4.57 Capital gains tax (CGT) receipts paid in a given year relate to gains realised in the previous year. Therefore the low levels of CGT in 2009-10 and 2010-11 largely relate to the period a year earlier when asset prices fell sharply compared to pre-crisis levels. The effect of low asset prices is exacerbated by the fact that CGT is levied on gains made at the point of sale rather than the sale price itself. Across the rest of the period CGT receipts growth is driven by residential property prices and equities. The forecast for CGT is lower than in the March Budget, mainly because of lower forecasts of equity prices and volumes and a lower volume of residential transactions.

4.58 Inheritance tax receipts are forecast to recover slowly from the fall recorded in 2009-10 associated with the recession, and will still be below their 2007-08 level in 2014-15. This is in part due to the continuing effect of the previous Government's measure on transferable tax-free allowances for married couples and civil partners. Compared to the March Budget, the forecast is lower in all years because of lower equity prices, partially offset by higher forecast house prices.

4.59 The stamp duty land tax (SDLT) forecast is driven by our judgements on the path of prices and transaction volumes for residential and commercial property, as set out in paragraphs 4.24 to 4.26. SDLT receipts are currently showing strong year-on-year growth, reflecting higher house prices and a rebound in property transactions from historically low levels in early 2009. Stamp taxes on shares grow at a moderate rate across the forecast period. Equity prices rise in line with nominal GDP, while equity volumes are assumed to remain broadly at their current levels with slight increases from 2012 onward. Compared to the March Budget, the forecast for total stamp duties is lower in all years because of lower equity prices and lower property transaction volumes.

Excise duties

4.60 The fuel duty forecast reflects both the pre-announced duty rises as well as prospects for the demand for fuel. In the near term, the demand for fuel is likely to be held back by subdued economic growth and the effect on pump prices from the higher sterling price for oil. With fuel

duty charged on a pence per litre basis, higher pump prices will reduce demand and hence receipts. Demand for fuel picks up as the economy recovers, although expected improvements in the average fuel efficiency of vehicles will constrain growth in receipts in the medium term.

4.61 The alcohol duty forecast is similar to that published in the March Budget. Total receipts are expected to grow at a moderate rate over the forecast period, reflecting the pre-announced duty rises combined with subdued overall consumer spending growth. The tobacco duty forecast is driven by pre-announced and forecast duty rates and an assumption on the underlying change in duty-paid clearances. The cautious assumption used by the previous Government was for an annual fall of 3 per cent, and in the March Budget even larger declines were forecast in 2010-11 and 2011-12. The assumption of a 3 per cent decline has proved cautious in the past, especially in 2009-10 when duty-paid clearances rose by 4.1 per cent. This is likely to be partly due to a fall in cross-border shopping reflecting the effect of the recession on travel abroad and the weaker exchange rate. Our central judgement is that duty paid clearances will fall by 2 per cent a year. In 2011-12 and 2012-13 we assume clearances will decline by 4 per cent a year when there may be a return towards past levels of cross-border shopping. Overall it is expected that tobacco revenues will grow slowly over the forecast period.

4.62 Overall excise duty receipts are broadly unchanged from the March Budget, with falls in the fuel duty forecast, main due to a higher sterling oil price, broadly balanced by increases in tobacco duties arising from the move to a central assumption on clearances.

Bank payroll tax

4.63 Bank payroll tax receipts are estimated to be £2.5 billion this year, £0.5 billion higher than the forecast in the March Budget. The increase is driven by the strength of bonus-related receipts in the last months of 2009-10 as described above in paragraph 4.45. Although the tax is levied on 2009-10 bonuses, the ONS has decided that in line with Eurostat guidelines the accrual point should be 2010-11, reflecting the date that the tax passed into law.

Other receipts

4.64 VAT refunds to central and local government are fiscally neutral as receipts are offset by a positive AME accounting adjustment. The key determinants of the forecast are local government procurement and investment, and central government procurement. The fall in receipts in 2009-10 and the forecast rebound in 2010-11 reflect the temporary impact of the VAT rate change under the previous Government.

4.65 Interest and dividend receipts from the private sector and overseas are forecast to reach £10.7 billion by 2014-15. The main economic determinants of interest and dividend receipts are short-term interest rates, which are assumed to move in line with market expectations. The interest and dividend receipts forecast beyond 2010-11 has fallen since the March Budget. This is due to a combination of a lower forecast for the path of interest rates, and a revaluation of stocks of government assets.

4.66 The council tax forecast for 2010-11 is based on the rate increases announced since the March Budget. The figures for 2011-12 onwards are based on the arithmetic average of council tax increases from 2008-09 to 2010-11. Receipts have been reduced since the March Budget since the actual rate increase for 2010-11 is lower than the previous assumption based on the average for 2007-08 to 2009-10. The lower 2010-11 increase also reduces the average rate increases for subsequent years. Since changes to council tax are broadly balanced by changes to locally financed expenditure, they have little material impact on the current balance or on net borrowing.

Table 4.6: Current receipts

	£ billion						
	Outturn	Estimate	Forecasts				
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
HM Revenue and Customs							
Income tax (gross of tax credits)[1]	153.4	145.6	150.3	159.8	173.1	185.4	199.0
of which: Pay as you earn (PAYE)	*128.5*	*122.9*	*130.1*	*136.8*	*142.8*	*151.9*	*162.4*
Self assessment	*22.5*	*21.7*	*21.5*	*24.0*	*29.5*	*32.1*	*34.6*
Income tax credits	-5.6	-5.6	-5.8	-6.1	-6.1	-6.1	-6.2
National insurance contributions	96.9	95.6	99.0	106.7	112.0	120.2	127.0
Value added tax	78.4	70.1	80.7	86.3	89.2	92.4	95.9
Corporation tax[2]	43.7	36.5	43.2	46.9	51.3	54.7	58.3
of which: Onshore	*33.4*	*30.9*	*36.1*	*39.7*	*43.7*	*46.9*	*50.7*
Offshore	*10.4*	*5.6*	*7.1*	*7.2*	*7.7*	*7.8*	*7.6*
Corporation tax credits[3]	-0.6	-0.7	-0.8	-0.8	-0.8	-0.8	-0.8
Petroleum revenue tax	2.6	0.9	1.6	1.7	1.6	1.5	1.3
Fuel duties	24.6	26.2	27.4	28.8	30.2	31.8	33.4
Capital gains tax	7.8	2.5	2.6	3.3	2.6	3.2	3.7
Inheritance tax	2.8	2.4	2.2	2.3	2.4	2.6	2.9
Stamp duty land tax	4.8	4.9	5.8	7.1	9.3	11.1	12.5
Stamp taxes on shares	3.2	2.9	3.2	3.2	3.4	3.7	3.9
Tobacco duties	8.2	8.8	9.4	9.4	9.4	9.6	9.8
Spirits duties	2.4	2.6	2.6	2.6	2.7	2.8	2.9
Wine duties	2.7	2.9	3.2	3.3	3.5	3.7	4.0
Beer and cider duties	3.4	3.5	3.7	3.8	3.9	4.0	4.1
Air passenger duty	1.9	1.9	2.3	2.9	3.1	3.4	3.6
Insurance premium tax	2.3	2.3	2.3	2.3	2.3	2.3	2.4
Temporary bank payroll tax	0.0	0.0	2.5	0.0	0.0	0.0	0.0
Other HMRC receipts[4]	6.1	5.9	6.4	6.8	7.1	7.3	7.5
Total HMRC	**439.1**	**409.2**	**441.8**	**470.3**	**500.3**	**532.7**	**565.1**
Vehicle excise duties	5.6	5.6	5.9	6.0	6.1	6.2	6.3
Business rates	22.9	24.3	24.8	26.1	26.7	27.8	29.0
Council tax	24.4	25.0	25.3	26.2	27.3	28.3	29.5
VAT refunds	12.0	11.2	13.8	13.8	14.1	14.3	14.5
Other taxes and royalties[5]	4.0	4.8	4.4	5.5	6.3	8.5	8.8
Net taxes and NICs	**507.9**	**480.1**	**515.9**	**547.9**	**580.6**	**617.8**	**653.3**
Accruals adjustments on taxes	-4.2	6.0	0.9	1.8	4.4	3.0	3.0
Less own resources contribution to EU budget	-5.1	-3.8	-4.8	-4.8	-5.0	-5.2	-5.4
Interest and dividends	7.7	3.8	4.6	5.5	7.5	9.2	10.7
Gross operating surplus	23.5	24.6	24.7	25.8	27.0	28.0	29.1
Other receipts[6]	4.2	4.6	5.1	5.3	5.5	5.9	6.2
Current receipts	**534.0**	**515.3**	**546.4**	**581.5**	**620.0**	**658.8**	**696.9**
Memo:							
Current receipts (per cent of GDP)	*37.2*	*36.6*	*37.0*	*37.8*	*38.3*	*38.5*	*38.7*
UK oil and gas revenues[7]	*12.9*	*6.5*	*8.7*	*8.9*	*9.3*	*9.3*	*8.9*

[1] *Income tax includes PAYE and Self Assessment receipts, and also includes tax on savings income and other minor income tax components.*

[2] *National Accounts measure, gross of enhanced and payable tax credits.*

[3] *Includes enhanced company tax credits.*

[4] *Consists of landfill tax, climate change levy, aggregates levy, betting and gaming duties and customs duties and levies.*

[5] *Includes EU ETS receipts and money paid into the National Lottery Distribution Fund.*

[6] *Includes TV licences and business rate payments by local authorities.*

[7] *Consists of offshore corporation tax and petroleum revenue tax.*

Table 4.7: Changes to current receipts since March Budget

	Changes since the March Budget (£ billion)						
	Outturn	Estimate	Forecasts				
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
HM Revenue and Customs							
Income tax (gross of tax credits)[1]	0.0	1.3	3.9	-0.2	0.2	-0.5	-1.6
Income tax credits	0.0	0.0	0.1	0.0	0.2	0.5	0.7
National insurance contributions	0.0	0.6	2.0	1.2	0.0	0.1	-0.2
Value added tax	0.0	0.1	2.6	1.8	1.8	1.9	1.9
Corporation tax[2]	0.0	0.4	1.1	0.7	2.2	3.6	4.7
of which: Onshore	*0.0*	*0.4*	*0.9*	*0.5*	*1.8*	*3.1*	*4.0*
Offshore	*0.0*	*0.0*	*0.2*	*0.3*	*0.5*	*0.5*	*0.7*
Corporation tax credits[3]	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Petroleum revenue tax	0.0	0.1	0.0	0.1	0.1	0.1	0.2
Fuel duties	0.0	0.0	-0.1	-0.2	-0.4	-0.5	-0.5
Capital gains tax	0.0	0.0	-0.1	0.3	-0.8	-0.6	-0.4
Inheritance tax	0.0	0.0	-0.1	-0.1	-0.2	-0.2	-0.3
Stamp duties	0.0	0.1	-0.8	-1.1	-1.0	-1.0	-1.2
Tobacco duties	0.0	0.0	0.6	0.6	0.5	0.6	0.7
Spirits duties	0.0	0.0	0.0	0.0	0.1	0.1	0.2
Wine duties	0.0	0.0	0.0	0.0	0.0	-0.1	-0.1
Beer and cider duties	0.0	0.0	0.1	0.0	0.0	0.0	-0.1
Air passenger duty	0.0	0.0	-0.1	0.0	0.0	0.0	-0.1
Insurance premium tax	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Temporary bank payroll tax	0.0	0.0	0.5	0.0	0.0	0.0	0.0
Other HMRC receipts[4]	0.0	0.0	0.3	0.2	0.3	0.2	0.3
Total HMRC	**0.0**	**2.7**	**10.0**	**3.3**	**3.1**	**4.2**	**4.2**
Vehicle excise duties	0.0	-0.1	-0.2	-0.2	-0.1	-0.1	-0.1
Business rates	0.0	0.6	0.1	0.4	0.4	0.3	0.2
Council tax	0.0	0.2	-0.5	-0.7	-1.0	-1.3	-1.6
VAT refunds	0.0	0.0	-0.3	-0.3	-0.5	-0.7	-1.0
Other taxes and royalties[5]	0.0	0.3	-0.2	0.0	-0.1	0.0	-0.4
Net taxes and NICs	**0.0**	**3.6**	**8.9**	**2.5**	**1.7**	**2.4**	**1.3**
Accruals adjustments on taxes	0.0	4.6	-3.0	-0.3	0.0	-0.1	-0.5
Less own resources contribution to EU budget	0.0	0.0	-0.1	-0.1	0.0	0.0	0.0
Interest and dividends	0.0	-0.4	0.2	-2.3	-2.1	-2.5	-1.9
Gross operating surplus	0.8	0.4	-0.1	-0.2	-0.3	-0.5	-0.6
Other receipts[6]	-0.4	-0.5	-0.2	-0.2	-0.2	-0.3	-0.2
Current receipts	**0.4**	**7.8**	**5.6**	**-0.5**	**-1.0**	**-1.0**	**-1.9**
Memo:							
Current receipts (per cent of GDP)	*0.1*	*0.5*	*0.1*	*-0.2*	*0.0*	*0.2*	*0.4*
UK oil and gas revenues[7]	*0.0*	*0.1*	*0.3*	*0.4*	*0.6*	*0.7*	*0.8*

[1] *Income tax includes PAYE and Self Assessment receipts, and also includes tax on savings income and other minor income tax components.*

[2] *National Accounts measure, gross of enhanced and payable tax credits.*

[3] *Includes enhanced company tax credits.*

[4] *Consists of landfill tax, climate change levy, aggregates levy, betting and gaming duties and customs duties and levies.*

[5] *Includes EU ETS receipts and money paid into the National Lottery Distribution Fund.*

[6] *Includes TV licences and business rate payments by local authorities.*

[7] *Consists of offshore corporation tax and petroleum revenue tax.*

Expenditure

4.67 Table 4.8 sets out the central projections for TME and its main Departmental Expenditure Limit (DEL) and Annually Managed Expenditure (AME) components.

4.68 DEL is spending which is allocated to departments at Spending Reviews through firm multi-year plans. The previous Government allocated current and capital DELs up to 2010-11 at the Spending Review in 2007. AME is spending, such as social security and debt interest, which has not been fixed by multi-year plans. Under the previous Government, a projection for AME was published for the years of the current spending review period. This projection was updated at each fiscal event in the light of the latest economic forecast and any AME policy announcements.

4.69 For the years after the end of the current Spending Review period in 2011-12 the previous Government did not publish DEL plans or AME projections. Instead, it published projections of total PSCE and total PSNI that were produced on the basis of a top-down assumption rather than through bottom-up forecasts.

4.70 Our forecast of expenditure in 2010-11 uses the previous Government's published DEL plans and our updated AME forecast. After 2010-11 there are no published DEL plans on which to base our forecasts for expenditure. Therefore, we have chosen to use the March Budget assumptions for public sector current expenditure (PSCE) and public sector net investment (PSNI) as the basis for our pre-Budget forecasts. Specifically, we assume that PSCE grows from our updated base at the same nominal rate as in the March Budget, and that PSNI remains at the same share of GDP as in the March Budget. [9]

4.71 These assumptions already imply a significant reduction in spending against a possible trajectory, in the absence of cuts, of departmental spending remaining constant in real terms. Memo lines have been added to Table 4.8 to illustrate what resource DEL (RDEL) and capital DEL (CDEL) would be if grown in line with general inflation in the economy.

4.72 Both PSCE and PSNI are split into DEL and AME components. We have produced central forecasts for current and capital AME on the basis of existing policy commitments and our central forecast for the economy. We have then derived current and capital DEL totals from 2011-12 onwards by subtracting the relevant AME forecast from the projections of PSCE or PSNI. These DELs do not represent the Government's plans for DEL from 2011-12 onwards, which have not yet been set.

Changes in TME since Budget 2010

4.73 In 2010-11, the forecast for TME is around £2.8 billion lower than at the March Budget. This is because of lower current AME projections due to lower central forecasts for social security, the removal of the AME margin, and the inclusion of financial sector fees, which are discussed further below. Other than classification changes, DEL plans in 2010-11 are consistent with the March Budget – in particular they do not include the effect of the Government's £6.2 billion spending cuts announced on 24 May.

[9] The March Budget set out that: *"[P]ublic sector current expenditure (excluding the additional time-limited expenditure announced in the 2009 Pre-Budget Report and all additional Budget expenditure) is projected to grow at 0.8 per cent per year on average in real terms from 2011-12 to 2014-15; and public sector net investment is projected to decrease to 1¼ per cent of GDP in 2013-14 and remain at that level in 2014-15."* (*Budget 2010*, HM Treasury, March 2010). This translated into nominal growth for PSCE of 2.9 per cent, 3.0 per cent, 3.1 per cent and 3.1 per cent for 2011-12 to 2014-15.

Effect of Clear Line of Sight classification change

4.74 The Treasury has implemented changes to the way it measures departmental budgets as part of the Alignment (or "Clear Line of Sight") project, and we have reflected these changes in our presentation of the breakdown of public spending. As set out in *Alignment (Clear Line of Sight) Project*,[10] the project aims to simplify the Government's financial reporting to Parliament by better aligning budgets, Estimates and resource accounts. These technical classification changes have the effect of reducing DEL in all years. However, the adjustments have no impact on the purchasing power of departments or the planned level of expenditure. The reduction in DEL budgets, which is largely a consequence of removing transactions previously recorded as non-cash from the RDEL boundary, is offset by an increase in AME accounting adjustments of the same amount, and as such there is no overall effect on TME or any fiscal aggregates. Table 4.9 shows the effect on public spending aggregates in 2008-09, 2009-10 and 2010-11 of implementing these classification changes.

[10] *Alignment (Clear Line of Sight) Project*, HM Treasury, March 2009.

Table 4.8: Total Managed Expenditure

	£ billion						
	Outturn	Estimate			Forecasts		
	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15
CURRENT EXPENDITURE							
Resource Departmental Expenditure Limits (Pre-CLOS)	*320.7*	*343.1*	*355.2*				
Clear Line of Sight (CLOS) adjustment	*-7.2*	*-8.4*	*-9.1*				
Resource Departmental Expenditure Limits (Post-CLOS)[1]	**313.5**	**334.8**	**346.1**	**348.6**	**350.7**	**352.7**	**353.2**
Resource Annually Managed Expenditure	**251.1**	**267.3**	**293.8**	**309.6**	**327.1**	**346.0**	**367.4**
of which:							
Social security benefits[2]	149.7	163.7	169.3	175.0	179.2	184.5	192.1
Tax credits[2]	19.9	22.9	23.9	24.9	26.1	27.3	29.1
Net public service pensions[3]	3.1	3.1	4.0	5.5	6.2	8.0	9.4
National Lottery	1.0	0.9	0.9	0.9	1.0	0.7	0.7
BBC domestic services	3.4	3.5	3.7	3.8	3.9	4.1	4.2
Other departmental expenditure	1.3	0.0	-0.5	2.1	2.1	2.2	2.3
Net expenditure transfers to EU institutions	3.1	6.4	8.3	8.3	8.4	9.4	10.3
Locally-financed expenditure	26.8	26.4	27.6	27.6	28.7	29.8	31.0
Central government gross debt interest	30.5	30.9	42.1	46.1	54.2	60.6	67.2
Accounting adjustments (Pre-CLOS)	*5.2*	*1.1*	*5.2*				
Clear Line of Sight adjustment	*7.2*	*8.4*	*9.1*				
Accounting adjustments (Post-CLOS)	12.4	9.5	14.3	15.4	17.2	19.5	21.3
Public sector current expenditure	**564.5**	**602.1**	**639.8**	**658.2**	**677.8**	**698.7**	**720.6**
CAPITAL EXPENDITURE							
Capital Departmental Expenditure Limits (Pre-CLOS)	*48.2*	*56.5*	*53.1*				
Clear Line of Sight adjustment	*0.3*	*0.1*	*0.0*				
Capital Departmental Expenditure Limits (Post-CLOS)[1]	**48.5**	**56.6**	**53.1**	**42.9**	**41.1**	**38.5**	**40.3**
Capital Annually Managed Expenditure	**17.4**	**12.7**	**8.2**	**7.8**	**7.3**	**6.7**	**6.6**
of which:							
National Lottery	0.5	1.0	0.9	0.7	0.6	0.6	0.6
Locally-financed expenditure	7.5	6.3	5.4	4.8	4.6	4.4	4.4
Public corporations' own-financed capital expenditure	7.7	6.8	7.4	7.4	7.3	7.3	7.3
Central government grants to public sector banks	9.4	4.7	0.0	0.0	0.0	0.0	0.0
Other capital expenditure	0.2	1.3	2.4	2.1	2.1	2.1	2.1
Accounting adjustments (Pre-CLOS)	*-7.7*	*-7.2*	*-7.9*				
CLOS adjustment	*-0.3*	*-0.1*	*0.0*				
Accounting adjustments (Post-CLOS)	-8.0	-7.3	-7.9	-7.2	-7.4	-7.7	-7.9
Public sector gross investment	**65.9**	**69.3**	**61.3**	**50.7**	**48.4**	**45.2**	**46.8**
Less public sector depreciation	-18.7	-19.6	-20.6	-21.5	-22.5	-23.4	-24.3
Public sector net investment	**47.2**	**49.7**	**40.7**	**29.2**	**25.9**	**21.9**	**22.5**
TOTAL MANAGED EXPENDITURE[4]	**630.4**	**671.4**	**701.1**	**708.9**	**726.2**	**744.0**	**767.4**
of which:							
Departmental Expenditure Limits[1]	350.4	378.0	384.8	377.1	377.5	376.9	379.1
Annually Managed Expenditure	280.1	293.3	316.3	331.8	348.7	367.1	388.4
Memo:							
Total Managed Expenditure (per cent of GDP)	44.0	47.7	47.5	46.1	44.8	43.5	42.6
RDEL if grown in line with general economy inflation			346.1	351.5	359.7	369.4	379.4
CDEL if grown in line with general economy inflation			53.1	53.9	55.2	56.7	58.2

Note: See paragraph 4.74 for a description of the Clear Line of Sight changes.

[1] Implied DEL numbers from 2011-12 onwards. Calculated as the difference between Resource AME and PSCE in the case of Resource DEL, and between Capital AME and PSNI in the case of Capital DEL.

[2] For 2008-09, child allowances in Income Support and Jobseekers' Allowance have been included in the tax credits line and excluded from the social security benefits line.

[3] Net public service pensions expenditure is reported on a National Accounts basis.

[4] Total Managed Expenditure is equal to the sum of public sector current expenditure, public sector net investment, and public sector depreciation.

Table 4.9: Changes to Total Managed Expenditure since March Budget

	Changes since the March Budget (£ billion)		
	Outturn 2008-09	Estimate 2009-10	Forecast 2010-11
CURRENT EXPENDITURE			
Resource Departmental Expenditure Limits[1]	**-0.4**	**-0.4**	**0.1**
Resource Annually Managed Expenditure	**1.3**	**-2.2**	**-4.3**
of which:			
Social security benefits	0.0	0.0	-0.7
Tax credits	0.0	0.0	0.3
Net public service pensions	0.0	-0.3	-0.3
National Lottery	0.0	0.0	0.0
BBC domestic services	0.0	0.0	0.0
Other departmental expenditure	0.0	0.1	-1.7
Net expenditure transfers to EU institutions	0.0	0.0	0.7
Locally-financed expenditure	0.0	-0.4	-0.5
Central government gross debt interest	0.0	0.0	0.6
AME margin	0.0	0.0	-0.9
Accounting adjustments[1]	1.3	-1.6	-1.6
Public sector current expenditure	**0.8**	**-2.5**	**-4.1**
CAPITAL EXPENDITURE			
Capital Departmental Expenditure Limits[1]	**0.1**	**-0.1**	**0.1**
Capital Annually Managed Expenditure	**-0.1**	**-0.1**	**1.2**
of which:			
National Lottery	0.0	0.0	0.0
Locally-financed expenditure	0.0	-0.2	0.3
Public corporations' own-financed capital expenditure	0.0	-0.2	-0.2
Central government grants to public sector banks	0.0	0.2	0.0
Other capital expenditure	0.0	-0.5	-0.1
AME margin	0.0	0.0	-0.1
Accounting adjustments[1]	-0.1	0.8	1.3
Public sector gross investment	**0.0**	**-0.2**	**1.3**
Less public sector depreciation	0.0	-0.1	-0.1
Public sector net investment	**0.0**	**-0.3**	**1.2**
TOTAL MANAGED EXPENDITURE	**0.8**	**-2.7**	**-2.8**
of which:			
Departmental Expenditure Limits[1]	-0.4	-0.4	0.0
Annually Managed Expenditure	1.2	-2.4	-2.8
Memo: Total Managed Expenditure (per cent of GDP)	*0.1*	*-0.3*	*-0.6*

[1] *Changes calculated excluding Clear Line of Sight changes.*

Annually Managed Expenditure

4.75 Table 4.8 sets out projections of AME to 2014-15 based on the policy commitments made by the previous Government. The AME projections are subject to considerable uncertainty, mainly in relation to their key economic determinants. For example, the path of unemployment is critical for the social security forecast, and debt interest payments depend heavily on interest rates. The AME forecasts in Table 4.8 are in each case the central projection and there are significant uncertainties and risks attached to each.

Social security

4.76 The main components of the social security forecast have been produced by the Department of Work and Pensions (DWP) using their detailed models for each individual benefit. The forecasts are based on our central economic forecast and on central judgements we have agreed with DWP on the various factors affecting the level of benefit take-up and related issues. Table 4.8 shows the forecast for total social security spending.

4.77 The key economic determinants of the social security forecast are claimant count unemployment, ROSSI and average earnings. ROSSI is the index of inflation used to uprate most working-age benefits, while from 2012 state pensions will be uprated in line with average earnings.

4.78 Social security spending rose sharply in 2008-09 and 2009-10, by an estimated 5.3 per cent and 7.3 per cent in real terms, driven primarily by the significant increase in claimant count unemployment in this period, demographic change and above-inflation uprating of benefits. Our forecast assumes that the claimant count falls by around 0.4 million over the forecast period as the economy recovers. This reduces social security spending in 2010-11 by around £0.9 billion compared to the March Budget forecast, which assumed a flat claimant count projection. It also reduces the growth in social security spending over the medium term, although this is partly offset by increases in the short-term forecasts for inflation which increase the costs of indexation in 2011-12 and all subsequent years. On an approximate ready-reckoner basis, a change in the claimant count of 100,000 is equal to a change of around £0.5 billion in social security payments.

4.79 Overall real growth in social security spending from 2010-11 averages 1 per cent a year, with growth in pensioner spending the key determinant, given the re-linking of the basic state pension to earnings growth.

Tax credits

4.80 The Child and Working Tax credits forecast has been produced by HMRC on the basis of our central economic forecast and agreed judgements. The key economic determinants of the forecast are RPI inflation, claimant count unemployment and average earnings.

4.81 Child and Working Tax credits expenditure rises during the forecast period. This is based on assumptions about the up-rating of the tax credits elements, the level and persistence of income falls following from the recession, and increases in take-up levels for both in- and out-of-work recipients due to population and childcare growth assumptions. Provisional outturn figures for 2009-10 are in line with the March Budget estimates but the forecast for 2010-11 is slightly higher because of new data on the split of expenditure between in-work, out-of-work and debts in 2009-10 and the subsequent effect on future years' forecast.

4.82 Tax credits expenditure is classified as negative tax where the receipt of tax credits does not completely offset the income tax paid by the recipient. It is classified as AME when the recipient pays no net tax as a result of receiving tax credits. This split has a neutral effect on the public finances, but is an important determinant of the AME estimates. During the economic

downturn, tax credit claimants experienced a reduction in household incomes. This led both to an increase in tax credit entitlement and a reduction in tax liabilities. These two factors reduce the proportion of tax credit entitlement attributable to negative tax.

4.83 In addition, the freezing of the family element (which is paid to families with higher incomes) compared to yearly increases in the value of other tax credit elements, has contributed to the reduction in the proportion of tax credits entitlement attributable to negative tax.

4.84 The negative tax element of tax credits stays broadly flat at around £6 billion a year over the forecast period, while the AME component rises from £23 billion in 2009-10 to £29 billion in 2014-15.

Public service pensions

4.85 The net public service pensions expenditure forecast is measured on a National Accounts basis, and measures benefits paid less contributions received by central government pay-as-you-go public service pension schemes. Chapter 5 includes a discussion of public sector pension liabilities.

4.86 The forecasts of receipts to pension schemes from pension contributions are based on assumptions about the growth in the wage bill of employees and contribution rates. Our assumptions for growth in wage bills are consistent with our overall assumptions for the implied future path of DELs in this forecast, though they do not represent the Government's plans for DEL for 2011-12 onwards. Current contribution rates are assumed to increase from 2012-13 onwards to raise £1 billion a year extra income on account of policy agreed at the 2005 Public Services Forum by the previous Government on cap and share provisions.

4.87 The gross expenditure forecast is based on the demographics of each individual pension scheme, reflecting both the demographics for existing pensioners and the demographics of the workforce. This means expenditure rises steadily across the forecast period as the age profile of each scheme's membership changes. The main economic determinant of gross pensions expenditure is RPI inflation (used to uprate benefits paid).

4.88 The assumptions used mean that receipts to pay-as-you-go schemes rise slightly across the forecast period. However, this effect is more than offset by the changes in demographics which cause net public service pensions expenditure to increase year-on-year, by an average of 20 per cent in real terms from 2009-10 to 2014-15.

EU contributions

4.89 The forecast for net expenditure transfers to EU institutions is based on a comprehensive and detailed analysis of the many different factors affecting the different types of contribution the UK makes to the EU. The forecast for net expenditure transfers in 2010-11 has increased by £0.7 billion compared to the March Budget. This mainly reflects new information from the European Commission regarding the UK's relative economic performance and the value of the UK abatement. In the medium term, the size of net expenditure transfers is forecast to increase from £8.3 billion in 2010-11 to £10.3 billion in 2014-15. This reflects planned increases in the EU budget and increases in the size of the UK's contribution, both of which were agreed at the 2007-2013 EU Budget negotiations. Forecasts beyond 2013 are particularly uncertain, as negotiation of the budget envelope for 2014-20 has not yet begun.

Locally financed expenditure

4.90 Locally financed expenditure consists mainly of local authority self-financed expenditure (LASFE) and Scottish Government spending financed by local taxation. The main determinant of LASFE is council tax receipts. Consistent with the previous approach we project council tax for 2011-12 onwards on the basis of a stylised assumption using the average council tax increase in the three years from 2008-09 to 2010-11. This approach is also applied to council tax receipts, so these assumptions are broadly neutral for the fiscal aggregates.

4.91 Other factors affecting current LASFE include local authorities' use of reserves and their interest receipts. Other factors affecting capital LASFE include private sector contributions to capital projects and prudential borrowing for investment.[11] All these factors are subject to significant uncertainties as they depend on decisions taken in individual local authorities. Consistent with the previous approach our central forecasts use available outturn data on expenditure in 2009-10 and a projection of local authority budgets taking into account known spending pressures. On the basis of the latest available data, the 2010-11 projection is slightly lower than the March Budget for current LASFE, because of lower council tax increases, and slightly higher for capital LASFE, because of an increased forecast for English prudential borrowing.

Central government debt interest

4.92 The key factors affecting the debt interest forecast are:

- the existing stock of debt and the forecast of the financing requirement for future years;
- the types of debt instrument expected to be used to meet the financing requirement; and
- the forecast of interest rates and RPI inflation, which determine the forecast of expected payment on these debt instruments.

4.93 The forecast for the financing requirement depends on our forecast of the central government net cash requirement, and uses financing assumptions consistent with the March Budget financing remit for the Debt Management Office (DMO). This includes adjustments for the redemptions of gilts, buy-backs of existing gilts, the financing for official reserves (the Government's foreign currency holdings) and any planned short-term financing adjustment.

4.94 Our projections on the composition of issuance between conventional and index-linked gilts and the maturity of these instruments are also based on the DMO's published remit and medium-term strategy. These proportions have been kept the same as in the March Budget remit for the purposes of this pre-Budget forecast. The debt interest forecast uses a weighted average of short, medium and long dated gilt rates, with the weights derived from the DMO remit.

4.95 The key determinants of payments on these instruments are market interest rates and RPI inflation. Interest rates are assumed to move in line with market expectations as explained in paragraph 4.29. RPI inflation has a significant effect on the accrued uplift on index-linked gilts. Assumptions are also made for the level of issuance of Treasury Bills and National Savings instruments.

[11] Borrowing against revenue for capital purposes. This is subject to that borrowing being assessed as affordable against the terms of a prudential code established by the accounting profession (CIPFA).

4.96 On the basis of these assumptions, central government debt interest as a percentage of GDP increases over the forecast period from 2.9 per cent in 2010-11, to 3.7 per cent in 2014-15. The key determinant of this rise is the sustained high levels of borrowing over this period. The average annual growth rate in debt interest payments from 2010-11 to 2014-15 is 12 per cent. Compared with the March Budget, debt interest payments are expected to be £0.6 billion higher in 2010-11 reflecting higher inflation, which raises accrued uplift payable on index-linked gilts.

4.97 The debt interest forecast is subject to particular uncertainty around the projections of interest rates and inflation. Gilt rates have been particularly volatile in recent months. The approximate ready-reckoner effect on gross debt interest spending of a permanent 1 percentage point rise in gilt rates (and short-term rates) throughout the forecast period would be an increase of around £9 billion by 2014-15.

Fees and losses associated with the financial interventions

4.98 The forecast of 'other departmental expenditure' for 2010-11 includes around £2.5 billion of fees associated with the interventions introduced in 2009 to stabilise the financial sector, such as the Asset Protection Scheme and Credit Guarantee Scheme. These fees score as negative current expenditure in National Accounts and are around £1.5 billion higher than the March Budget, which excluded any fees not already received from the forecast. We assume there will be no payouts on any losses from the interventions in 2010-11. From 2011-12 onwards given the large uncertainties in this area we do not include in the forecast any income from fees or share sales, or any estimate of possible loss payouts on the interventions. Capital AME includes the cost of capital grants to the public sector banks, net of fees classified as capital in National Accounts, in 2008-09 and 2009-10, which is broadly unchanged from the March Budget.

AME margin

4.99 The previous Government included an 'AME margin' of £1 billion in its projections for 2010-11 (split £0.9 billion current and £0.1 billion capital). This was intended to provide a cautious margin against the risk of higher than expected AME spending. We have not included an AME margin in our central forecast.

Accounting adjustments

4.100 The accounting adjustments reconcile the departmental budgeting aggregates (DEL and AME) with the National Accounts definition of TME. They remove items that score in DEL and AME but not TME, and add in items included in TME but not in DEL or AME. The main change in the accounting adjustments since the March Budget is due to the Clear Line of Sight classification change, described above in paragraph 4.74. The current accounting adjustments are lower in 2009-10, compared with 2008-09 or 2010-11, before the Clear Line of Sight changes, largely because of the profile of defence capital spending classified as 'single use military equipment' (SUME). SUME is included in the current accounting adjustments (and removed in the capital accounting adjustments) because it is classified as current expenditure in National Accounts.

Financial Transactions

4.101 The forecast of PSND is driven by the profile of the public sector net cash requirement (PSNCR), which is the cash equivalent of PSNB. Financial transactions represent the difference between the PSNCR and PSNB.

4.102 These transactions arise either from timing differences or from financial transactions involving cash. Timing differences arise as net borrowing is an accruals measure whereas the PSNCR is cash-based. The measures are reconciled via accruals adjustments. Exchanges of financial assets involving cash do not score in PSNB, because they do not change the net liabilities position of the public sector, but the cash impact is captured in the PSNCR.

4.103 The methods we have used to forecast financial transactions are consistent with those used in the March Budget:

- the relatively small accruals adjustments on receipts and expenditure are produced by the modelling of the public finances more generally;
- for regular financial transactions where the size and timing of the transaction are reasonably certain – for example on the repayment of loans to the financial sector and student loans payments – an estimate based on the latest available information is included in the forecast; and
- potential financial transactions where firm plans are not in place are not included in the forecast.

4.104 We have not made any substantial changes to the financial transactions forecast compared with the March Budget. As set out in Table 4.3 the PSNCR generally closely follows the PSNB. In certain years the two measures diverge where large cash transactions are forecast. This is most noticeable in 2011-12 and 2013-14 and in both years is attributable to the redemption of index-linked gilts.

4.105 There are large uncertainties in the forecast of the PSNCR. Uncertainties affecting the estimates of PSNB discussed earlier in the chapter all feed through to the PSNCR. In addition there can be significant one-off financial transactions which have very large cash implications.

5 Fiscal sustainability

5.1 The Office for Budget Responsibility (OBR) will enhance the information and analysis on which fiscal policy is made, in particular, ensuring it is informed by the best available information on the liabilities and longer–term fiscal pressures faced by the Government. Central to this is an assessment of the sustainability of the public finances.

5.2 The Chancellor has asked us to undertake an assessment of the public sector balance sheet and fiscal sustainability, including assessing the impact of ageing, public service pensions and PFI contracts, as set out in our Terms of Reference.

5.3 The first part of this chapter discusses the concept of fiscal sustainability, and approaches to assessing it, both backward- and forward-looking. The second part sets out existing information on public sector liabilities and likely future fiscal pressures, including the fiscal impact of demographic change, obligations arising out of the Private Finance Initiative (PFI), public service pensions, and contingent liabilities.

5.4 Our initial assessment is that a great deal of piecemeal information is available in many of these areas, but that a more transparent and systematic analysis of these obligations and their implications for fiscal sustainability would help inform policy-making. The final part of this chapter outlines the next steps in achieving this.

Defining fiscal sustainability

5.5 There is no single, widely accepted, definition of 'fiscal sustainability'. One simple approach is to link sustainability to some fiscal target, for example, a pre-determined ratio for public debt as a share of GDP. Under this approach, a fiscal policy is 'sustainable' if, given reasonable assumptions, the government can maintain its current policies indefinitely while continuing to stabilise the debt-GDP ratio at the desired level.

5.6 Stabilising the debt-GDP ratio can be achieved by running an appropriately-sized primary budget balance. The primary budget balance is net government borrowing excluding net debt interest costs. The precise size of the primary deficit or surplus required to stabilise the debt ratio will depend upon the level of public debt, the growth rate of the economy and the cost of government borrowing.

5.7 It is possible to calculate the primary balance (*PB/GDP*) required to stabilise the debt ratio at a given target level (*D/GDP*) using the following formula, where r is the effective interest rate on government debt, and g is the rate of GDP growth:

$$\frac{PB}{GDP} = (r - g)\frac{D}{GDP}$$

5.8 This formula shows that the primary balance necessary to stabilise debt at a given level depends crucially on the gap between the effective interest rate on government debt and the rate of economic growth, and that the effect of any difference between the two is magnified by the level of existing debt. If the cost of borrowing faced by the government is equal to GDP

growth, then growth will cause nominal income to rise in line with nominal interest payments. In this case, a balanced primary budget (i.e. tax receipts equal to non-interest spending) will be sufficient to stabilise the debt ratio.

5.9 But if the interest rate is higher than the growth rate, a surplus in the primary balance will be necessary to stabilise the debt ratio. The higher the interest rate is relative to growth, the higher is the necessary surplus.

5.10 The forecast set out in Chapter 4 of this document projects a primary deficit in 2010-11 of 7.9 per cent of GDP, and public sector net debt of 62.2 per cent of GDP. Given the projected differential between the effective interest rate on government borrowing and GDP growth through the forecast period, a primary deficit of this size would result in an unsustainable rise in public debt. Although the primary deficit is expected to fall over the forecast period, it is still projected to be positive in 2014-15.

5.11 But focusing solely on this aspect of sustainability is simplistic. In practice, there are a number of dimensions to the meaning of the term.

Further dimensions of sustainability

5.12 A more comprehensive view of sustainability goes beyond a simple debt target to consider a number of dimensions. They include:

- solvency – does the government have the ability to pay its financial obligations?
- growth – does the fiscal position support or hinder economic growth?
- stability – can the government meet its future obligations without increasing the tax burden?
- fairness – can the government pay for current obligations without shifting the cost to future generations?[1]
- robustness to shocks – can fiscal policy absorb economic shocks without public debt reaching unsustainable levels?

5.13 Viewing sustainability across multiple dimensions reflects concerns that governments have accumulated long-term liabilities that do not appear in current budgets or balance sheets but may disadvantage future generations or threaten sustainability when they become due. A simple assessment of solvency measured against current debt would not capture such liabilities, although it can be illuminating in suggesting how the other dimensions may be affected.

Measures of government obligations

5.14 The multiple dimensions of sustainability set out above can all be related to the position of the public finances at a given point in time, particularly the level of public debt. Keeping public debt at a low level can support the creditworthiness of the government and its ability to raise debt finance, support growth by reducing the 'crowding out' of private activity, reduce upward pressure on the tax burden by keeping debt service costs low, lessen the transfer of resources across the generations which can arise from government borrowing, and provide fiscal 'space' to absorb future shocks.

5.15 Policy-makers use a variety of measures to capture different aspects of public debt.[2] They can differ in their treatment of such matters as which government assets are offset against

[1] For a discussion of the above dimensions see *Sustainable Budget Policy – Concepts & Approaches,* OECD, 2005.

[2] For a detailed accounting description of public debt concepts see *Economic and Labour Market Review: Volume 3 No.7,* Office for National Statistics, July 2009.

which liabilities, and which range of holdings across government and the public sector are included. There is therefore some question as to the appropriate debt measure that should be used to assess the path of public debt in any sustainability analysis.

5.16 All debt measures are predominantly backward-looking, in that they relate to events or transactions that have happened in the past. Accruals-based balance sheets incorporate some future payments, but still have inherent limitations as a measure of long-term sustainability as they only recognise liabilities arising out of past actions, not future obligations arising out of current policy.[3] In particular, such balance sheets only include explicit liabilities, but many government obligations are embedded in expectations of how it will behave in future.

5.17 Hence, comprehensive sustainability analysis requires an assessment of future liabilities that will be incurred in the future, and must also take account of future revenues. While this approach is fundamental to a comprehensive assessment of sustainability, it does highlight the extreme uncertainty in such an assessment.[4]

5.18 Box 5.A gives a breakdown of some of the more technical, forward-looking, indicators that can be used to assess sustainability. These indicators rely on a projection of the primary balance, which incorporates future revenues and expenditure that would occur under current policy. It is important that this should take account of the different dimensions of sustainability. Simply assessing solvency over time is a weak criterion, since it requires only that adjustments to bring policy back on track occur at some point in the future. Given the Government's right to tax and (not) spend, credible changes in these variables can always be assumed to make the problem of insolvency disappear. But markets are unlikely to be impressed by promises that are unsupported by the track record of policy-makers.

Box 5.A: Technical fiscal sustainability indicators.

There are several technical indicators of fiscal sustainability that stem from a forward-looking approach, and build on the sustainability concept developed in paragraph 5.7. There is no comprehensive indicator of sustainability, and all have strengths and weaknesses.

One such indicator is the fiscal gap. It is defined as the permanent spending decrease or revenue increase that would be necessary to ensure a specified debt-to-GDP constraint is met at the end of a projection horizon. It obviously depends on the initial and desired target ratios and the time horizon, but it will largely be driven by the forward-looking projected primary balance.

Another indicator of interest is the inter-temporal budget constraint (IBC). This states that all current and future revenue streams should be sufficient to cover all current and future spending streams and today's debt. If current and future revenues are insufficient, the extent of the imbalance is called the 'inter-temporal budget gap' (IBG). This represents the amount of fiscal tightening that would be required to meet the IBC.

5.19 We believe that a comprehensive analysis of fiscal sustainability needs to account for the dimensions and issues discussed so far. To do this, we need a full understanding of public sector liabilities and longer-term fiscal pressures.

[3] For example, whilst the accruals-based balance sheet of the Whole of Government Accounts (WGA) would give an indication of future unfunded pension liabilities for those currently or previously in public service, there is no assessment of the need to pay future public servants a pension. This is discussed further in the next section.

[4] For example, the fan charts in Chapters 3 and 4 indicate the high level of uncertainty over the forecast period, which is only a fraction of the time considered in most long-term fiscal projections.

Existing information on public sector liabilities and longer-term fiscal pressures

5.20 Given the variety of conceptual approaches to sustainability, a key principle for good government should be transparency. This applies particularly with respect to liabilities which are currently off-balance sheet. This section sets out existing information on key public sector liabilities and likely future pressures on public spending and revenues, discusses why these matter for fiscal sustainability, and identifies how we can further improve our understanding and analysis of them.[5]

5.21 These liabilities and fiscal pressures include:

- an ageing population, with demographic trends putting upward pressure on health care and pension spending. The annual impact of demographic change on the public finances is projected to amount to almost 4 per cent of GDP by 2049-50;
- Private Finance Initiative (PFI) contracts, representing a high profile example of a pre-commitment of future expenditure. The total estimated unitary charges payable under PFI for 2010-11 are £7.8 billion. As of the end of 2009-10, the capital cost of signed PFI projects was approximately £56 billion, of which approximately £43 billion was off-balance sheet;
- unfunded public service pension liabilities, in terms of accounting are the largest example by far of an obligation arising from events now and in the past. The last Government Actuary's Department estimate of this liability, published in December 2009, was £770 billion. In addition to these liabilities, there is a long-term overall deficit in the funded Local Government Pension Scheme which is effectively a liability underwritten by taxpayers; and
- contingent liabilities, examples of which include nuclear decommissioning and guarantees provided to the banking sector.

Ageing pressures

5.22 The percentage of the UK population aged 65 and over increased slightly from 15 per cent in 1983 to 16 per cent in 2008. Over the same period, the percentage of the population aged 16 and under decreased from 21 per cent to 19 per cent. This trend is projected to accelerate. By 2033, 23 per cent of the population will be aged 65 and over, compared to 18 per cent aged 16 or younger.

5.23 The ageing of the population is a demographic and social issue. But it is also relevant to the position of the public finances: directly, by affecting public spending and tax receipts, and indirectly, through its impact on economic growth.

5.24 Age groups differ in the extent to which they contribute to tax receipts and consume public services. Stylised age profiles illustrate how separate items of revenue and spending are distributed over a representative individual's lifetime.[6] If all such items are summed over a lifetime, it is apparent that large spending items (such as health and pensions) occur outside working years. An increasingly old demographic structure therefore can have implications for fiscal sustainability.

[5] For an in-depth discussion of government financial liabilities beyond public sector net debt see *Government financial liabilities beyond public sector debt* in the *Economic & Labour Market Review, Volume 3 No.7,* Office for National Statistics, July 2009.
[6] For a discussion of age profiles see Box 2.A of the *2009 Long-term public finance report*, HM Treasury.

5.25 A detailed description of how long-term fiscal projections can be constructed can be found in the Treasury's *Long-term public finance report*. One approach to long-term projections uses a 'bottom-up' method to illustrate demographic pressures on individual areas of public spending. These can then be aggregated to arrive at a projection for the total fiscal impact of demographic change. Because of the great uncertainty over population projections and the sensitivity to underlying assumptions, these projections should be seen as only indicative.[7]

5.26 In the UK, on unchanged policies, population ageing and the retirement of the 'baby boom' generation is projected to lead to increased spending on health, long-term care and state pensions, with some offset from reduced education spending. In twenty years time, annual state pensions and long-term care spending are each projected to be around ½ per cent of GDP higher than their level in 2009-10 (the base year of the last published projections), and health spending will be almost 1½ per cent of GDP higher. Total spending on these three areas of expenditure is projected to be almost 2½ per cent of GDP higher.

Table 5.1: Projections for age-related expenditure (per cent of GDP)

	2009-10	2019-20	2029-30	2039-40	2049-50
Health	8.0	8.5	9.3	10.0	10.3
Long-term care	1.2	1.4	1.7	1.9	2.1
Public service pensions	1.8	1.9	1.9	1.8	1.7
State pensions	5.5	5.3	5.9	6.5	6.5
Education	6.0	5.9	6.0	5.8	5.7
Total	**22.5**	**23.0**	**24.8**	**26.1**	**26.3**

5.27 Relative to current levels of age-related spending, projections generated by the Treasury's long-term public finances model suggest that the total annual impact of demographic change on the public finances will amount to over 2 per cent of GDP by 2029-30, around 3½ per cent of GDP by 2039-40 and almost 4 per cent of GDP by 2049-50.

5.28 Although the OBR has not yet had the opportunity to study the Treasury's long-term projections in any detail, we judge that the methodology used is reasonable and in line with that used by other bodies such as the International Monetary Fund and the European Commission. Future projections could incorporate more up-to-date age profiles, as well as reflect changes to forecast spending projections and possible changes to the retirement age.

PFI and other long-term contracts

5.29 PFI provides a way of funding major capital investments, without immediate recourse to the public purse. Private consortia, usually involving large construction firms, are contracted to design, build, and in some cases manage new projects. Contracts agreed under PFI generally represent long-term commitments – subject to adequate private sector performance – to (i) repay the capital cost of a given project and (ii) have it operated to a given standard.

5.30 PFI therefore represents a long-term commitment to future expenditure, part of which relates to paying for the original capital cost of an asset and part of which relates to the ongoing maintenance and renewal of the asset. It should be noted that all capital cost investments in built infrastructure are sunk costs regardless of how they are financed.[8] However, PFI can limit future budgetary flexibility relative to conventional procurement with respect to maintenance. PFI contractually commits government to maintenance of a given building at a pre-determined rate. Were the same building to be conventionally procured rather than through

[7] Spending projections will also be subject to revisions after the forthcoming Spending Review.

[8] That is, paying for the capital cost of a conventionally procured building is also a commitment in the sense that government uses tax receipts or issues gilts to fund the construction cost.

PFI, government could choose when to spend money on the maintenance of the asset. The offsetting benefit of such reduced flexibility is an explicit recognition of the future costs associated with any given investment and a commitment to maintain assets in good order. Deferred or reduced maintenance on non-PFI assets could create higher long-term costs, reduced service capacity or intergenerational effects that would also need to be considered in the context of sustainability.

5.31 Depending on perspective, the commitment made under PFI can be viewed either as (i) a long-term rental of the assets, or (ii) purchase of the asset matched by a deferred payment, in addition to a commitment to pay for the operation, maintenance and renewal of the asset. Government reports on both bases – departmental resource accounts for 2009-10 will treat PFI contracts according to International Financial Reporting Standards (IFRS) which place them on-balance sheet; while National Accounts treat PFI according to European System of Accounts 1995 (ESA95) standards which place a majority off-balance sheet.[9] In National Accounts, a PFI contract has to be on either the public or private sector balance sheets – it cannot be on both.

5.32 The Treasury currently collects and publishes data on PFI on its website and at each Budget and Pre-Budget Report. It formally commissions two PFI data collection exercises each year, which update the information currently held on all PFI contracts and also information on projects that have been added to the pipeline.

5.33 The total estimated unitary charges payable under PFI for 2010-11 are £7.8 billion.[10] As of the end of 2009-10, the capital cost of signed PFI projects was approximately £56 billion, of which approximately £13 billion (23 per cent) is on-balance sheet and counted within departmental budgets.[11] The remaining £43 billion (77 per cent) is not. To the extent that PFI contracts are on-balance sheet, they will affect published figures for public borrowing and debt, and therefore a simple analysis of fiscal sustainability. But, as the discussion above indicates, off-balance sheet PFI contracts represent a commitment to future spending and are therefore also relevant to sustainability.

5.34 There are many other contracts beyond PFI in the public sector where Government is committed to varying degrees of future expenditure. As such, consideration should also be given to which contracts (if any) should be included in an assessment of public sector liabilities. Examples include multi-year leases, IT contracts and cleaning contracts - in essence, any contract that extends beyond one accounting period.

5.35 We expect the Treasury to continue to publish data on PFI at regular intervals. Publication of the Whole of Government Accounts (WGA) in spring 2011 should also increase transparency by recording PFI on an IFRS basis. Some assessment of the effect of these liabilities, irrespective of their balance sheet treatment, will be needed.

[9] This assessment is based on whether it is the private or the public sector that holds the risks of ownership, specifically, if the private sector holds the construction risk, plus either the availability or demand risk, then the public sector will not treat the asset as on its balance sheet.
[10] http://www.hm-treasury.gov.uk/ppp_pfi_stats.htm.
[11] Excluding Metronet (no longer classified as a Public Private Partnership).

Public service pension liabilities

5.36 Public service pensions are occupational pension schemes that form part of the remuneration of current public sector employees but represent a long-term liability to make future payments to pensioners. Occupational pension schemes may collect contributions and use them to build up a fund of assets to match the liabilities of the scheme (the net present value of future payments to pensioners, in respect of rights accrued to date) to ensure they are sustainable in the long term. When pensions come to be paid, they are financed from the fund. This approach is operated in the private sector and in parts of the public sector, notably by the Local Government Pension Scheme.

5.37 But unlike private sector employers, government can be considered 'permanent' and has the power to tax. This characteristic of governments, as opposed to private corporations, is the basis for running most UK public service pension schemes with no fund, on a pay-as-you-go (PAYG) basis. With no fund, a scheme relies on the sponsoring employer (i.e. ultimately the government) to supply cash as needed and any contributions collected can be used to help to finance today's cashflows to pensioners.

5.38 Although the PAYG system has some advantages for government in terms of fiscal management, for example in avoiding the kind of investment risk faced by funded schemes, the lack of a fund to back liabilities imparts a level of fiscal inflexibility regarding future shocks to revenue. For example, a negative GDP growth shock could mean that the cost of paying current pension obligations displaces other expenditure and thereby causes distortions.

5.39 Net annual public expenditure on the PAYG public service pension schemes equals the amount spent on paying cash benefits to pensioners of those schemes less any contributions received.[12] The cost of this expenditure is covered by government revenue, as it falls due. The most recent published data on projected costs were presented in the Treasury's *2009 Long-term public finance report*, with a projected annual cost of around 2 per cent of GDP over the next fifty years. This assumes the schemes remain as now and reflects the costs of new members who will join during that period.

5.40 It is also possible to use published resource accounts in central and local government to estimate the total PAYG public service pension liability (the net present value of future payments to pensioners, in respect of rights accrued to date). Using this mechanism the Government Actuary's Department (GAD) has estimated the liability at £770 billion as at 31 March 2008. The size of this figure depends on assumptions about a number of factors, such as the mortality of current and future pensioners within the schemes, as well as a discount rate in order to express future cash flows as a single figure in today's terms. The main schemes covered are those for the NHS, teachers, civil service, armed forces, police, firefighters, judiciary and the UK Atomic Energy Authority.

5.41 In terms of the annual accruing liability in these schemes, the most appropriate measure is probably the current service cost. Current service cost represents the amount that discounted pension scheme liabilities will increase over the year by reason of the additional year's service of active members of the pension scheme. The current service cost for all PAYG public service pension schemes was around £26 billion for the year ending 31 March 2008.

5.42 We will continue to assess public service pensions, drawing on the work of GAD and the Office for National Statistics (ONS), and we expect the publication of the WGA to establish a figure for the total public sector liability, covering both unfunded and funded schemes.

[12] Chapter 4 forecasts AME costs for most public sector unfunded schemes, which are projected to rise significantly over the forecast period.

Contingent Liabilities

5.43 A contingent liability is an obligation activated by a discrete event, which may or may not occur, but which could potentially be material to fiscal sustainability. Despite the uncertainty over their occurrence and timing, the potential for large increases in the direct liabilities of the government mean they should be accounted for. Parliament has a right to know what liabilities the government takes on, and for which it will in future be asked to provide support through Estimates. Provisions (payments for liabilities that are probable and can be estimated) and guarantees represent two ways that contingent liabilities can be recognised in the main accounts.

5.44 There is a very wide range of contingent liabilities.[13] For example those incurred from government interventions in the financial sector range from liabilities from guarantees to specific nationalised institutions, to liabilities arising from sector-wide liquidity support. Beyond the financial sector, contingent liabilities can range from guaranteeing the minimum return on pension funds to nuclear decommissioning. The impact on sustainability is complex.

5.45 Explicit contingent liabilities are currently reported to Parliament in Departmental Estimates, and shown in departmental resource accounts. Many are still unquantifiable. For some of the larger contingent liabilities, such as those taken on in response to the financial crisis (for example the Asset Protection Scheme and the Special Liquidity Scheme) additional details have been published by the Treasury.

5.46 We understand how difficult it can be to give a precise quantification of contingent liabilities. It will be important to continue to assess whether there are better ways for the government to increase transparency in this area.

Next Steps

5.47 The discussion above sets out some of the core issues involved in assessing fiscal sustainability. It also brings together a discussion of the Government's key liabilities and long-term fiscal pressures, including the fiscal impact of demographic change, obligations arising from PFI and public service pensions, and contingent liabilities.

5.48 Our initial assessment is that a great deal of piecemeal information is available in many areas, but that a more transparent and systematic analysis of public sector obligations and their implications for fiscal sustainability would help to inform policy-making. It could build on publications such as the *Long-term public finances report*, which provided a significant degree of information on some public sector liabilities and future fiscal pressures.

5.49 More transparency will, in part, be achieved by the publication of WGA, provisionally set for the Spring of 2011, and by forthcoming work by the ONS on the public sector balance sheet, covering 'conventional' liabilities and assets, financial interventions, public sector pension liabilities (both for state pensions and public service schemes), and PFI. Other joint work between the ONS and the National Institute for Economic and Social Research on generational accounts, an indicator of intergenerational fairness, should also aid analysis of this aspect of sustainability.

[13] For a more detailed accounting definition of contingent liabilities and the spectrum of risk see *Government financial liabilities beyond public sector debt* in the *ONS Economic & Labour Market Review, Volume 3 No.7*, July 2009.

5.50 But we believe that the permanent OBR also has an important role to play, by:

- promoting the transparent and coherent provision of information on public sector liabilities and longer-term fiscal pressures, including drawing on the work of government departments and other bodies to highlight any gaps in information; and
- providing a comprehensive and periodic analysis of the implications of these liabilities for fiscal sustainability, to promote understanding of fiscal pressures and allow the Government to take these into account when setting policy.

5.51 The permanent OBR should continue to assess the scale of government liabilities and their fiscal and economic impact, through its own analysis and through commentary on relevant work produced across government and elsewhere, to increase transparency and inform fiscal policy.

A Construction of fan charts

A.1 The uncertainty about the outcome of a variable – for example GDP growth or public borrowing – can formally be represented by a probability distribution. For both the economic and fiscal outlook, we believe that the risks around our central forecast are balanced, such that upside errors are as likely as downside errors. In other words, the forecast is a median forecast. The probability distribution shows the range of possible outcomes around this median forecast.

A.2 We do not know with any certainty what the spread of this distribution is. For example, we do not know exactly how much weight we should attach to large errors relative to smaller ones. However, while quantifying the distribution can never be exact, it can illustrate the uncertainty around any forecast.

A.3 We could take one of two possible approaches to quantifying uncertainty at this stage. The first is to choose parameters that reflect our subjective view of the distribution of risks. This has the advantage of flexibility but it may be difficult to explain how the parameters have been chosen. The second, which is the approach we have taken, uses the distribution of past forecast errors made by the Treasury to quantify the probability distribution around our forecasts. This has its drawbacks, since the past can only ever be an imperfect guide to the future. But it provides a clear, transparent and objective method of quantifying the degree of uncertainty. And while our forecasting process may differ from that which generated these errors, this approach recognises the great uncertainty surrounding all forecasts of the economy and public finances.

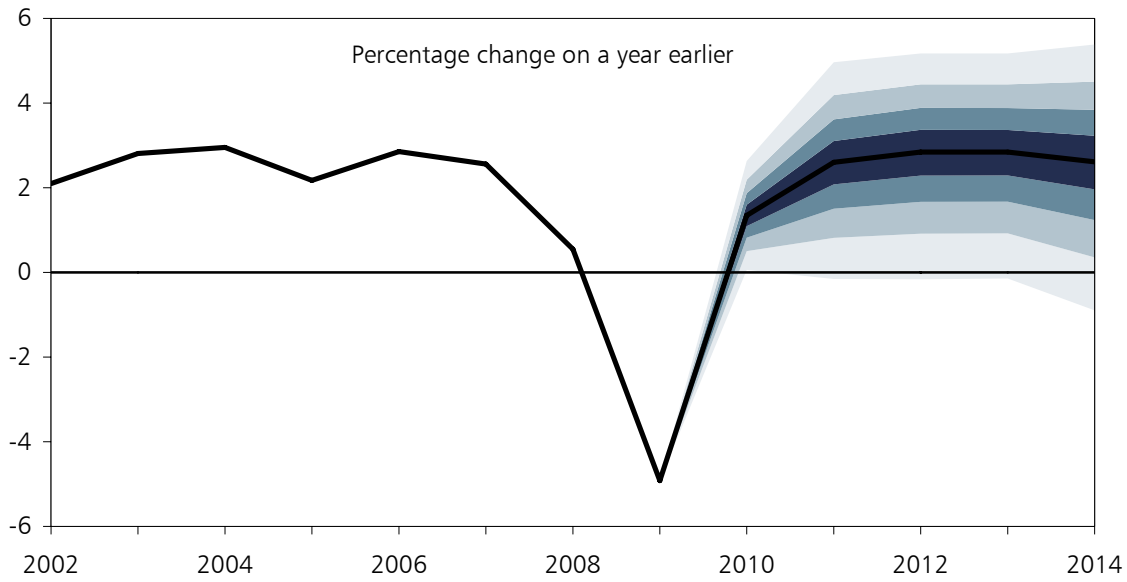
Economy forecast fan charts

A.4 The forecast for the economy, described in Chapter 3, takes the form of a probability distribution illustrated in a 'fan chart', shown in Chart A.1. We have constructed this probability distribution around the median forecast. We have then used data from past forecasting errors made by the Treasury to illustrate the likely scale of uncertainty around that forecast in the fan chart.

A.5 In the fan chart the central, median, GDP growth forecast is shown in black. The range of risks surrounding the central projection is illustrated through probability bands; each band represents 10 per cent of the probability distribution.[1] The distribution suggests that the probability of growth in 2010 being within one percentage point of our central forecast (i.e.¼ per cent and 2¼ per cent) is 70 per cent. The probability of growth being within one percentage point of our central forecast in 2011 (i.e. between 1½ per cent and 3½ per cent) falls to below 40 per cent and to around 30 per cent in 2014.

[1] The top and bottom 10 per cent of the distribution are not shown in the chart.

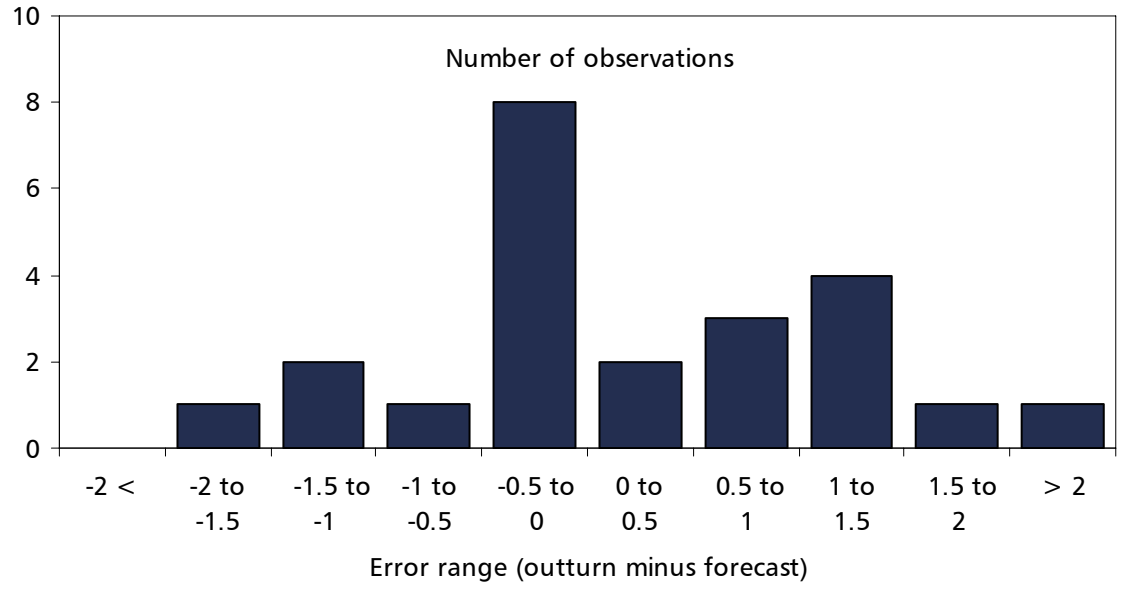
Chart A.1: GDP growth fan chart



Distribution of past forecast errors

A.6 The data for the distribution of past forecast errors are generated using the Treasury's spring forecasts for calendar year GDP growth from 1987 onward.[2] The chart below illustrates the frequency distribution of these errors for the in-year forecast for GDP growth, and shows that these errors (outturn minus forecast) have been concentrated fairly close to zero, with a roughly even spread of errors on the upside and downside.

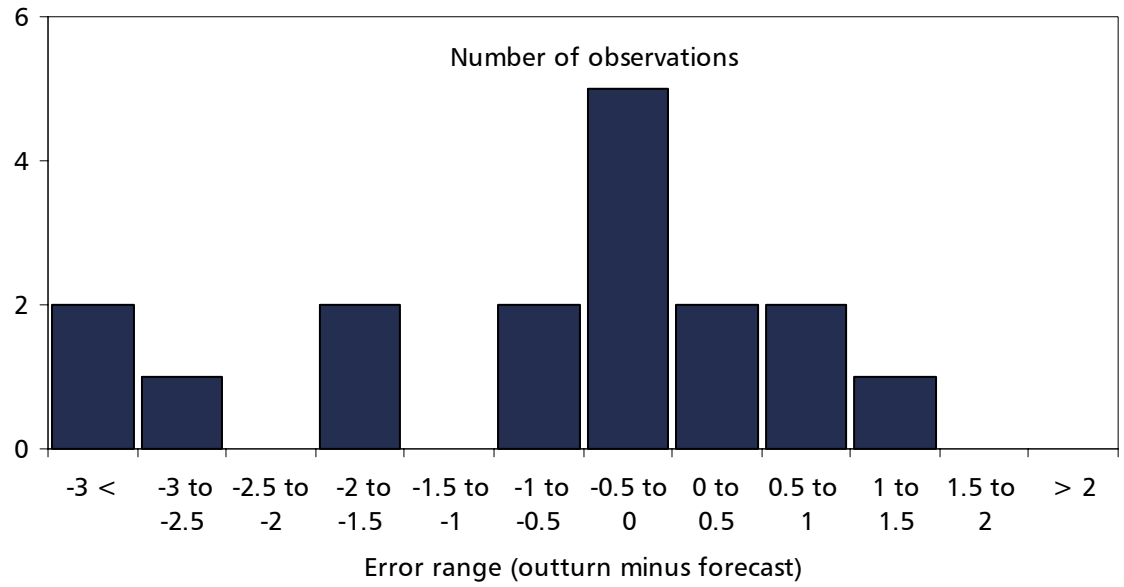
Chart A.2: In-year GDP growth forecast errors (percentage points)



[2] Until 1998, these related to forecasts for GDP at factor cost.

A.7 For forecasts of economic growth further into the future, the distribution of errors is not even. While errors remain concentrated close to zero, forecast errors where the outturn has been lower than forecast tend to be larger than errors where outturn GDP growth has been higher than forecast. This reflects the distribution of actual growth, with the negative deviation from average growth rates experienced during recessions being much greater than the positive deviation experienced during upswings. As recessions are by their nature difficult to forecast, this feature of the distribution of actual data carries over into the distribution of forecast errors. This is illustrated in the chart of three-year ahead GDP growth forecast errors below. It is worth noting that there are fewer observations on which to base the analysis for the longer forecast horizons of three years and above.

Chart A.3: Three-year ahead GDP growth forecast errors (percentage points)



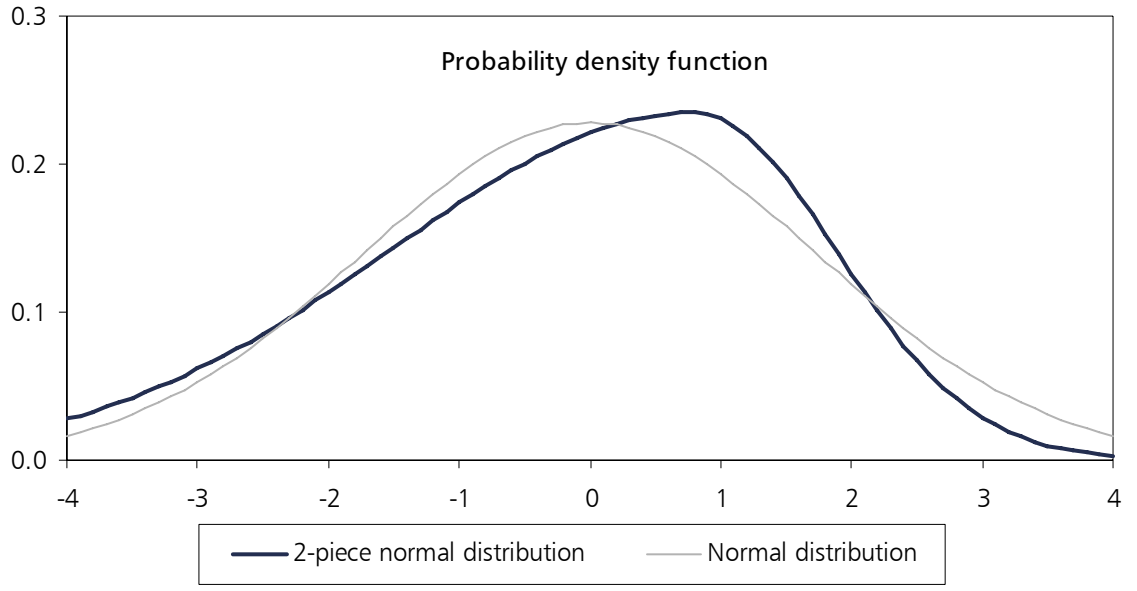
A.8 Beyond the current year, statistical tests suggest that this disparity in the errors – with downside errors being larger than upside ones - is significant. It implies that past errors for medium-term economic growth have not been normally distributed in a classic bell-shaped curve, but instead are skewed on the downside. This does not imply that over-forecasting economic growth has been significantly more likely than under-forecasting it, but that when the economy has been over-forecast the errors have tended to be larger.

Construction of the probability distribution for the fan chart

A.9 The fan chart for the forecast of future economic growth displays this skew of risks. There is an equal chance that growth will be above or below our central view, but the expectation is that errors on the downside will be larger than errors on the upside. To create the fan chart we have used a '2-piece normal' distribution, centred on the median forecast presented in Chapter 3. This is a distribution used by the Bank of England[3] and other institutions in their economy forecasts. The distribution is illustrated in Chart A.4, with the normal probability distribution for comparison.

[3] For further details see '*The Inflation Report projections: understanding the fan chart*', Bank of England Quarterly Bulletin, February 1998.

Chart A.4: Illustrative comparison of the 2-piece and normal probability density functions



A.10 We have used the standard deviation of past forecast errors to illustrate the likely range of uncertainty (which determines the width of the fan chart) and the mean of those forecast errors as the basis for the degree of skew in the distribution (i.e. the extent to which downside forecast errors are likely to be larger than upside errors).

Table A.1: Annual spring GDP forecast errors since 1987

	Current year	One-year ahead	Two-years ahead	Three-years ahead	Four-years ahead
Mean error	0.3	-0.5	-0.9	-0.9	-1.0
Standard deviation	1.0	2.0	2.1	2.1	2.5

Fiscal forecast fan charts

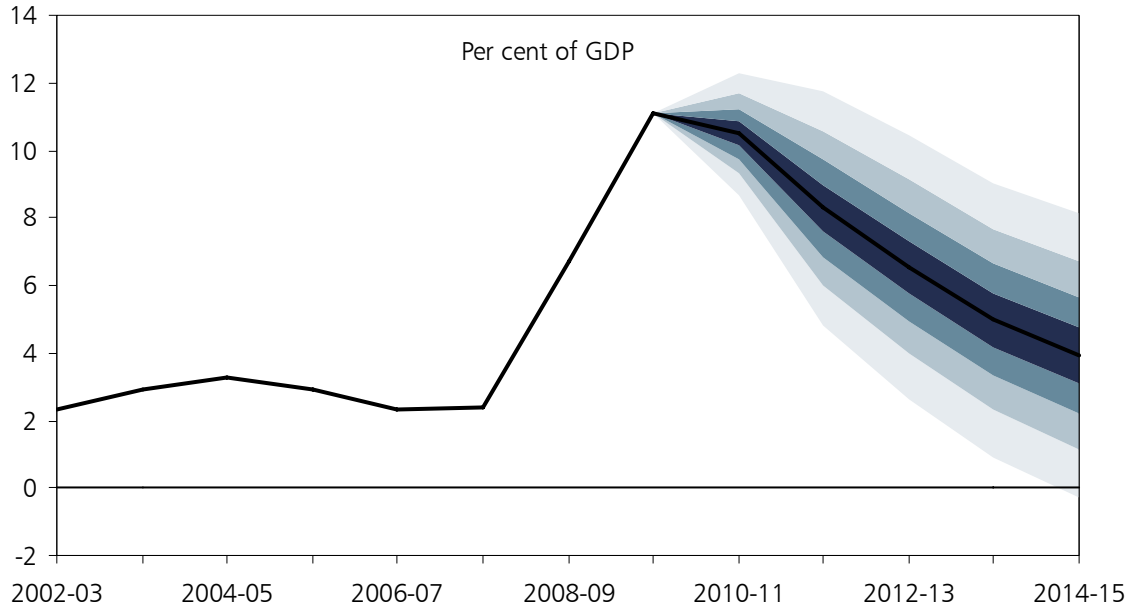
A.11 The forecast for the fiscal position, set out in Chapter 4, also takes the form of a probability distribution fan chart, for public sector net borrowing (PSNB), shown in Chart A.5. We have centred the fan chart on our central, median view of prospects for the public finances, which is based on a detailed forecast of revenues, expenditure and our median forecast for the economy. We have again used data from past forecasting errors made by the Treasury to illustrate the likely scale of uncertainty around that forecast.

A.12 Chart A.5 shows our forecast of PSNB from 2010-11 to 2014-15 in the form of a fan chart. The chart shows our central, median, forecast for PSNB – the solid black line – and the probability of outcomes deviating from that forecast, based on the distribution of past forecast errors. The successive pairs of lighter shaded areas represent 10 per cent probability bands, implying that there is an 80 per cent probability that the actual outturn will lie within the range captured by the lightest band shown in the chart. [4]

[4] The top and bottom 10 per cent bands are not shown on the chart.

A.13 The distribution shows that the probability of PSNB in 2010-11 being within one percentage point of our central forecast (i.e. between 9.5 per cent and 11.5 per cent) is around 50 per cent. The probability of PSNB being within one percentage point of our central forecast in 2011-12 (i.e. between 7.3 per cent and 9.3 per cent) falls to around 30 per cent and to around 20 per cent in 2014-15. The chart shows that there is also a 50 per cent probability of borrowing being 3.9 per cent of GDP or lower in 2014-15.

Chart A.5: Public sector net borrowing fan chart



Analysing past fiscal forecasting errors

A.14 There are three potential sources of fiscal forecasting error:

- economic forecasting error: forecasts for spending and tax revenues depend on the forecast for growth and the composition of that growth. This category therefore includes differences in the public finance projections that can be attributed to differences between outturn and forecast for the macroeconomic determinants that include the tax base;
- policy error: policy announced after the publication of a forecast will affect the outturn in subsequent years. This category includes any differences in the public finance projections that can be attributed to policy changes such as tax rates or spending; and
- fiscal forecasting error: a variety of other factors including modelling errors, such as those relating to effective tax rates, and the impact of classification changes, including changes in definition and statistical treatment.

A.15 In analysing forecasting errors to illustrate the level of uncertainty around the forecast, and in assessing the resulting probability of meeting a certain fiscal target in future, there is an argument for basing the probability distribution on data adjusted for policy changes. That would in theory allow a clearer demonstration of the risks to achieving the Government's targets on an unchanged policy basis, by removing the policy error from past forecast errors. Intuitively, in the medium term we would expect policy adjustment of past errors to widen the observed

probability distribution. This is because policy changes are more likely to be used to correct deviations in fiscal outcomes from forecast, so that the final observed fiscal error is smaller. However at shorter time horizons the opposite may be the case, for example if the Government pursues counter-cyclical fiscal policies.

A.16 It is not straightforward to produce a policy-adjusted series for fiscal forecasting errors over a sufficient forecast horizon to inform the fan chart. Data separating changes in spending plans into changes as a result of forecasting errors and changes as a result of policy responses are not readily available for a sufficient number of observations. Creating a series would require making significant assumptions that could potentially distort the results, and make the construction of the fan charts less transparent. On tax, while there are data on the expected cost of policy changes set out in each Budget, the number of years over which policies are costed do not always match the borrowing forecast horizon, making the adjustment incomplete, and the costings themselves may incorporate errors.

A.17 If we adjust data on past forecast errors for the effects of tax policy changes, using Budget policy costings, the effect on the results is minimal. It is difficult to draw strong conclusions from this, as the effect of incorporating spending policy changes may be more significant. However, in the absence of a robust methodology for adjusting spending forecast errors over a sufficient time series, and in the interests of transparency, we have chosen to base the fan charts on an unadjusted series of past forecasting errors. That may imply that the range of uncertainty in our forecast of unchanged policies is greater than we have illustrated.

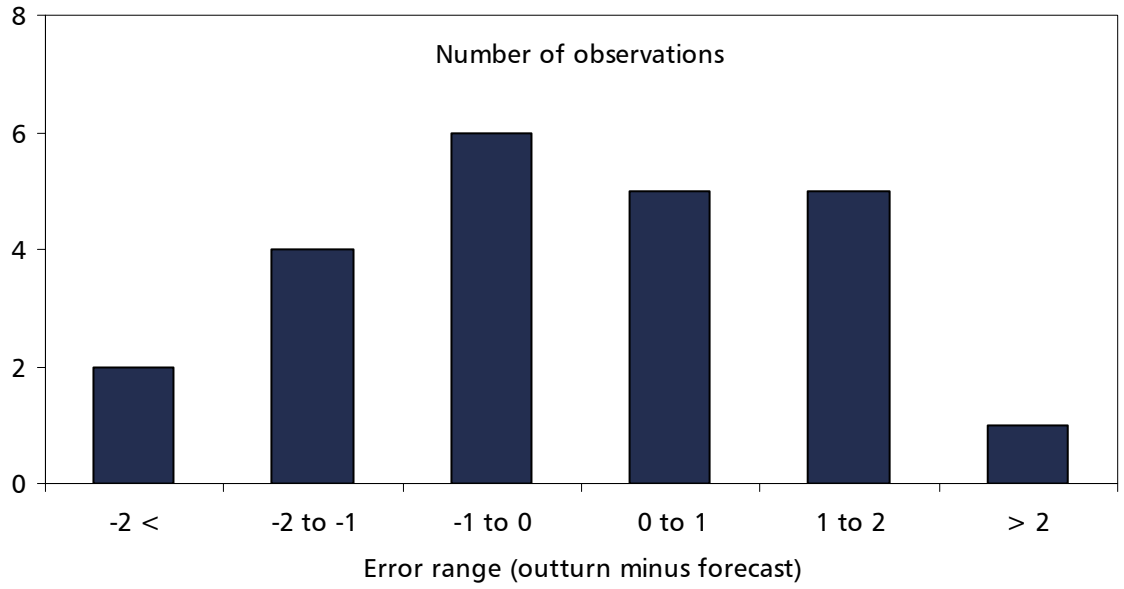
Distribution of past errors

A.18 As with the data used to produce the GDP growth fan chart, we have calculated public borrowing forecast errors[5] back to 1987, using the Treasury's spring forecasts. There are some inconsistencies in using past forecasts for borrowing to quantify the level of uncertainty around the forecast. Over time governments have changed the statistic by which they measure the level of borrowing. Moreover, the way in which governments have approached forecasting has varied over time. For example, since 1998, forecasts have been explicitly based on a number of assumptions designed to introduce caution. As a result, a distribution based on errors in those forecasts may not be consistent with our central forecast. However, we believe this distribution of errors will give a reasonable illustration of the uncertainty related to our own forecasts.

A.19 Chart A.6 illustrates the distribution of errors for the fiscal-year ahead borrowing forecast. The observed distribution of one-year ahead forecast errors is broadly consistent with these errors being normally distributed around zero. The average error is 0.0 and the standard deviation is 1.4.

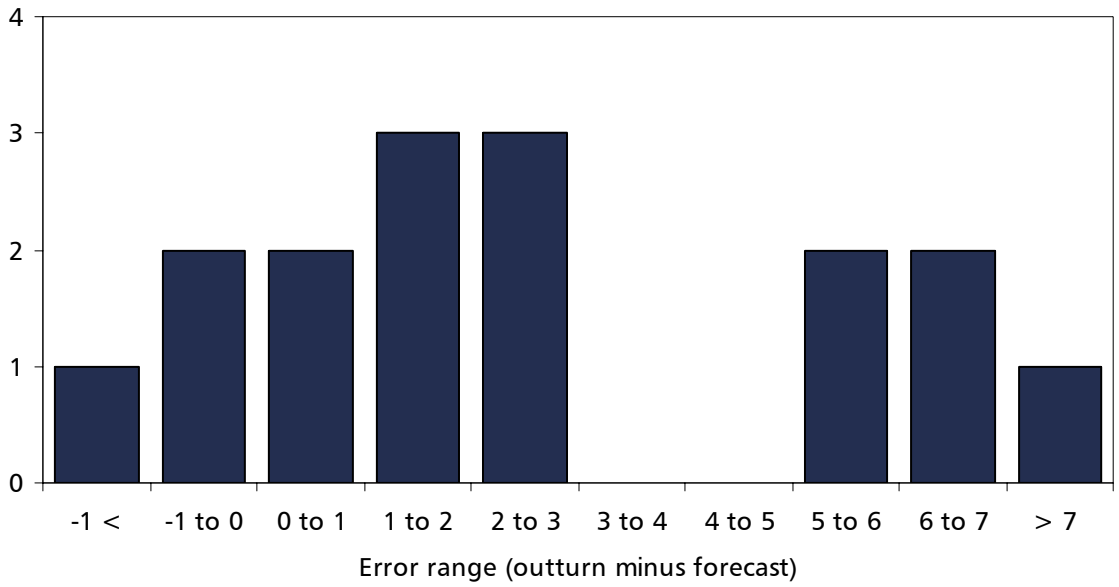
[5] Errors are nominal errors normalised for latest nominal GDP estimates.

Chart A.6: One-year ahead forecast errors for borrowing (per cent of GDP)



A.20 We have performed the same statistical tests on the data for both normality and bias as on the data on economy forecast errors. Unlike the economy forecast errors, the tests cannot reject a symmetrical distribution. However there is some evidence of serial correlation, whereby an error in one year is likely to lead to an error in the same direction in the following year, and sample bias, which indicates that the average mean error is not equal to zero, in the forecasts at longer time horizons (three years and beyond). This can be seen in Chart A.7, showing four-year ahead borrowing forecast errors. The mean, median and mode of the four-year ahead distribution are all above zero, implying that the forecast was on average optimistic.

Chart A.7: Four-year ahead forecast errors for borrowing (per cent of GDP)



Construction of the probability distribution for the fan chart

A.21 To produce the fan charts of the probability distribution around the net borrowing forecast, we have assumed that the distribution of errors is symmetrical and that our best view is the centre of the distribution.

A.22 We judge that it is reasonable to assume that in the future the average error on our forecast will be zero, as we have sought to balance risks on the upside and the downside. Given that the economic growth fan chart exhibits risks skewed to the downside, there are some reasons to expect the distribution of errors around the central view of the fiscal forecast to be skewed. However, the data we are using on fiscal forecast errors do not support that expectation. Therefore, for the sake of transparency and simplicity we have used a normal distribution. This is the same approach that has been adopted by other institutions that produce probability distributions for fiscal forecasts, including, for example, the United States Congressional Budget Office.

A.23 As with the economic forecast probability distribution, we would expect the amount of uncertainty over the projection to increase the further into the future we attempt to forecast. We have therefore made the further assumption that the standard deviation of the four-year ahead data is the midpoint between the three year ahead and five-year ahead standard deviation, to show a gradual increase in the level of uncertainty over the forecast horizon. The data, which are unavoidably based on a small sample size, show a smaller standard deviation for the four-year ahead forecast than for the three-year ahead.

Table A.2: Standard deviation of spring borrowing forecast errors since 1987

	One-year ahead	Two-years ahead	Three-years ahead	Four-years ahead	Five-years ahead
Standard deviation	1.4	2.7	3.1	3.2	3.3

B Potential growth and the output gap

B.1 The economy's trend or potential rate of growth is the rate at which the economy can grow on a sustained basis without exerting upward or downward pressure on inflation. Trend output is a key consideration in assessing the outlook for growth as the economy can be expected to move back towards its trend level over time. An estimate of trend output will also provide an estimate of the output gap (the gap between actual and trend output – and hence the amount of spare capacity in the economy). The output gap is used to identify the structural and cyclical components of the budget deficit/surplus and to provide an indication of inflationary pressure.

B.2 The March Budget recognised that the financial crisis had lowered potential output. It estimated that trend growth would average just under 1 per cent between mid-2007 and mid-2010, before reverting to a pre-crisis projection of 2¾ per cent. This implied an output gap of just over –6 per cent at the end of 2009.

B.3 While we recognise that contemporaneous estimates of trend output and the output gap are subject to considerable uncertainty, particularly when large shocks are likely to have affected the economy's underlying supply potential, we judge that evidence from a range of alternative indicators points to less spare capacity at the end of 2009 than assumed by the March Budget. The current evidence suggests an output gap of around –4 per cent at the end of 2009.

B.4 The impact of the financial crisis on the economy's future trend rate of growth remains subject to substantial uncertainty. In particular, increases in risk premia and a more restricted supply of credit could continue to bear down on productivity growth over the medium term. There is also a risk that the recent slowdown in net migration could be more protracted, with annual net inflows lower than those seen prior to the crisis. Our estimate is that trend output will grow at 2.35 per cent over the next three years, slowing to 2.1 per cent from 2014 on as demographic changes reduce the growth of the potential labour supply. Taken together with the judgement that the output gap was around -4 per cent at the end of 2009 this implies that the level of trend output at the start of 2015 is around 3¾ per cent below that implied by the assumption used for the March Budget economic forecast, and around 2½ per cent below that implied by the assumption used for the March Budget public finances forecast (Table B.1).

Table B.1: OBR and March Budget trend growth and output gap assumptions (per cent)

	Trend growth		Output gap at end of 2009	Implied levels adjustment 2015[1]
	2010Q3 to 2013Q4	2014Q1 to 2015Q1		
March Budget (economy)	2¾	2¾	-6¼	-5¼
March Budget (public finances)	2½	2½	-6¼	-6½
OBR	2.35	2.10	-4	-8¾

[1]Level of trend output at the start of 2015 relative to the level implied by trend growth of 2¾ per cent from the end of 2006.

The output gap

B.5 In the March Budget the estimate of the output gap dropped out as the difference between the Treasury's trend output assumptions, including the estimate of the loss of trend output from the financial crisis, and estimates of actual output produced by the Office for National Statistics (ONS). Our approach relies on a more direct estimate of the output gap, drawing on information from a range of cyclical indicators. These indicators of the cyclical position of the economy, which relate to the output gap or to a component of the output gap, consist mainly of data from private sector business surveys and ONS statistics. For example, business surveys of recruitment difficulties may proxy the employment component of the output gap, whereas measures of price and wage inflation relate to the overall output gap.

B.6 The information used to construct such estimates does not directly depend on estimates of output. This helps to ensure that the output gap estimates are not subject to large changes following revisions to National Accounts data, which may be particularly important when there is a degree of uncertainty around the estimated level of output over the recent past.[1]

B.7 There are several ways of combining the various cyclical indicators to generate an estimate of the output gap:

- one method is to obtain a 'composite' estimate of the output gap by weighting together the indicators from separate surveys. For example, estimates of the labour and profit share of income can be used as weights for recruitment difficulties and capacity utilisation indicators from the British Chambers of Commerce (BCC), Confederation of British Industry (CBI) and Bank of England Regional Agents surveys. This gives an output gap estimate corresponding to each survey;[2]
- alternatively survey-based indicators can be used to form aggregate 'composite' estimates producing an estimate of the output gap by combining indicators from all surveys. To calculate the aggregate 'composite' measure each type of survey-based indicator is combined initially with similar indicators across the BCC, CBI and Bank of England Agents surveys using a simple average, which is then weighted by corresponding sector shares; and
- principal components analysis (PCA), a commonly used statistical technique that enables the identification of the common determinants of a number of variables over time, can also be used to produce alternative measures of the output gap. In particular the PCA technique distinguishes the common 'cyclical' component from other components of a set of indicators. While the 'composite' estimates of the output gap only take into account survey indicators, the PCA estimates include additional information such as measures of price and wage inflation, the vacancy ratio and the labour share.

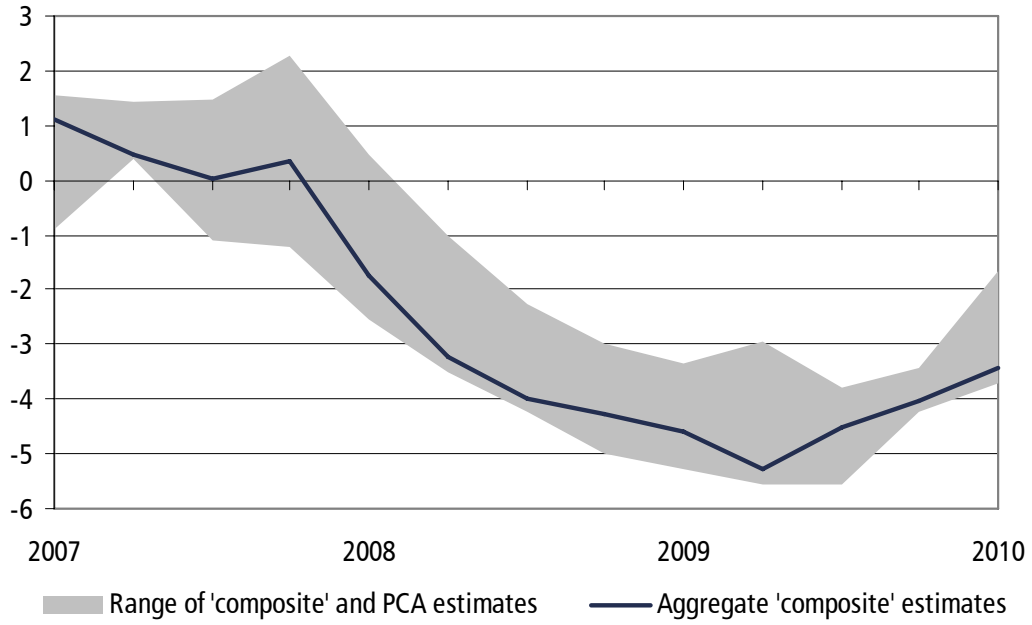
B.8 The range of alternative indicators including 'composite' (survey-based) estimates and estimates derived using PCA suggest an output gap of between -4¼ per cent and –3½ per cent at the end of 2009 (Chart B.1)[3]. Taken together, evidence from the alternative indicators would be consistent with an output gap of around -4 per cent at the end of 2009.

[1] For example, in their May *Inflation Report*, the Bank of England's 'backcast' suggests that the level of GDP in 2009 may be higher than that implied by the latest ONS estimates.

[2] For example, composite estimates of the output gap can be estimated as equal to α.(recruitment difficulties)+(1-α).(capacity utilisation), where α=labour share of income. Where the survey contains multiple indicators of capacity utilisation or recruitment difficulties by sector, e.g. manufacturing and services they can be combined in a similar way using information on sectoral shares of labour income or output.

[3] One issue when constructing such estimates is whether to account for the possible lag between output and the labour market when combining the indicators. The estimates presented above assume a three quarter lag between output and the labour market indicators. Estimates based on no lag between output and the labour market tend to show a slightly larger but not substantially greater degree of slack at the end of 2009.

Chart B.1: Alternative estimates of the output gap based on cyclical indicators



B.9 It is possible to decompose the output gap into the underlying components of trend output, that is productivity (output per hour), average hours per person employed, the employment rate and the 16+ population. Table B.2 shows how the overall output gap at the end of 2009 breaks down into these components. Of the end-2009 output gap of around –4 per cent:

- the productivity gap accounts for around ½ percentage point, reflecting both the large fall in actual output per hour over the recession and a judgement that underlying trend productivity has been adversely affected by the financial crisis;
- the fall in average hours in the recession implies an average hours gap of just over 1 per cent;
- just over 2 percentage points is attributable to the employment rate being below its estimated trend level. This is broadly consistent with the degree of spare capacity implied by indicators of recruitment difficulties.

Table B.2: Decomposition of the output gap (per cent)

	end-2009
Output gap	-4.0
Of which:	
Productivity gap	-0.6
Average hours gap	-1.3
Employment rate gap	-2.3
Population gap	0.2

Trend growth

B.10 To form a judgement on the rate of trend growth from 2010 onwards, it is helpful to decompose trend output into its underlying components, that is productivity, average hours per person employed, employment rate and the 16+ population.

Productivity

B.11 The analysis in the March Budget explained why the financial crisis might have had a significant adverse effect on trend productivity. In particular:

- possible increases in risk premia may result in an increase in the cost of capital, leading to a downward adjustment to the level of capital and subsequently to the level of productivity. Available estimates suggest this may reduce the level of trend output by around 2-3 per cent;[4]
- the adjustment of the financial sector may reduce its direct contribution to whole economy productivity. For example, a reduction in the financial sector's share of output from its pre-crisis level of around 8 per cent to 7 per cent could reduce the whole economy level of productivity by around ½ per cent. The National Institute for Economic and Social Research (NIESR) has also suggested that the adjustment of the financial sector may reduce the sustainable level of output by around 1 to 2 per cent based on an assumption that the financial sector share of output reverts to its share in 2000 of just over 5 per cent.[5] The size of this effect may be partly mitigated if resources are reallocated to other sectors with relatively high levels of productivity, such as manufacturing, or away from sectors that have relatively low levels of productivity, such as the government sector; and
- more generally, a restricted supply of credit may have impaired the financial sector's role in efficiently allocating resources and spreading risk. While this effect is difficult to quantify, it may have had a substantial effect on trend productivity.

B.12 Since actual output per hour fell by 2 per cent between its peak in 2008Q2 and 2009Q4, trend productivity might have already made a significant adjustment. Nevertheless, increases in risk premia and a more restricted supply of credit could continue to bear down on productivity growth over the medium term. In a standard production function approach, trend productivity growth can be decomposed into two components: increases in the capital to labour ratio (capital deepening) and a residual, total factor productivity (TFP) growth. Increases in the cost of capital in particular could imply a lower contribution from capital deepening (increases in the capital to labour ratio) to productivity growth than observed in the years preceding the crisis.

B.13 Our central estimate is that trend productivity per hour grows at 2 per cent, around ¼ percentage point below the rate observed in the years leading up to the recession but in line with previous trends. This is consistent with a contribution from capital deepening to productivity growth that is around ¼ percentage point lower than the rate observed in the years prior to the crisis, reflecting more subdued rates of capital accumulation. In particular the investment profile in the forecast is consistent with a contribution from capital deepening of around 1 per cent a year, compared with around 1¼ per cent a year between 2001 and 2006. The residual, total factor productivity (TFP) growth, therefore implicitly contributes around 1 per cent to trend productivity growth, broadly in line with previous trends, having fallen significantly during the course of the recession.

[4] See, for example, *Long-term scarring from the financial crisis*, Barrell, R., National Institute Economic Review No. 210, October 2009; and *Prospects for growth and imbalances beyond the short term*, OECD Economic Outlook (Preliminary Version) No. 87, May 2010.
[5] For further details see *Commentary: Growth prospects and financial services,* Martin Weale, in *NIESR Economic Review Vol.207*, January 2009.

Average hours

B.14 Average hours have declined steadily since the 1970s, falling by around ¼ per cent a year in the years preceding the recession. The fall in average hours continued in the recession as employers cut back on labour input although, more recently, hours have started to pick up. While there remains a large degree of uncertainty around the impact of the financial crisis on labour supply, it is assumed that the recession does not have an effect on the underlying trend level of average hours worked. The forecast assumes that the trend of average hours worked continues to fall by around ¼ per cent a year.

Employment rate

B.15 The prospects for the trend employment rate can be split into the outlook for the 'structural' unemployment rate, or non-accelerating inflation rate of unemployment (NAIRU), and the outlook for the labour market activity rate. For the purposes of the projection the NAIRU is assumed to be around 5¼ per cent, which is broadly in line with the unemployment rate prior to the recession, and to remain flat over the projection period. This judgement is consistent with the absence of a significant pick-up in the NAIRU in the previous recession, as well as the limited evidence so far of structural displacement in the labour market. It is also consistent with OECD evidence that finds no evidence of a significant impact of economic downturns on structural unemployment in economies with below average employment protection legislation, a category that includes the UK.[6]

B.16 The activity rate is projected using the 'cohort method', an approach used by a number of international organisations to project labour market activity over the medium to long term.[7] The cohort method of projecting future participation rates uses historical lifetime participation profiles of different cohorts to model current cohorts through the projection period. It captures the impact of an ageing workforce on overall participation and the effect of current young cohorts gradually replacing current older cohorts. This is important as each generation or cohort has its own specific level of participation that is usually different from the corresponding level of participation of preceding and future generations.

B.17 The latest estimates obtained using the cohort approach point to a decline in labour market activity (on a 16+ basis) of around –0.15 per cent a year. This entirely reflects the large shift in the age composition of the population as the baby-boom generation moves beyond State Pension age and retires. This projection includes an allowance for the effect of the gradual increase in the female State Pension age on labour market activity.[8] It is consistent with empirical evidence which suggests that increases in the female State Pension age may have a non-negligible, positive effect on the labour market activity rates of older age groups.[9]

[6] See *How do Institutions Affect Structural Unemployment in Times of Crises?*, Furceri, D. and Mourougane, A., OECD Economics Department Working Paper No.730, OECD, 2009.

[7] Other institutions to have used the cohort method to project labour market participation include the OECD, EU Economic Policy Committee, the US Congressional Budget Office and the New Zealand Treasury.

[8] The allowance in the cohort model for the increase in the female State Pension age on labour market activity has a positive effect of around 2 per cent per annum on the growth of the participation rate for those aged between 55-64 over the period from 2008 to 2020. The methodology used to construct this estimate is consistent with that described in the 2006 *Long-term public finance report*, HM Treasury, December 2006, chapter 4.

[9] For example, in 2006 ONS estimated that removing the entitlement to the State Pension would bring about an increase of 7.5 percentage points in the participation rates of the age groups affected; similarly, participation rates of those aged between 55 and 64 rose significantly in New Zealand following an increase in the State Pension age between 1992 and 2001.

Population

B.18 A key uncertainty for the growth of the 16+ population is the outlook for net migration. The latest data confirm a slowdown in net migration since 2007:

- ONS estimates of long-term net migration flows have fallen back from 198,000 in 2006 and 233,000 in 2007 to 163,000 in 2008;
- provisional International Passenger Survey data (which form the main component of ONS long-term net migration estimates and are more timely than the headline numbers) suggest that net migration flows fell back from 160,000 in the year to September 2008 to 142,000 in the year to September 2009; and
- applications from A8[10] nationals to the Workers' Registration Scheme have fallen back sharply with the number of successful applications in the year to March 2010 around half the level in the year to March 2008, while National Insurance numbers allocated to non-UK nationals fell by around a quarter between the year ending December 2007 and the year ending December 2009.

B.19 A recent analysis by NIESR and the Department for Communities and Local Government (DCLG) suggests that the deterioration in economic prospects may reduce net inward migration to the UK by around 50,000 a year.[11] Particular uncertainties that may have a bearing on net migration over the projection period include:

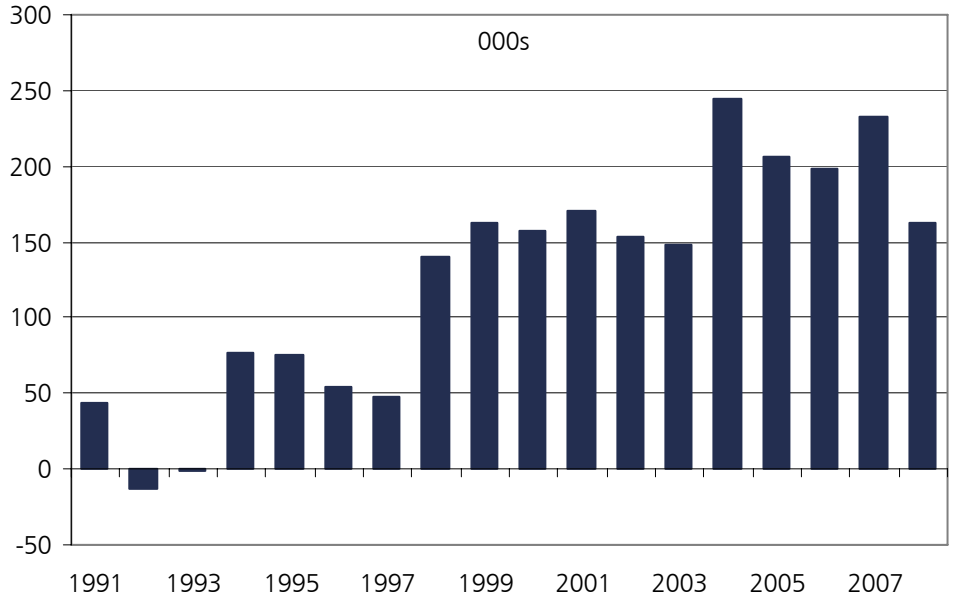
- the lifting of restrictions on A8 inward migration by other EU countries: Germany, Austria and Belgium are required to open their borders to A8 migrants by the end of 2011. Given the likely importance of relative employment prospects, such countries may be reasonably expected to compete with the UK as a destination for A8 migrants. Other factors relevant to migration decisions, including the stock of existing migrants, geographical proximity and cultural links are also likely to mean that the opening up of the remaining EU countries' borders are likely to have a bearing on net migration flows; and
- subdued economic activity/exchange rate movements: net migration is partly endogenous to economic prospects. Hence there is a possibility that a more protracted period of slow growth in the UK or additional sterling depreciation could reduce net migration over the medium term.

B.20 To take account of these effects we assume net migration of 140,000 a year from mid-2007 onwards. This is below the levels observed immediately prior to the recession but broadly in line with the level of inflows seen prior to the accession of the A8 countries to the European Union in 2005 (Chart B.2). A net migration assumption of 140,000 is in also line with the average assumption underpinning the ONS's 2008-based low migration population variant, and is consistent with estimates of the reduction in net inflows implied by the NIESR/DCLG analysis. Taken together with the contribution of natural change, a net migration assumption of 140,000 a year implies 16+ population growth of around 0.7 per cent a year until the end of 2013.

[10] The 'A8' refers to the eight Central and Eastern European countries that joined the European Union in May 2004, comprising the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

[11] *Projections of migration inflows under alternative scenarios for the UK and world economies*, Department for Communities and Local Government, April 2009.

Chart B.2: Net migration



B.21 From 2014 onwards, the 16+ population growth is likely to slow for demographic reasons even in the absence of any changes to net migration flows. In particular, increases in longevity and decreases in the fertility rate in the 1990s are likely to result in a slowdown in the contribution of natural change to population growth. The ONS's 2008-based low migration variant projections show average 16+ population growth slowing from around 0.7 per cent between mid-2008 and mid-2013 to around 0.5 per cent between mid-2014 and mid-2019. Consistent with this, our projection is for the 16+ population to grow at a rate of 0.5 per cent from 2014 onwards.

B.22 Table B.3 sets out the trend growth assumptions. From 2010Q2 onwards the underlying trend growth components imply a trend growth rate of 2.35 per cent, falling to 2.1 per cent from 2014 onwards as demographic changes reduce trend employment rate growth and trend population growth. The combination of this with an output gap of around -4 per cent at the end of 2009 implies that the level of trend output at the start of 2015 is around 3¾ per cent below that implied by the assumption used for the March Budget economic forecast, and around 2½ per cent below that implied by assumption used for the March Budget public finances forecast.

Table B.3: Trend growth assumptions

	Trend output per hour worked[1,2]		Trend average hours worked[2]	Trend employment rate[2]	Trend population[3]	Trend output
	Underlying	Unadjusted				
	(1)	(2)	(3)	(4)	(5)	
2010Q2 to 2013Q4	1.93	2.0	-0.2	-0.15	0.7	2.35
2014Q1 to 2015Q1	1.9	2.0	-0.2	-0.2	0.5	2.10

[1] The underlying trend rate is the unadjusted trend rate adjusted for changes in the employment rate, i.e. assuming the employment rate had remained constant. Column (1) = column (2) + (1-a).column (4), where a is the ratio of new to average worker productivity levels. The figuring is consistent with this ratio being of the order of 50 per cent, informed by econometric evidence and Labour Force Survey (LFS) data on real wages.
[2] The decomposition allows for employment and hours worked lagging output. Employment is assumed to lag output by around three quarters, so that on-trend points for employment come three quarters after on-trend points for output, an assumption that can be supported by econometric evidence. Hours are easier to adjust than employment, and so the decomposition assumes that average hours worked lag output by just one quarter, although this lag is harder to support by econometric evidence.
[3] UK resident household basis (LFS). Population aged 16 and over.

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