

Inflation Report

August 2011



BANK OF ENGLAND





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In order to maintain price stability, the Government has set the Bank's Monetary Policy Committee (MPC) a target for the annual inflation rate of the Consumer Prices Index of 2%. Subject to that, the MPC is also required to support the Government's objective of maintaining high and stable growth and employment.

The *Inflation Report* is produced quarterly by Bank staff under the guidance of the members of the Monetary Policy Committee. It serves two purposes. First, its preparation provides a comprehensive and forward-looking framework for discussion among MPC members as an aid to our decision making. Second, its publication allows us to share our thinking and explain the reasons for our decisions to those whom they affect.

Although not every member will agree with every assumption on which our projections are based, the fan charts represent the MPC's best collective judgement about the most likely paths for inflation and output, and the uncertainties surrounding those central projections.

This *Report* has been prepared and published by the Bank of England in accordance with section 18 of the Bank of England Act 1998.

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The Overview of this *Inflation Report* is available on the Bank's website at www.bankofengland.co.uk/publications/inflationreport/infrep.htm.

The entire *Report* is available in PDF at www.bankofengland.co.uk/publications/inflationreport/2011.htm.

PowerPoint™ versions of the charts in this *Report* and the data underlying most of the charts are provided at www.bankofengland.co.uk/publications/inflationreport/2011.htm.

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Overview

CPI inflation remained well above the 2% target and output grew sluggishly. The recovery in global activity continued, although the pace of growth slowed and vulnerabilities, especially within the euro area, increased. In the United Kingdom, the squeeze in households' real incomes is likely to continue to weigh on domestic demand, especially over the next year or so. But expansionary monetary policy, prospective growth in global demand and the current level of sterling should mean that, after some near-term weakness, GDP growth gradually picks up.

CPI inflation is set to rise further in 2011, boosted by increases in utility prices. Inflation is likely to fall back through 2012 and into 2013 as the impact of the factors temporarily raising inflation diminishes and downward pressure from slack in the labour market persists. But the precise timing and extent of that fall are highly uncertain. Under the assumptions that Bank Rate moves in line with market interest rates and the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion, the chances of inflation being above or below the 2% target in the medium term are judged to be roughly equal.

Financial and credit markets

Since the *May Report*, the MPC has maintained Bank Rate at 0.5% and its stock of purchased assets at £200 billion. Strains within financial markets intensified amid heightened concerns about the fiscal positions of several euro-area countries. These strains initially eased somewhat following the announcement of the support package agreed by eurozone leaders on 21 July, but subsequently re-emerged. In the United Kingdom, banks raised significantly less wholesale term funding, and credit conditions for households and smaller businesses remained tight. Weakness in broad money and credit growth persisted. Partly reflecting these developments in the United Kingdom and elsewhere, expectations of the near-term path of Bank Rate were lowered and ten-year government bond yields fell to record lows.

Demand

The recovery in global demand continued, although the pace of expansion slowed. Disruption to global supply chains following the Japanese earthquake and tsunami, and the squeeze on spending from past oil price rises, are likely to have depressed output growth temporarily. But some of the slowdown in growth appears likely to be more persistent. Substantial divergences across euro-area countries remained and indicators pointed to a slowing in aggregate growth in Q2. The pace of recovery in the United States is likely to be hindered by continued weakness in labour and housing markets. And policy tightened in a number of emerging

economies. Trade data and business surveys suggested that the growth of UK exports may have slowed along with world demand in 2011 Q2.

At home, private domestic demand fell sharply in 2011 Q1. Households' consumption fell for the third consecutive quarter, driven by a further sharp squeeze in real incomes. And the support previously provided by business spending was absent, with companies cutting back on both stockbuilding and investment. The impact of the fall in private domestic demand on UK output was partly offset by a contraction in imports.

GDP was provisionally estimated to have increased by 0.2% in 2011 Q2. The increase in output was probably moderated by a number of one-off effects. But even abstracting from such effects, underlying output over the past year appears to have grown at a rate below its historical average.

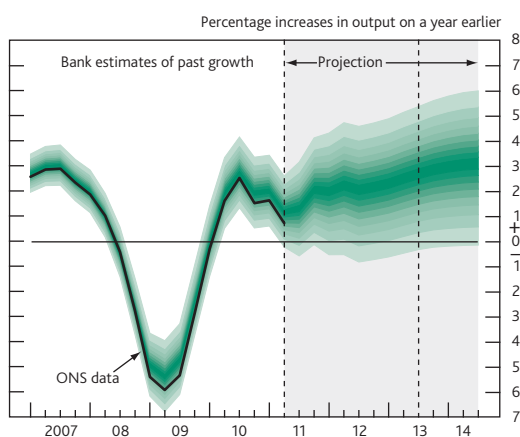
The Committee's projections are conditioned on the tax and spending plans set out in the March *Budget*. Those plans imply that the contraction in the cyclically adjusted primary deficit in 2011/12 will be similar to that observed in 2010/11.

The outlook for GDP growth

Chart 1 shows the Committee's best collective judgement for four-quarter GDP growth, assuming that Bank Rate follows a path implied by market interest rates and the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion. Growth is likely to remain sluggish in the near term, reflecting the continuing squeeze on households' real incomes. Thereafter, GDP growth gently picks up, underpinned by a steady recovery in business investment and a gradual rebalancing of the economy towards external demand. Although the fiscal consolidation is likely to dampen activity throughout the forecast period, consumer spending growth should slowly increase as the drag on real income growth from high inflation dissipates.

The outlook for output growth remains highly uncertain. The greatest risks to the prospects for global demand come from the euro area and the substantial challenges faced by several member countries as they seek to ensure the sustainability of their fiscal positions and to preserve the stability of their banking systems. Were they to crystallise, the risks emanating from the euro area have the potential to have a significant impact on the UK economy. To the extent that such risks are already reflected in asset prices, bank funding costs and confidence, they will be captured in the MPC's projections. But beyond that, the MPC sees no meaningful way to quantify such risks and they are therefore excluded from its fan charts.⁽¹⁾

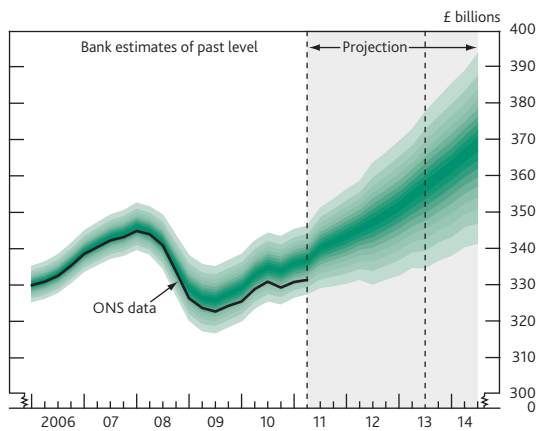
Chart 1 GDP projection based on market interest rate expectations and £200 billion asset purchases



The fan chart depicts the probability of various outcomes for GDP growth. It has been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion throughout the forecast period. To the left of the first vertical dashed line, the distribution reflects the likelihood of revisions to the data over the past; to the right, it reflects uncertainty over the evolution of GDP growth in the future. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that the mature estimate of GDP growth would lie within the darkest central band on only 10 of those occasions. The fan chart is constructed so that outcomes are also expected to lie within each pair of the lighter green areas on 10 occasions. In any particular quarter of the forecast period, GDP is therefore expected to lie somewhere within the fan on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions GDP growth can fall anywhere outside the green area of the fan chart. Over the forecast period, this has been depicted by the light grey background. In any quarter of the forecast period, the probability mass in each pair of identically coloured bands sums to 10%. The distribution of that 10% between the bands below and above the central projection varies according to the skew at each quarter, with the distribution given by the ratio of the width of the bands below the central projection to the bands above it. In Chart 1, the probabilities in the lower bands are slightly larger than those in the upper bands at Years 1, 2 and 3. See the box on page 39 of the November 2007 *Inflation Report* for a fuller description of the fan chart and what it represents. The second dashed line is drawn at the two-year point of the projection.

(1) See the box on page 38.

Chart 2 Projection of the level of GDP based on market interest rate expectations and £200 billion asset purchases



Chained-volume measure (reference year 2006). See the footnote to Chart 1 for details of the assumptions underlying the projection for GDP growth. The width of this fan over the past has been calibrated to be consistent with the four-quarter growth fan chart, under the assumption that revisions to quarterly growth are independent of the revisions to previous quarters. Over the forecast, the mean and modal paths for the level of GDP are consistent with Chart 1. So the skews for the level fan chart have been constructed from the skews in the four-quarter growth fan chart at the one, two and three-year horizons. This calibration also takes account of the likely path dependency of the economy, where, for example, it is judged that shocks to GDP growth in one quarter will continue to have some effect on GDP growth in successive quarters. This assumption of path dependency serves to widen the fan chart.

Domestically, the strength of the recovery will depend on the extent to which households have further to adjust to past falls in their real incomes or to the uncertainty associated with the financial crisis and the fiscal consolidation now in train. It will also depend on whether the desire of companies to initiate deferred projects or to increase capacity in those sectors benefiting from the rebalancing of the economy is sufficient to support a recovery in business investment, against a general backdrop of only modest economic expansion. The outlook for both household and business spending will also depend on the extent to which the availability of bank credit improves and the cost falls.

There remains a range of views among Committee members about the outlook for growth. Based on the conditioning assumptions described above, the Committee's best collective judgement is that, following some near-term weakness, GDP growth is likely to pick up gradually, so that by 2014, it is a little more likely to be above its historical average than below it.

Chart 2 shows that output is likely to remain significantly below the level associated with a continuation of its pre-recession trend. The Committee judges that a majority of this shortfall reflects weakness in the level of underlying productivity. Even so, some margin of slack, particularly in the labour market, is likely to persist throughout the forecast period.

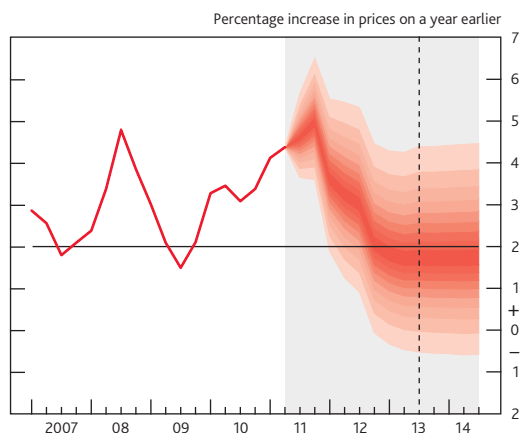
Costs and prices

CPI inflation was 4.2% in June. The strength of inflation continued to reflect the effects of past increases in both the standard rate of VAT to 20% and the prices of energy and other imported goods and services. Sterling oil and gas prices have been broadly unchanged since May, although both remained significantly higher than a year ago. Non-energy commodity prices have fallen slightly since May.

Indicators of inflation expectations were mixed. Most measures of companies' and households' one year ahead inflation expectations fell back in 2011 Q2, reversing some of their increases over the past year. Although some measures of longer-term inflation expectations had increased a little since the beginning of 2011, most were close to their series averages.

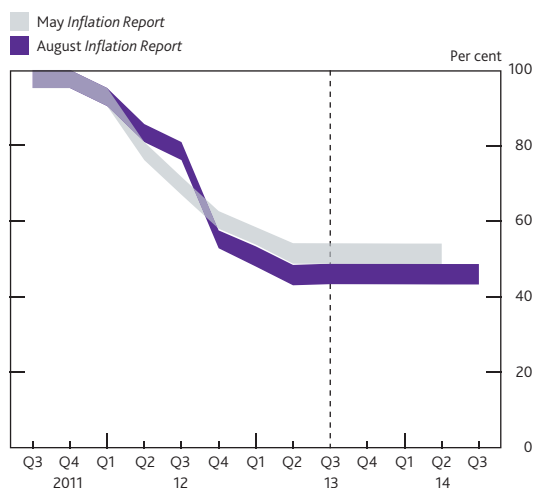
Labour productivity remained weak. Despite modest output growth, the Labour Force Survey indicated that private sector employment had increased by over half a million in the past year. Labour productivity remained well below the level associated with a continuation of its pre-crisis trend, perhaps indicating a substantial amount of underutilised capacity within companies. That contrasted with survey measures of capacity utilisation, however, which pointed to there being only a small margin of spare capacity. Unemployment was broadly unchanged, but remained elevated. Private sector pay

Chart 3 CPI inflation projection based on market interest rate expectations and £200 billion asset purchases



The fan chart depicts the probability of various outcomes for CPI inflation in the future. It has been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion throughout the forecast period. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that inflation in any particular quarter would lie within the darkest central band on only 10 of those occasions. The fan chart is constructed so that outcomes of inflation are also expected to lie within each pair of the lighter red areas on 10 occasions. In any particular quarter of the forecast period, inflation is therefore expected to lie somewhere within the fan on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions inflation can fall anywhere outside the red area of the fan chart. Over the forecast period, this has been depicted by the light grey background. In any quarter of the forecast period, the probability mass in each pair of identically coloured bands sums to 10%. The distribution of that 10% between the bands below and above the central projection varies according to the skew at each quarter, with the distribution given by the ratio of the width of the bands below the central projection to the bands above it. In Chart 3, the probabilities in the lower bands are slightly smaller than those in the upper bands at Years 1, 2 and 3, albeit that the upward skew in Year 1 is smaller than those at Years 2 and 3. See the box on pages 48–49 of the May 2002 *Inflation Report* for a fuller description of the fan chart and what it represents. The dashed line is drawn at the two-year point.

Chart 4 An indicator of the probability inflation will be above the target



The August and May swaths in this chart are derived from the same distributions as Chart 3 and Chart 5.7 on page 39 respectively. They indicate the assessed probability of inflation being above target in each quarter of the forecast period. The width of the swathe at each point in time corresponds to the width of the band of the fan chart in which the target falls in that quarter, or, if the target falls outside the coloured area of the fan chart, the width of the band closest to the target. The bands in the fan chart illustrate the MPC's best collective judgement that inflation will fall within a given range. The swathes in Chart 4 show the probability within the entire band of the corresponding fan chart of inflation being close to target; the swathes should not therefore be interpreted as a confidence interval. The dashed line is drawn at the two-year point of the August projection. The two-year point of the May projection was one quarter earlier.

growth stayed subdued, at around 2.5%, probably reflecting both continuing slack in the labour market and weak productivity.

The outlook for inflation

Chart 3 shows the Committee's best collective judgement for the outlook for CPI inflation, based on the same assumptions as Chart 1. There is a good chance that inflation will reach 5% later this year, boosted by utility price rises, and reflecting the continuing impact from past increases in VAT and in oil and other import prices. Inflation is likely to fall back through 2012 and into 2013 as those effects wane and downward pressure from slack in the labour market persists. The extent of that fall is likely to be mitigated by some upward pressure on nominal wages stemming from the response of companies and households to the sustained period of high inflation.

The timing and extent of the likely decline in inflation are highly uncertain. Labour productivity is still a little lower than it was three years ago. The extent to which that weakness in productivity persists as the economy recovers will affect the degree of inflationary pressure associated with any given path of demand. The downward pressure on wages from the elevated rate of unemployment will depend on the extent to which those who have become unemployed retain their attachment to the labour market and on the sensitivity of wages to labour market slack. The magnitude of both the squeeze in real wages and the overshoot of the inflation target are exceptional, so it is hard to be sure how this will affect wage and price-setting. And the prospects for import prices, especially commodity prices, will depend, in part, on the strength of global demand.

There remains a range of views among Committee members regarding the relative strength of the factors affecting the outlook for inflation. On balance, the Committee's best collective judgement, based on the conditioning assumptions described above, is that inflation is about as likely to be below as above target in the medium term (Chart 4).

The policy decision

At its August meeting, the Committee judged that the outlook for the global economy had deteriorated and that GDP growth in the United Kingdom would pick up only gradually. Inflation looked set to increase in the near term, boosted by higher utility prices. But under the assumption that Bank Rate moved in line with market yields, inflation was likely to fall back in the medium term, as the impact of the factors raising inflation diminished and some downward pressure from a degree of slack in the labour market persisted. In the light of that outlook, the Committee judged it appropriate at that meeting to maintain Bank Rate at 0.5% and the stock of asset purchases at £200 billion, in order to meet the 2% CPI inflation target over the medium term.

1 Money and asset prices

The MPC maintained Bank Rate at 0.5% and the stock of purchased assets financed by the issuance of central bank reserves at £200 billion. Since the *May Report*, market participants have revised down their expectations for the path of Bank Rate substantially and UK government bond yields have declined. Sovereign debt concerns and banking sector strains in several euro-area countries intensified. Together with mounting concerns about global growth prospects, that led to sharp falls in riskier asset prices in the run-up to the MPC's August meeting. Bank lending to businesses and households remained weak in 2011 Q2, as did broad money growth. Spreads over Bank Rate on new bank loans remained elevated, particularly so for unsecured household loans and probably also for loans to smaller companies.

Short-term interest rate expectations have fallen significantly since the *May Report* (Section 1.1), as have UK government bond yields (Section 1.2). Government bond yields in some euro-area countries rose substantially. And, in part related to those euro-area sovereign debt concerns, some indicators of major UK banks' funding costs rose, while their wholesale term issuance weakened significantly (Section 1.3). Credit conditions for households and some businesses remained restrictive (Section 1.4). Weakness in broad money growth persisted (Section 1.5).

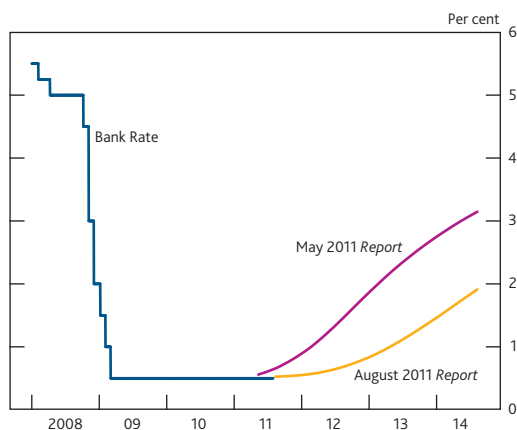
1.1 Monetary policy

The MPC has maintained Bank Rate at 0.5% and the stock of purchased assets financed by the issuance of central bank reserves at £200 billion. The reasons behind the MPC's decisions in June and July are discussed in the box on page 10.

In the period leading up to the MPC's August meeting, financial market participants' interest rate expectations, as indicated by overnight index swap (OIS) rates, were lower throughout the next three years than at the time of the *May Report*: by mid-2014, the path had fallen by around 1.3 percentage points (**Chart 1.1**). Since the *May Report*, respondents to the Reuters survey of economists have also revised down their expectations of the path of Bank Rate over the next 18 months to a similar degree. Those respondents judged, on average, that there was around a one-in-four chance of an additional programme of asset purchases.

At its July meeting, the Governing Council of the European Central Bank increased the interest rate on the main refinancing operations by 0.25 percentage points to 1.50%. The US Federal Open Market Committee completed its

Chart 1.1 Bank Rate and forward market interest rates^(a)



Sources: Bank of England and Bloomberg.

(a) The May 2011 and August 2011 curves are estimated using overnight index swap (OIS) rates in the fifteen working days to 4 May 2011 and 3 August 2011 respectively.

Monetary policy since the *May Report*

The MPC's central projection in the *May Report*, under the assumptions that Bank Rate followed a path implied by market interest rates and that the stock of purchased assets financed by the issuance of central bank reserves remained at £200 billion, was that CPI inflation was likely to rise further in 2011 and was then likely to fall back during 2012 and into 2013. But the precise extent and timing of that fall were uncertain. Under the same assumptions, some pickup in underlying GDP growth was likely during 2011, following broadly flat output around the turn of the year.

Recent data on GDP growth, and especially consumer spending, had been weak at the time of the MPC's meeting on 8–9 June. And the latest indicators suggested that, abstracting from erratic factors, growth would remain below its historical average in the middle of the year. The pace of global output growth appeared to have softened, although it was possible that this had primarily been caused by supply chain disruption resulting from the Japanese earthquake and tsunami, and the elevated level of oil prices.

CPI inflation had risen further above the target to 4.5% in April and had remained there in May. That elevated rate of inflation reflected the temporary impacts of the increase in the standard rate of VAT, higher energy and other commodity prices, and the past depreciation of sterling.

The primary upside risks to future inflation flowed from: the possibility that above-target inflation would become engrained in expectations and subsequently in wage and price-setting behaviour; and the possibility of further upward shocks to the price level, particularly from global prices. The Committee judged that the likelihood of these risks materialising, while substantial, had changed little over the month.

The key downside risk to inflation was that the strength of demand would prove insufficient to eliminate the current margin of spare capacity, leading to inflation falling below the target in the medium term. The current weakness of demand growth was likely to persist for longer than previously thought, and therefore, on balance, the Committee judged that the downside risks to the prospects for medium-term inflation had increased over the month.

Most members judged that it was appropriate to maintain the current stance of monetary policy. For some of these members, it was possible that further asset purchases might become warranted if the downside risks to medium-term inflation materialised. For one member, the balance of risks to inflation continued to warrant an immediate expansion of the

Committee's programme of asset purchases. For two members, the substantial upside risks to the medium-term inflation outlook meant that the argument for removing some of the monetary stimulus remained strong, although both acknowledged that the data on the growth outlook had been weak.

Seven members of the Committee voted to maintain Bank Rate at 0.5% and two members voted for a 25 basis point rise in Bank Rate. Eight members voted to keep the stock of asset purchases at £200 billion. One member preferred to increase the size of the programme by £50 billion.

At the time of the MPC's meeting on 6–7 July, business surveys had pointed towards continued modest underlying UK GDP growth in the second quarter and, more tentatively, to some softening in the outlook for Q3. There was continued evidence of an easing in the pace of global expansion and euro-area sovereign debt markets had become more strained, reflecting heightened concerns over some periphery countries' fiscal positions.

Despite CPI inflation falling to 4.2% in June, recent developments in utility and imported food prices had indicated that the near-term peak in CPI inflation would probably be somewhat higher, and would occur sooner, than the Committee had assumed at the time of the *May Report*. The evidence on inflation expectations had been mixed on the month.

The key risk to the upside for inflation was still that the period of elevated inflation would persist for longer than the Committee expected. And the key risk to the downside remained that demand growth would not be sufficiently strong to soak up the pool of spare capacity in the economy. Overall, the balance between the upside and the downside risks to inflation in the medium term had not changed sufficiently over the month for Committee members to change their views of the appropriate setting for monetary policy. But a majority believed that recent developments had reduced the likelihood that a tightening in policy would be warranted in the near term.

At their July meeting, seven members of the Committee voted to maintain Bank Rate at 0.5% and two members voted for a 25 basis point rise in Bank Rate. Eight members voted to keep the stock of asset purchases at £200 billion. One member preferred to increase the size of the programme by £50 billion.

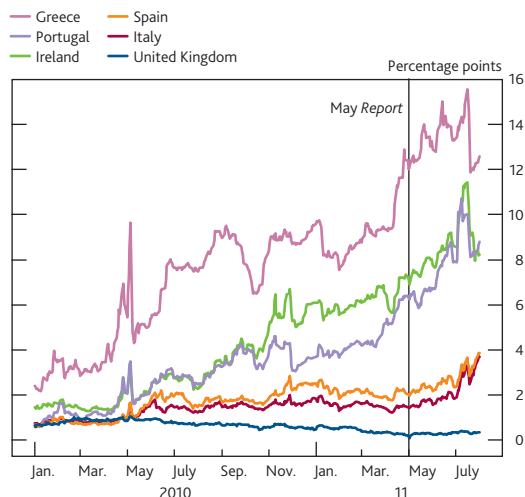
At its meeting on 3–4 August, the Committee voted to maintain Bank Rate at 0.5%. The Committee also voted to maintain the stock of asset purchases financed by the issuance of central bank reserves at £200 billion.

purchases of \$600 billion of longer-term Treasury securities in June.

1.2 Financial markets

Market participants' concerns about the sustainability of several euro-area countries' fiscal and external debt positions, and the wider implications for already strained banking sectors and for euro-area growth, have intensified since the *May Report*. That led to a sharp widening in government bond spreads in those countries, significant declines in euro-area equity prices and increases in financial companies' bond spreads. In the period running up to the MPC's August meeting, a wider range of asset prices were affected by those concerns and by more general worries about global growth prospects.

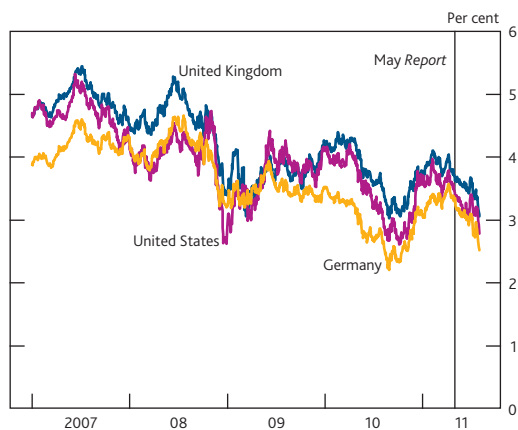
Chart 1.2 Selected European ten-year spot government bond spreads^(a)



Sources: Bloomberg and Bank calculations.

(a) Spread over ten-year German government bond yield.

Chart 1.3 International ten-year spot government bond yields^(a)



Sources: Bloomberg and Bank calculations.

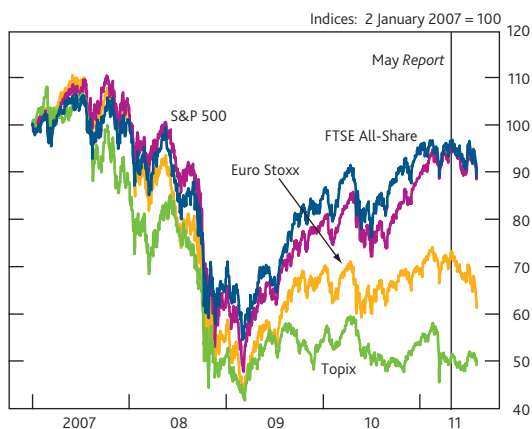
(a) Zero-coupon yield.

Government bonds

Government bond yields in several euro-area countries increased significantly relative to yields on German government debt in the period following the *May Report*. Greek government spreads rose following uncertainty about the disbursement of a €12 billion tranche from the support package agreed with the European authorities and the IMF in May 2010, and about the terms of an additional programme financed through both official and private sources. Following the announcement of that new programme by the heads of state or government of the euro area and EU institutions on 21 July, Greek government bond spreads fell back somewhat (**Chart 1.2**).

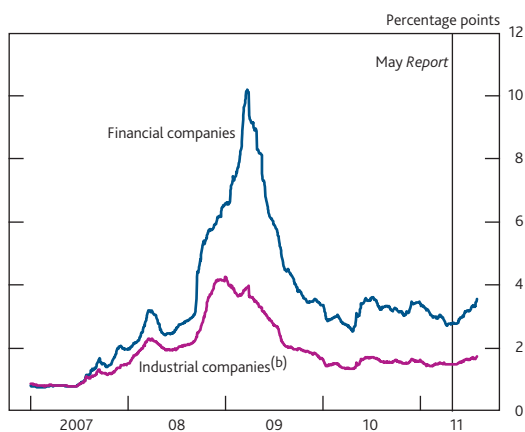
Government bond spreads in Ireland and Portugal also rose sharply in early July (**Chart 1.2**), following ratings downgrades. And spreads in Spain and Italy also rose around that time, although they remained significantly below Irish and Portuguese spreads. Spreads in these four countries declined immediately after the 21 July statement, but, by the time of the August MPC meeting, spreads in Spain and Italy had risen to levels higher than before that statement.

In contrast, UK ten-year government bond yields were about 0.5 percentage points lower in the fifteen working days to 3 August than at the time of the *May Report* (**Chart 1.3**). Over that same period, US government bond yields declined by a similar amount and German yields fell by about 0.7 percentage points. By the end of the period, yields in all three countries — but particularly in the United Kingdom — were close to the historically low levels observed in Autumn 2010. The recent declines were, in large part, associated with lower expectations of the path of monetary policy, which, in turn, could reflect mounting concerns about global growth prospects (Section 2). The implied cost of UK government borrowing in five years' time for a period of five years also fell, but remained close to its average level since the late 1990s.

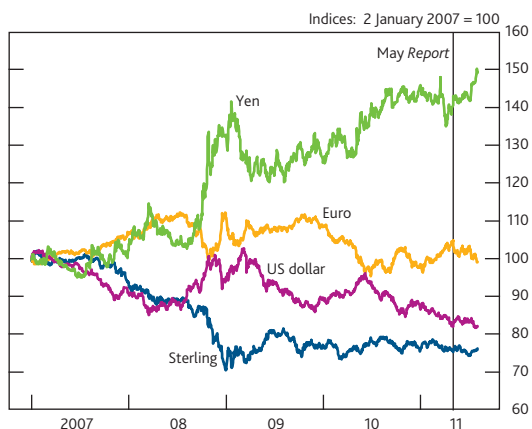
Chart 1.4 International equity prices^(a)

Source: Thomson Reuters Datastream.

(a) In local currency terms.

Chart 1.5 Sterling investment-grade corporate bond spreads^(a)

Source: Bank of America Merrill Lynch.

(a) Option-adjusted spread over equivalent-maturity government bonds.
(b) All non-financial companies excluding utilities.**Chart 1.6** International nominal effective exchange rates

Equities and corporate bonds

Equity prices across a range of countries have fallen since the *May Report*. For example, in the fifteen working days to 3 August, the FTSE All-Share index was 3% below its level in the fifteen working days to 4 May (**Chart 1.4**). And there were sharp falls towards the end of the period such that the FTSE All-Share was 4% lower on 3 August than the August fifteen-day average. Euro-area equity prices have fallen by 8% since the *May Report*, and fell even more sharply than most other equity markets in the days leading up to the MPC's August decision.

Spreads over government bonds on sterling-denominated investment-grade industrial corporate bonds have widened a little since the *May Report* (**Chart 1.5**). Spreads on the bonds of financial corporations — including banks and insurance companies — increased by much more over that period and remain well above their pre-crisis levels.

Exchange rates

Between the *May* and *August Reports*, the sterling effective exchange rate index was broadly unchanged (**Chart 1.6**). Over that period, the euro depreciated by 3% and the US dollar by 1%, but the Japanese yen appreciated by 6% (**Chart 1.6**). Following the 25% depreciation that started in mid-2007, sterling has been broadly stable since the beginning of 2009.

1.3 The banking sector

At its meeting on 16 June, the interim Financial Policy Committee judged that sovereign debt concerns and banking sector strains in the euro-area periphery economies were the most material and immediate threat to UK financial stability.⁽¹⁾ As the box on page 38 discusses, this could also have material implications for the economic outlook, in part because banks' capital and funding positions affect the availability and cost of loans to the household and corporate sectors (Section 1.4).

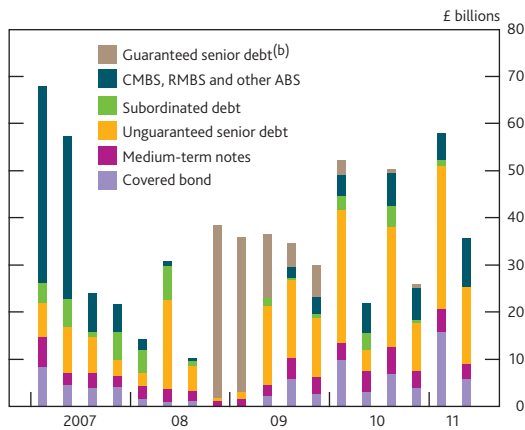
Funding

Over much of the past year, the major UK banks have been making progress in meeting their funding needs. Robust wholesale term issuance in public (**Chart 1.7**) and private markets, combined with non-core asset disposals and retail deposit growth, allowed them to reduce official sector liquidity support more quickly than envisaged in the voluntary plans agreed bilaterally with the Bank.⁽²⁾

Recent developments, however, suggest it may become harder for banks to deal with the significant funding challenges still facing them. Banks have a large amount of term funding, including funding supported by the official sector, that is due to mature before the end of 2012. Indicators of the cost of

(1) See www.bankofengland.co.uk/publications/records/fpc/pdf/2011/record1106.pdf.(2) See, for example, Chart A on page 89 of the 'Markets and operations' article in the 2011 Q2 *Quarterly Bulletin*.

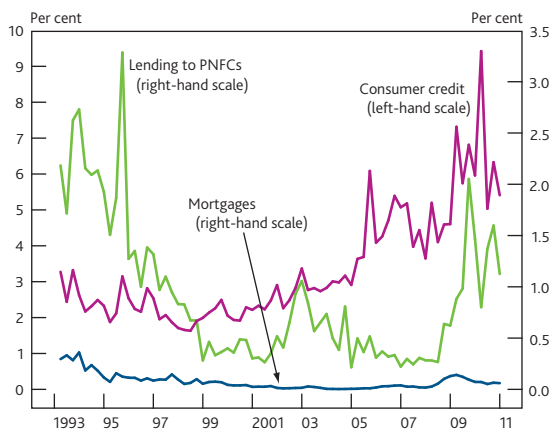
Chart 1.7 Term issuance by the major UK lenders in public markets^(a)



Sources: Bank of England, Dealogic and Bank calculations.

- (a) Data are as at 4 August 2011. Data are shown at a quarterly frequency and the final observation is 2011 Q2. Includes debt issued by Banco Santander, Bank of Ireland, Barclays, Co-operative Financial Services, HSBC, Lloyds Banking Group, National Australia Bank, Nationwide, Northern Rock and Royal Bank of Scotland. Term issuance refers here to securities with an original contractual maturity or earliest call date of at least 18 months. It includes subordinated lower Tier 2 and Tier 3 capital instruments with debt features.
- (b) Senior debt issued under HM Treasury's Credit Guarantee Scheme.

Chart 1.8 Write-off rates^(a)



- (a) Write-off rates on lending by UK monetary financial institutions. The series have been calculated as annualised quarterly write-offs divided by the corresponding loans outstanding at the end of the previous quarter. The series start in 1993 Q2. Lending in both sterling and foreign currency, expressed in sterling terms. Non seasonally adjusted.

replacing that maturing funding have increased further. For example, banks' credit default swap (CDS) premia have risen by 0.3 percentage points on average since the *May Report* (Chart A in the box on pages 16–17), reflecting in part the heightened stress in the euro-area periphery (Section 1.2). And wholesale term issuance in public markets has weakened significantly in recent months. Although some banks reported good progress in their interim results in meeting their term funding targets for 2011, one key question is whether the deterioration in funding conditions is likely to persist — particularly as September is usually an important month for term issuance.

Capital

Over the past two years, banks have improved their resilience by raising their capital ratios and by reducing leverage.⁽¹⁾ For example, the average ratio of the major UK banks' assets to their available capital fell slightly in 2010, to around 20 times capital, compared with around 35 times capital prior to the financial crisis. Some banks have since reported further improvements in their core Tier 1 capital ratios in their 2011 H1 interim results.

UK banks' exposures to the private sectors of the euro-area periphery economies, and their indirect exposures to those economies through their links to the banking systems of other countries, pose a key risk to their balance sheet positions. But their domestic exposures also matter. Indicators of corporate and household distress have been broadly stable recently. Write-off rates on loans to private non-financial corporations (PNFCs) and on unsecured loans to households fell back slightly in 2011 Q1, but remained elevated compared with their pre-recession averages (Chart 1.8). Lenders responding to the 2011 Q2 *Credit Conditions Survey* reported lower default rates on unsecured loans to households but higher losses given default on unsecured and secured household lending. If there were to be a renewed pickup in losses, including on loans currently subject to forbearance,⁽²⁾ the overall impact on banks' balance sheets would be mitigated to the extent that banks have set aside sufficient provisions.

1.4 Credit conditions

The flow of bank lending to UK households and businesses decreased sharply during the financial crisis. Previous Bank analysis suggests that a substantial and sustained tightening in credit supply conditions contributed to that weakness, as the fall in lending was accompanied by an increase in spreads over Bank Rate on new loans.⁽³⁾ The box on pages 16–17 considers recent developments in credit spreads and notes that they remained elevated, particularly so for unsecured household

(1) See www.bankofengland.co.uk/publications/fsr/2011/fsrfull1106.pdf.

(2) See the box on pages 24–26 of the June 2011 *Financial Stability Report*.

(3) See 'Understanding the weakness of bank lending', *Bank of England Quarterly Bulletin*, Vol. 50, No. 4, pages 311–20.

Chart 1.9 Loans to individuals

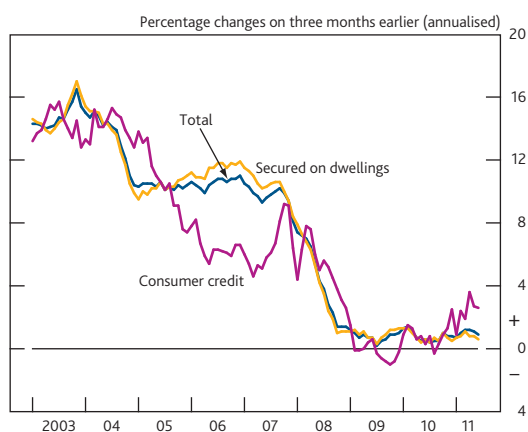


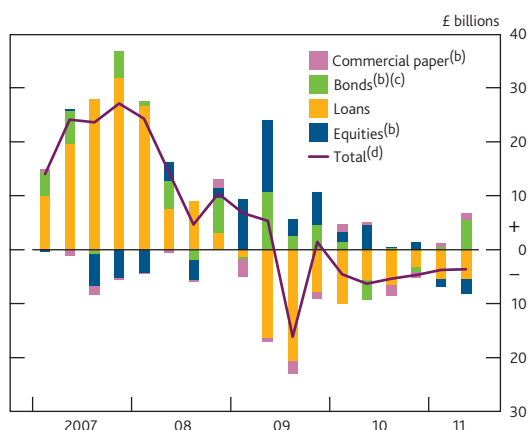
Table 1.A Housing market indicators

	Averages since 2000(a)(b)	2010(a)		2011	
		Q1(a)	Q2(a)	Q1(a)	July
Activity(c)					
Property transactions (000s)(d)	99	73	73	68	n.a.
Mortgage approvals (000s)(e)	89	48	47	47	n.a.
RICS sales to stock ratio(f)	0.36	0.25	0.22	0.22	n.a.
RICS new buyer enquiries(g)	-3	-6	-4	0	n.a.
RICS new instructions(g)	4	11	4	11	n.a.
Prices(h)					
Halifax(i)	0.5	-0.3	0.0	0.2	0.3
Nationwide	0.6	0.0	0.3	0.0	0.2
Communities and Local Government	0.5	0.3	-0.1	n.a.	n.a.
Land Registry(j)	0.5	0.1	-0.2	-0.1	n.a.

Sources: Bank of England, Department for Communities and Local Government, Halifax, HM Revenue and Customs, Land Registry, Nationwide, Royal Institution of Chartered Surveyors (RICS) and Bank calculations.

- (a) Averages of monthly data.
 (b) Except for property transactions, which is an average since April 2005, and Department for Communities and Local Government house prices, which is an average since March 2002.
 (c) All series are net percentage balances, unless otherwise stated.
 (d) Number of residential property transactions with value £40,000 or above.
 (e) Loan approvals for house purchase.
 (f) Ratio of sales recorded over the past three months to the level of stock on estate agents' books at the end of the month.
 (g) Compared with the previous month.
 (h) Growth on a month earlier.
 (i) The published Halifax index has been adjusted in 2002 by Bank staff to account for a change in the method of calculation.
 (j) Data relate to England and Wales only.

Chart 1.10 PNFCs' net external finance raised(a)



- (a) Includes sterling and foreign currency funds.
 (b) Non seasonally adjusted.
 (c) Includes stand-alone and programme bonds.
 (d) As component series are not all seasonally adjusted, the total may not equal the sum of its components.

loans and probably also for loans to smaller companies. The rest of this subsection discusses other indicators of credit conditions.

Household credit conditions and the housing market

Growth in the stock of loans to individuals remained weak during the first half of 2011 (Chart 1.9). That reflected weakness in secured lending growth, which accounts for the majority of the stock of household debt. Growth in the stock of unsecured loans — including credit cards and personal loans — increased a little (Chart 1.9).

Lenders responding to *Credit Conditions Surveys* have reported little significant increase in the overall availability of secured credit over recent quarters. There have been some reported increases in the availability of mortgages with loan to value (LTV) ratios above 75%. But that follows a period during the worst of the financial crisis when the availability of such loans declined precipitously. As a result, credit conditions for borrowers who would like a higher LTV mortgage — such as many first-time buyers — appear to remain significantly more restrictive than prior to the financial crisis and more restrictive than the conditions currently facing borrowers with larger deposits. Conditions prior to the crisis had probably reached unsustainably loose levels. So those differences are likely to persist to some extent, assuming that lenders continue to discriminate between loans with different risk profiles.

The persistence of tight credit conditions is likely to have contributed to the historically low level of activity in the housing market (Table 1.A). Indeed, if the level of property transactions seen on average over the past three years were to persist, it would take almost twice as long for the private housing stock to turn over as in the decade prior to the financial crisis. Forward-looking indicators of housing activity have remained weak since the *May Report*. Most measures of house prices have been broadly flat over the past year.

Corporate credit conditions

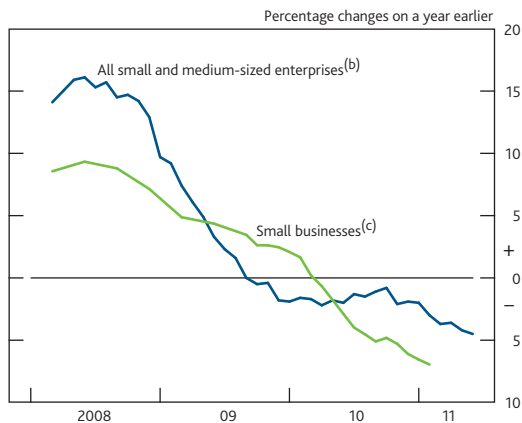
Including a range of sources of external finance, PNFCs raised less funds than they repaid in 2011 Q2, as a reduction in the stock of bank loans was only partially offset by positive net capital market issuance (Chart 1.10).

As discussed in previous *Reports*, there has been evidence of some improvement in the supply of bank credit to larger businesses since the worst of the financial crisis. Recent data have been mixed but, on balance, they suggest that the availability of credit to larger companies has been broadly stable. For example, lenders responding to the 2011 Q2 *Credit Conditions Survey* reported another slight increase in overall credit availability, but the net balance of respondents to the latest *Deloitte CFO Survey* reporting credit as easily available, rather than hard to get, fell somewhat.

Table 1.B PNFCs' equity and debt issuance^(a)

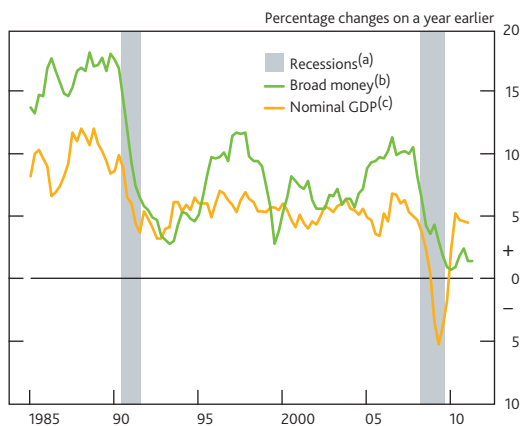
£ billions	Averages			2011	
	2003–08	2009	2010	Q1	Q2
Equities					
Net issuance	-0.7	2.6	0.7	-0.4	-0.9
Gross issuance	0.8	2.7	1.0	0.5	0.4
Repayments	1.5	0.0	0.3	0.9	1.3
Corporate bonds^(b)					
Net issuance	1.1	1.5	-0.2	0.2	1.9
Gross issuance	2.6	4.3	1.9	1.8	3.7
Repayments	1.5	2.8	2.1	1.6	1.9
Commercial paper					
Net issuance	0.0	-0.6	-0.1	0.2	0.4
Gross issuance	4.4	3.3	2.2	1.4	1.6
Repayments	4.4	3.9	2.3	1.2	1.2

(a) Averages of monthly flows of sterling and foreign currency funds. Due to rounding, net issuance may not equal gross issuance minus repayments. Data are non seasonally adjusted.
 (b) Includes stand-alone and programme bonds.

Chart 1.11 Loans to UK smaller businesses^(a)

Sources: British Bankers' Association (BBA), Department for Business, Innovation and Skills (BIS) and Bank calculations.

(a) Data are non seasonally adjusted.
 (b) BIS data. Stock of sterling and foreign currency lending, expressed in sterling terms, by four UK lenders to enterprises with an annual bank account debit turnover of less than £25 million. The latest observation is June 2011.
 (c) BBA data. Stock of sterling lending by seven UK lenders to commercial businesses with an annual bank account debit turnover of up to £1 million. Data are quarterly until September 2009 and monthly thereafter. The latest observation is February 2011.

Chart 1.12 Broad money and nominal GDP

(a) Recessions are defined as at least two consecutive quarters of falling output (at constant market prices) estimated using the latest data. The recessions are assumed to end once output began to rise.
 (b) The series is constructed using headline M4 growth prior to 1998 Q4, and M4 growth excluding intermediate OFCs thereafter. Intermediate OFCs are: mortgage and housing credit corporations; non-bank credit grantors; bank holding companies; and those carrying out other activities auxiliary to financial intermediation. Banks' business with their related 'other financial intermediaries' is also excluded, based on anecdotal information provided to the Bank of England by several banks. The latest observation is 2011 Q2.
 (c) At current market prices. The latest observation is 2011 Q1.

Companies' demand for bank credit will depend, in part, on the cost and availability of alternative sources of finance. Large businesses increased their net bond issuance significantly in 2011 Q2 (Table 1.B). But net equity issuance remained weaker than in recent years, in part reflecting an increase in share buybacks. Consistent with those patterns, respondents to recent *Deloitte CFO Surveys* have reported bond issuance to be a much more attractive source of external finance than equity issuance. And that, in turn, is consistent with respondents to the same survey reporting that UK corporate balance sheets are slightly underleveraged.

Many smaller companies are unlikely to be able to access capital markets and so will be relatively more dependent on bank finance. Evidence in the *Credit Conditions Survey* and from the Bank's Agents suggests that credit conditions for smaller businesses tend to be tighter than those facing larger companies. The stock of loans to smaller businesses continued to fall on a year earlier according to the most recent data from the Department for Business, Innovation and Skills and the British Bankers' Association (Chart 1.11). The weakness in the growth of the stock of loans to smaller businesses since the recession could, in part, reflect weak demand for credit, although it is difficult to disentangle independently weak demand — for example, if companies cut their investment spending — from weak demand due to the tightening in the supply of credit observed over that period.

1.5 Money

Four-quarter broad money growth has remained subdued: M4, excluding the holdings of interbank intermediaries, increased by 1.5% on a year earlier in 2011 Q2, with households' and PNFCs' money growth remaining weak.

Growth in aggregate broad money has been significantly weaker than the growth rate of nominal GDP in recent quarters (Chart 1.12). As discussed in previous *Reports*, there are reasons why growth in nominal spending has been associated with weaker growth in broad money than was typically the case prior to the financial crisis.⁽¹⁾ For example, banks have issued a large amount of equity and long-term debt in order to strengthen their balance sheets following the financial crisis. And that will have pushed down money growth to the extent that those instruments were purchased by the non-bank private sector.

(1) For more details see 'Understanding the recent weakness in broad money growth', *Bank of England Quarterly Bulletin*, Vol. 51, No. 1, pages 22–35.

Credit spreads

The spreads between Bank Rate and new household and business loan rates rose sharply during the financial crisis. This box discusses: why credit spreads matter; their main determinants; and recent developments therein.

The importance of credit spreads

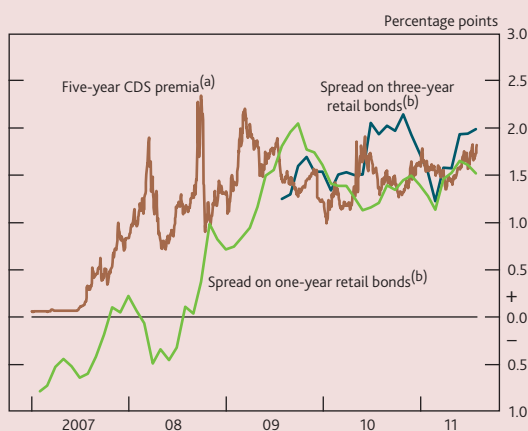
Private sector spending decisions will depend in part on the cost of new borrowing. Prior to the financial crisis, movements in Bank Rate, and expectations thereof, tended to be a good summary indicator of changes in an array of loan rates. But the increase in credit spreads during the crisis meant that cuts in Bank Rate were not reflected in full in new loan rates. Indeed, in some cases those rates rose (see, for example, the unsecured household rate in **Chart C**). The range of spreads across different types of loan also widened: for example, mortgages with higher loan to value (LTV) ratios became much more expensive than those with lower LTV ratios.

Determinants of credit spreads

Previous Bank analysis has identified a rise in the cost of funding for banks, relative to Bank Rate, as one important driver of the increase in credit spreads during the worst of the crisis.⁽¹⁾ Many lenders report that their marginal funding source is typically long-term wholesale debt, since this is the market in which it is possible to raise quickly a large amount of funding. But lenders with a greater proportion of retail deposits may consider the cost of both wholesale and retail funding. Indicators of funding spreads from both markets — such as credit default swap (CDS) premia and fixed-rate savings bonds — have tended to rise over the past 18 months (**Chart A**).⁽²⁾

The increase in CDS premia over the past 18 months has occurred despite banks taking action to increase capital and to

Chart A Indicative funding spreads



Sources: Bank of England, Markit Group Limited, Thomson Reuters Datastream and Bank calculations.

- (a) The data show a simple average of the five-year CDS premia of the major UK lenders (Barclays, HSBC, Lloyds Banking Group, Nationwide, Northern Rock, Royal Bank of Scotland and Santander UK).
- (b) Sterling only. Spread over the relevant swap rate. The one-year and three-year retail bond rates are weighted averages of rates from banks and building societies within the Bank of England's normal quoted rate sample with products meeting the specific criteria (see www.bankofengland.co.uk/mfsd/iadb/notesiadb/household_int.htm).

strengthen their balance sheets (Section 1.3). Several factors may have weighed against this improved resilience, including the intensification of fiscal concerns and banking sector stresses in several euro-area countries and continuing uncertainty surrounding the future structure of the UK banking industry and the regulatory environment. Meanwhile, an increase in competition for retail funding may have contributed to the rise in the cost of attracting some types of deposits from households.

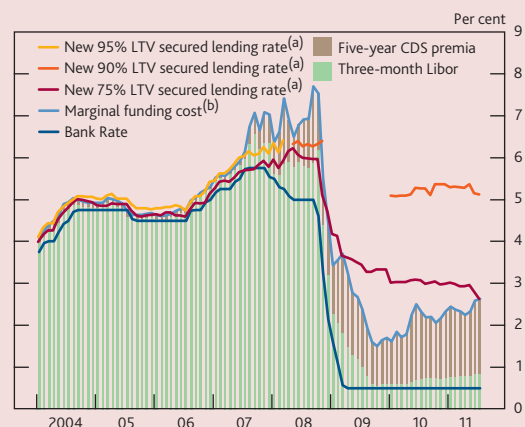
Loan rates to households and businesses also depend on the spread that banks add over their cost of funding. That reflects a wide range of factors including credit risk charges to cover possible losses on the loans, lenders' operating costs and a mark-up. And the importance of those factors may vary considerably between different types of loans: for example, a mortgage, backed by collateral, is likely to incur a much lower credit risk charge than an unsecured loan. A range of credit spreads are therefore considered below.

Recent developments in household credit spreads

Household secured credit spreads remain elevated. For example, the difference between a 75% LTV two-year discounted-rate mortgage and Bank Rate has risen from almost zero between 2004 and 2007 to over 2 percentage points currently (**Chart B**). And spreads on higher LTV mortgages have risen by substantially more.

But some mortgage rates have fallen over the past 18 months, as increases in banks' marginal funding costs — proxied, for floating-rate mortgages, by the sum of three-month Libor and five-year CDS premia⁽³⁾ — have been more than offset by a fall

Chart B New household secured lending rates, Bank Rate and an estimate of marginal funding cost



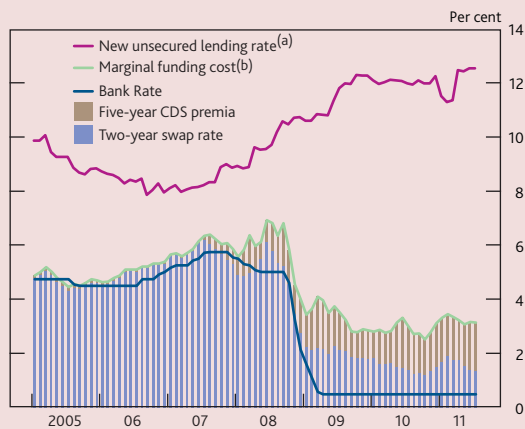
Sources: Bank of England, Bloomberg, British Bankers' Association, Markit Group Limited and Bank calculations.

- (a) Two-year discounted mortgage average quoted rate, sterling-only end-month averages, currently compiled using data from up to 25 UK monetary financial institutions. The 90% LTV series is only available on a consistent basis back to May 2008, and is not published for December 2008–December 2009 as only two or fewer products were offered in that period. The 95% LTV series finishes in March 2008, as thereafter only two or fewer products have been offered.
- (b) The estimated marginal funding cost of extending variable-rate sterling-denominated loans. This is calculated as the sum of three-month Libor plus a weighted average of the five-year CDS premia of the major UK lenders used in **Chart A**. Weights are based on banks' shares of new household secured lending, and, for July 2011 the weights are held fixed at June 2011 values. Marginal funding costs may vary across lenders. Lenders with a greater proportion of retail funding may consider the cost of deposits when assessing their marginal funding cost.

in the spread over those costs (**Chart B**). It is difficult to pinpoint the factors driving that decline in the spread over funding costs, although there have been tentative signs of greater competition in some parts of the mortgage market recently.

Spreads over Bank Rate on unsecured household lending also remain elevated relative to their pre-crisis levels. And, in contrast to recent declines in some secured lending rates, quoted rates on most types of unsecured lending have risen slightly over the past 18 months. That reflects banks' higher funding costs — proxied, for fixed-rate personal loans, by the sum of two-year swap rates and five-year CDS premia⁽³⁾ — but also increases in the spread over funding costs (**Chart C**). For example, credit risk charges on unsecured loans appear to have risen slightly recently.

Chart C New household unsecured lending rate, Bank Rate and an estimate of marginal funding cost



Sources: Bank of England, Bloomberg, British Bankers' Association, Markit Group Limited and Bank calculations.

(a) Calculated as a simple average of £5,000 and £10,000 personal loan average quoted rates, sterling-only end-month averages, currently compiled using data from up to 25 UK monetary financial institutions.

(b) The estimated marginal funding cost of extending fixed-rate sterling-denominated loans. This is calculated as the sum of a two-year swap rate plus a weighted average of the five-year CDS premia of the major UK lenders used in **Chart A**. Weights are based on banks' shares of new other household unsecured lending, and, for July 2011 the weights are held fixed at June 2011 values. Marginal funding costs may vary across lenders. Lenders with a greater proportion of retail funding may consider the cost of deposits when assessing their marginal funding cost.

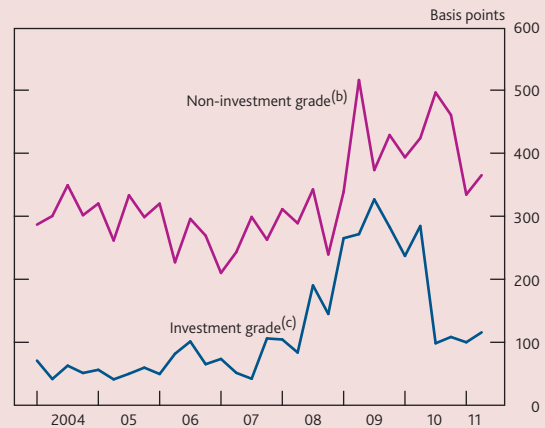
Recent developments in corporate credit spreads

Banks' higher funding costs are likely to have pushed up the cost of loans to the corporate sector relative to Bank Rate too. But, owing to the limitations of data — for example, there are no comprehensive data on quoted interest rates on new loans split by credit quality — it is difficult to construct a meaningful measure of credit spreads, or to carry out a decomposition similar to those discussed above for the household sector.

Movements in a number of alternative indicators of credit spreads suggest, however, that the cost of finance for large companies has fallen back over the past 18 months. For example, spreads on new investment-grade syndicated loans — large loans provided by a group of banks or other lenders — declined sharply in 2010, while spreads on non-investment

grade loans have fallen more recently (**Chart D**). Those movements are corroborated by reports from lenders of lower spreads on loans to large businesses in the Bank's *Credit Conditions Surveys*.

Chart D Average estimated spreads on syndicated loans^(a)



Sources: Dealogic and Bank calculations.

(a) Average disclosed spreads over reference rates in the currency in which loan tranches are denominated, weighted by tranche size. Classification may be adjusted if ratings change over the life of the loan providing this is confirmed by the banks involved in the loan. The share of loans for which spread details are disclosed varies over time. Data are non seasonally adjusted.

(b) Non-investment grade is Dealogic leveraged and highly leveraged categories.

(c) Investment grade is classified by Dealogic as a rating of BBB- or higher, on announcement of the loan. If there is no rating, then the loan spread on origination is used as the basis for classification, with any spread up to 250 basis points classified as investment grade.

In contrast to the apparent decline in credit spreads for large companies, data from the Department for Business, Innovation and Skills suggest that spreads on new lending for medium-sized companies have remained stable over the past 18 months and that they have risen slightly for small companies.⁽⁴⁾ Those data are only available from end-2008, so it is difficult to assess the extent to which spreads are higher now than before the crisis. But the Bank's Agents continue to report that credit conditions for small companies tend to be tight (Section 1.4).

Conclusion

Overall, credit spreads remained elevated relative to their pre-crisis levels, particularly so for unsecured household loans and probably also for loans to smaller companies. Higher funding costs are one common reason why spreads over Bank Rate have remained elevated. So the evolution of funding costs, including the extent to which they are affected by recent turbulence in financial markets, will be an important determinant of future changes in credit spreads. But movements in spreads over funding costs — which could vary significantly between different types of loans — will also be important. Section 5 discusses the MPC's judgements around the path of credit spreads.

(1) See 'Understanding the price of new lending to households', *Bank of England Quarterly Bulletin*, Vol. 50, No. 3, pages 172–82.

(2) This box considers aggregate measures of banks' funding costs, but the range of, for example, CDS premia across different banks has widened significantly since the financial crisis: see Chart 3.9 on page 33 of the June 2011 *Financial Stability Report*.

(3) For more details see the box on pages 174–75 of the article referenced in footnote (1).

(4) See, for example, Chart 2.4 in the July 2011 *Trends in Lending*.

2 Demand

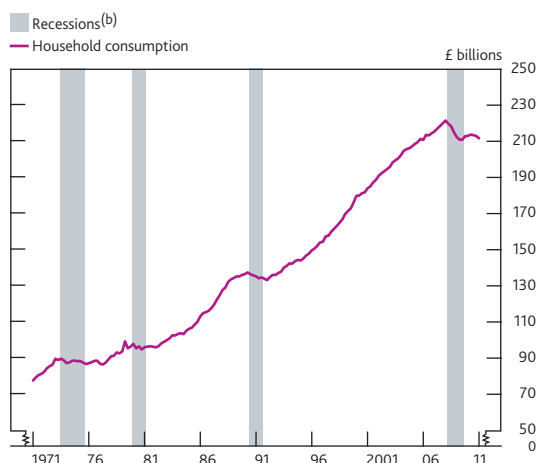
UK GDP rose by 0.5% in 2011 Q1, and is provisionally estimated to have increased by 0.2% in Q2. Private domestic demand decreased sharply in the first quarter, reflecting falls in both household and business spending. Net exports boosted growth in Q1, as imports decreased — in part reflecting the sharp fall in private domestic demand — and exports increased. Global demand has continued to expand, although the pace of world growth appears to have weakened recently. Market participants' concerns about the challenges facing several euro-area countries intensified.

Table 2.A Expenditure components of demand^(a)

Percentage changes on a quarter earlier	Averages		2010		2011
	1997–2009	2010 H1	Q3	Q4	Q1
Household consumption ^(b)	0.6	0.2	-0.1	-0.2	-0.6
Private sector investment	0.1	3.4	4.4	0.3	-3.8
<i>of which, business investment</i>	0.6	3.8	4.7	2.1	-3.2
<i>of which, private sector dwellings investment</i>	-0.7	2.6	3.6	-4.6	-5.6
Change in inventories ^{(c)(d)}	0.0	0.4	0.6	-0.1	-0.8
Private sector domestic demand	0.6	1.3	1.2	-0.2	-2.0
Government consumption and investment	0.8	0.0	0.2	-0.5	1.1
Alignment adjustment ^(d)	0.0	0.2	-0.2	0.0	0.3
Domestic demand	0.6	1.2	0.7	-0.2	-0.9
'Economic' exports ^(e)	0.8	1.0	1.5	2.1	2.4
'Economic' imports ^(e)	1.1	2.2	1.8	2.7	-2.4
Net trade^{(d)(e)}	-0.1	-0.4	-0.1	-0.3	1.4
Real GDP at market prices	0.5	0.7	0.6	-0.5	0.5

(a) Chained-volume measures.
 (b) Includes non-profit institutions serving households.
 (c) Excludes the alignment adjustment.
 (d) Percentage point contributions to quarterly growth of real GDP.
 (e) Excluding the estimated impact of missing trader intra-community (MTIC) fraud.

Chart 2.1 Household consumption^(a)



(a) Chained-volume measure. Includes non-profit institutions serving households.
 (b) Recessions are defined as at least two consecutive quarters of falling output (at constant market prices). The recessions are assumed to end once output began to rise, apart from the 1970s where two separate occasions of falling output are treated as a single recession.

Real GDP rose by 0.5% in 2011 Q1, with nominal GDP growing by 1.7%, as prices rose markedly following January's VAT increase. Real private domestic demand fell sharply in Q1 (Section 2.1), but GDP was supported by growth in government spending and a large boost from net exports (Section 2.3). Prospects for exports will depend, in part, on the outlook for the world economy (Section 2.2). The ONS provisionally estimated that GDP increased by 0.2% in Q2, although growth was depressed by the impact of temporary factors (Section 3).

2.1 Domestic demand

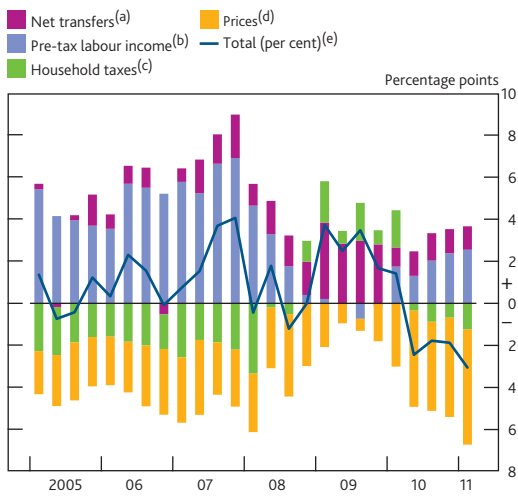
Recent trends in private domestic demand

Private domestic demand fell sharply in 2011 Q1, as both households' and businesses' real spending decreased (Table 2.A). As discussed in the *May Report*, companies' spending has so far been a key driver of the recovery in activity — business investment and stockbuilding have generally boosted GDP growth, while household spending has tended to provide less support. And although business spending declined in Q1, it might be expected to grow more rapidly than that of households during the recovery if demand rebalances away from private and public consumption towards net exports and business investment.

Household consumption

Through 2008 and the first half of 2009, real household consumption fell sharply (Chart 2.1). During that period, real post-tax labour income continued to grow: employment fell (Section 3) and nominal wage growth was weak (Section 4), but lower household taxes and increased benefit payments boosted incomes (Chart 2.2). Given the relative strength in income growth, the fall in consumption was accompanied by a sharp increase in the saving ratio (Chart 2.3). The rise in saving may have been because households expected the recession to lower their future earnings and adjusted their consumption in advance. In addition, increased uncertainty —

Chart 2.2 Contributions to four-quarter growth in real post-tax labour income



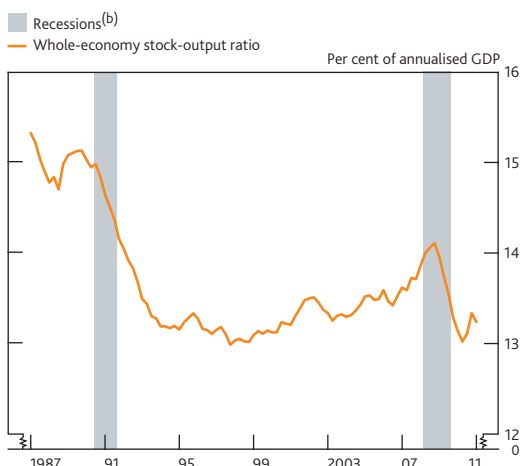
- (a) General government benefits minus employees' National Insurance contributions.
 (b) Wages and salaries plus mixed income.
 (c) Household taxes include income tax and Council Tax.
 (d) Calculated as a residual.
 (e) Nominal post-tax labour income divided by the consumer expenditure deflator (including non-profit institutions serving households).

Chart 2.3 Household saving ratio^(a)



- (a) Percentage of household post-tax income (not adjusted to take account of the impact of Financial Intermediation Services Indirectly Measured).
 (b) Recessions are defined as in Chart 2.1.

Chart 2.4 Whole-economy stock-output ratio^(a)



- (a) Based on the level of stocks in 2010 Q4 and stockbuilding, excluding the alignment adjustment.
 (b) Recessions are defined as in Chart 2.1.

for example about employment prospects — may have led households to increase their desired savings. The stimulus provided by monetary policy should have acted against those influences to some extent, although the impact of policy on the interest rates faced by households and companies was moderated somewhat by rising credit spreads (see the box on pages 16–17).

Over the past year and a half, GDP growth has begun to recover, but consumption growth has remained low. Very weak real income growth (Chart 2.2) is likely to have been a key driver of that low consumption growth. The weakness in real incomes in large part reflects the series of shocks — increases in VAT, energy and import prices — that have boosted consumer prices (Section 4). To the extent that these prices do not fall back, the level of households' real income will be permanently lower. And incomes will also be reduced by the persistent depressing effect that the recession is likely to have on the level of output.

When households face a persistent fall in their real income, they need to reduce their consumption. Some households may take time to alter their spending patterns. That is consistent with the decline in the saving ratio over the past few quarters (Chart 2.3). Others may have chosen to reduce their consumption immediately, or some, for example those who are credit constrained, may have had to adjust spending sharply to the lower level of real income.

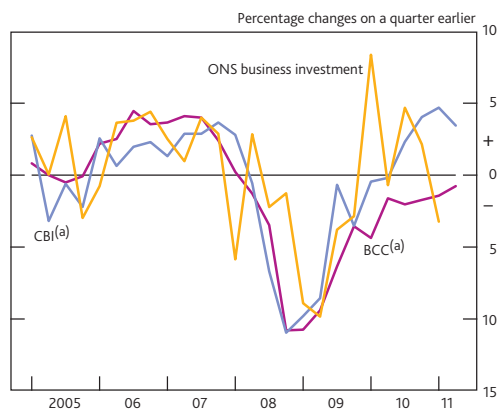
The evolution of real incomes will continue to be central for developments in household spending. But how much income households choose to save will also matter. As discussed above, the recession may have led households to increase savings as a precaution against future adverse income shocks. Such a rise in precautionary saving might persist for a time if households want to build up a larger buffer stock of assets, or reduce debt levels, in response to a change in view on the likely volatility of their future income. But if households are close to completing that adjustment, or if the rise in savings reflected a more temporary reaction to heightened uncertainty during the worst of the recession, the saving ratio could be expected to fall back as the economy recovers.

In the near term, consumption growth is likely to remain subdued. Retail sales volumes grew by only 0.2% in Q2, private new car registrations fell, and consumer confidence remains low. The prospects for household spending in the medium term are discussed in Section 5.

Companies' spending

Stockbuilding reduced GDP growth in Q1, as companies ran down their inventories after a period of re-stocking. Despite that previous rebuilding of inventories, the stock-output ratio remains below its level in the years immediately preceding the recession (Chart 2.4). But information from the Bank's Agents

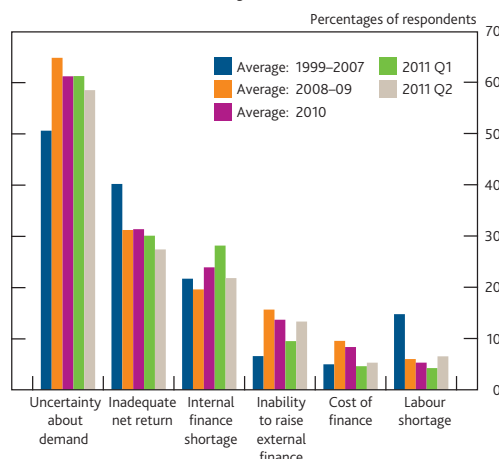
Chart 2.5 Business investment and surveys of plant and machinery investment intentions



Sources: BCC, CBI, CBI/PwC and ONS.

(a) Net percentage balance of companies that say they have increased planned investment in plant and machinery over the past three months (BCC), or revised up planned investment in plant and machinery over the next twelve months (CBI). Sectoral surveys weighted by shares in real business investment. BCC data are non seasonally adjusted and cover the non-services and services sectors. CBI data cover the manufacturing, distributive trades, financial services and consumer/business services sectors. Investment intentions survey measures have been scaled to match the mean and variance of investment growth since 1999.

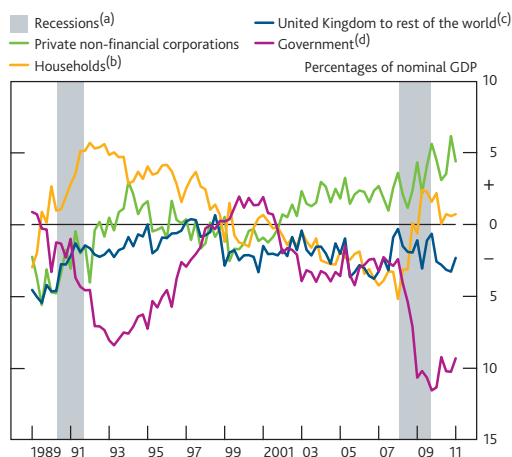
Chart 2.6 Factors likely to hold back investment(a)



Sources: CBI, CBI/PwC and ONS.

(a) Manufacturing, financial services, consumer/business services weighted by shares in real business investment. Companies are asked for their twelve-month forecast of factors likely to limit capital expenditure authorisations. Financial services companies are not asked to distinguish between a shortage of internal finance and the availability of external finance, so their single response is used for both questions.

Chart 2.7 Financial balances by sector



(a) Recessions are defined as in Chart 2.1.
 (b) Includes non-profit institutions serving households.
 (c) Net lending by the United Kingdom to the rest of the world is equivalent to the sum of the current and capital accounts of the balance of payments.
 (d) Excludes public corporations.

suggests that many businesses may have completed their post-recession re-stocking. That is consistent with companies having chosen to operate with lower stocks, relative to output, perhaps because the tightening in credit conditions during the financial crisis has been associated with a higher cost and reduced availability of working capital. In that case, there would be little further rebuilding of stock levels, relative to output, to come, and so stockbuilding would be unlikely to contribute significantly to growth in the medium term.

Business investment fell in 2011 Q1 (Chart 2.5), although the weakness was in part erratic: investment growth was boosted in the second half of 2010 as companies brought forward purchases of aircraft ahead of changes to their VAT treatment in January, and that effect unwound in Q1.

Companies invest for a variety of reasons, including: to replace assets that have depreciated; to improve efficiency and reduce costs; and to expand capacity. Survey evidence from the CBI suggests that the replacement of capital is generally a significant factor behind companies' investment. And the CBI survey and reports from the Bank's Agents suggest that it was a key driver of investment spending for many companies throughout much of the economic recovery so far. But the CBI survey suggests that it may have become somewhat less important recently. In contrast, in Q2, the proportion of CBI respondents saying that they were investing to expand capacity increased, consistent with a narrowing margin of spare capacity within companies (Section 3).

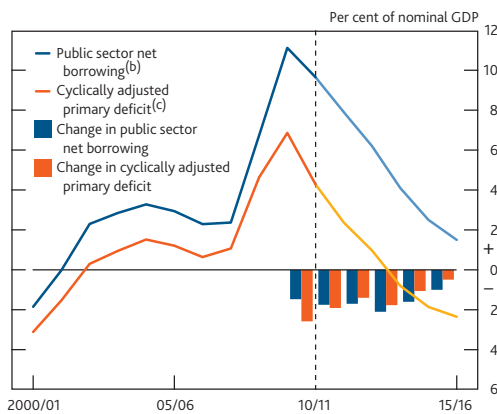
A number of factors may constrain investment, however. Businesses report that demand uncertainty, though less likely to hold back investment than during the recession, remains higher than before the recession (Chart 2.6). That may reflect uncertainty about developments in the global economy (Section 2.2) or about the impact of the UK fiscal consolidation. Companies also report that the availability of external finance continues to restrain investment to a greater extent than before the recession (Chart 2.6).

Businesses also finance investment using internal resources. UK private non-financial corporations have increased their net saving over the past few years (Chart 2.7), and healthier company balance sheets could support investment.

Surveys of investment intentions suggest that business investment growth may pick up somewhat in the near term (Chart 2.5). Section 5 discusses the prospects for companies' spending in the medium term.

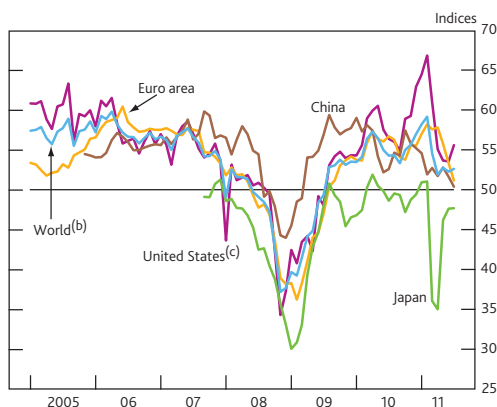
Government spending

The MPC's forecast is conditioned on the fiscal plans set out in the March Budget and supplemented by the assumed composition of government spending underlying the Office for Budget Responsibility's (OBR's) associated *Economic and Fiscal*

Chart 2.8 Public sector net borrowing^(a)

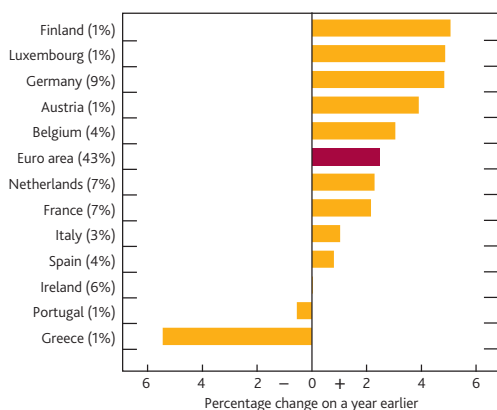
Sources: HM Treasury, Office for Budget Responsibility (OBR), ONS and Bank calculations.

- (a) Measures exclude the temporary effects of financial interventions. Observations to the right of the vertical line are projections.
- (b) Projections for public sector net borrowing come from the OBR's March 2011 *Economic and Fiscal Outlook*. Data prior to 2011/12 are based on ONS data.
- (c) Public sector net borrowing minus net debt interest payments, adjusted for the effects of the economic cycle. Projections are Bank calculations based on the OBR's March 2011 projections for the primary deficit and its projection of the output gap for 2011/12–2015/16. Estimates for 2009/10 and 2010/11 based on ONS data and the OBR's estimate of the output gap made in the March 2011 *Economic and Fiscal Outlook*. Estimates prior to 2009/10 based on ONS data and HM Treasury's estimates of the output gap.

Chart 2.9 Survey measures of global output growth^(a)

Sources: HSBC, JPMorgan Chase & Co., Markit Economics, Nomura, US Bureau of Economic Analysis and US Institute for Supply Management (ISM).

- (a) A figure over 50 indicates rising output compared with the previous month, and a figure below 50 indicates falling output.
- (b) Based on the results of surveys in almost 30 countries, accounting for an estimated 86% of global GDP.
- (c) Manufacturing production and non-manufacturing business activity ISM survey balances weighted together using their nominal shares in value added.

Chart 2.10 Selected euro-area countries' 2011 Q1 GDP^(a)

Sources: Eurostat and ONS.

- (a) Chained-volume measures. Figures in parentheses are shares in UK goods and services exports in 2009. Euro-area countries with a negligible share of UK exports are omitted from the chart. Country export shares may not sum to euro-area total due to rounding.

Outlook. The fiscal deficit has begun to narrow over the past year (Chart 2.7). The OBR's forecast suggests that a similar proportion of the consolidation is planned to occur in 2011/12 to that observed in 2010/11 (Chart 2.8).

2.2 The international economy

Recent developments in global growth

Global growth continued to be solid in 2011 Q1, but surveys suggest that it has slowed subsequently (Chart 2.9). In part, that slowdown is likely to reflect the impact of factors whose effects on growth should be transient. For example, the Japanese earthquake and tsunami depressed output in Japan in Q2, and also temporarily reduced GDP growth in other countries, as global supply chains were disrupted. In addition, higher oil prices since the start of the year are likely to depress growth for a time. But there are also factors that could be having a more persistent impact, such as increased concerns associated with the fiscal positions of several euro-area countries, and the effects of actual or expected policy tightening in some emerging Asian economies.

The euro area

Euro-area output growth was strong in 2011 Q1, though survey indicators suggest that the pace of growth has since fallen (Chart 2.9). Euro-area GDP increased by 0.8% in Q1 and by 2.5% over the four quarters to Q1 — above pre-recession average rates. But the fortunes of different Member States continued to diverge. Output in Germany increased healthily over the year to Q1 (Chart 2.10). GDP growth was much weaker in several other euro-area countries, however, particularly those most affected by concerns over fiscal positions and debt sustainability.

Market concerns about the sustainability of the fiscal positions of several euro-area members have intensified markedly over the past three months (Section 1). As these countries undergo fiscal consolidation, their output growth is likely to remain weak. And global growth could be affected significantly if concerns about debt sustainability in these countries were to result in severe distress and dislocation in financial markets more broadly in Europe and elsewhere,⁽¹⁾ or lead to a sharp deterioration in consumer and business confidence (see the box on page 38).

The United States

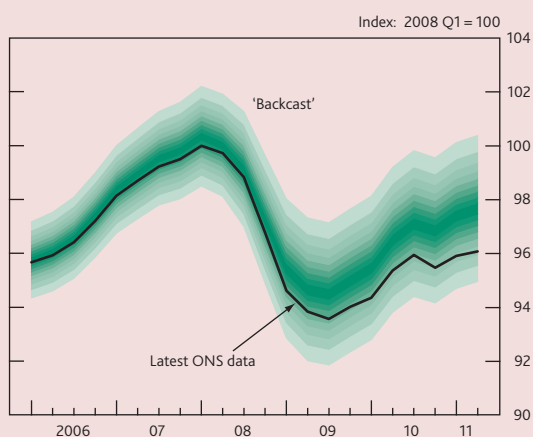
Recent revisions to US GDP data point to a more marked slowing in output growth in recent quarters than previously estimated (Chart 2.11). GDP growth has been especially weak over the first half of 2011, increasing by only 0.1% in Q1 and 0.3% in Q2. To the extent that the recent weakness in growth reflects the impact of rising petrol prices on real household income and spending growth and supply chain effects related

(1) See *Financial Stability Report*, June 2011, available at www.bankofengland.co.uk/publications/fsr/2011/fsrfull1106.pdf.

GDP revisions and current data puzzles

The economy is a complex system and output can therefore only be imperfectly measured. The MPC judges the level of activity based on a range of information, but a key indicator is the ONS's estimate of GDP. The ONS's early snapshots of GDP growth, while a timely steer on the state of the economy, are based on a subset of all the information that will eventually be available. Estimates are then revised as that additional information becomes available and as methodological improvements are introduced. The MPC's assessment of GDP therefore also considers the past pattern of revisions, as well as other indicators of activity. Due to the uncertainty around that assessment, it is presented in the form of a distribution (**Chart A**).

Chart A GDP at market prices^(a)



Sources: ONS and Bank calculations.

(a) Chained-volume measures. The fan chart depicts an estimated probability distribution for GDP over the past. It can be interpreted in the same way as the fan charts in Section 5 and forms the first part of the fan chart shown in **Chart 5.5** on page 39.

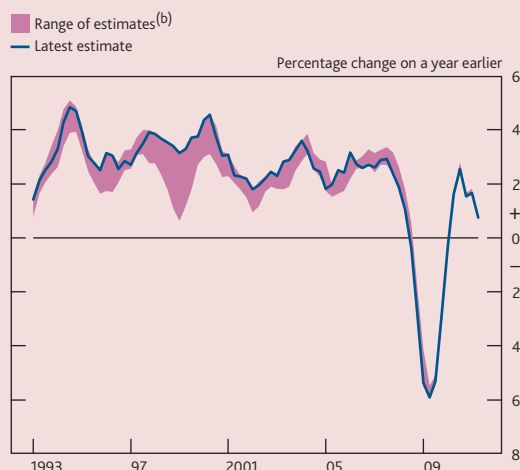
As this box discusses, data revisions have the potential to alter the interpretation of the past, but they are unlikely to resolve fully each data puzzle facing the Committee. In October, the ONS will publish updated GDP estimates, which will include the first balanced estimate of GDP for 2009 and methodological changes, and the MPC will reassess its view of the recent past based on those new estimates alongside other information.

GDP revisions

Revisions to GDP growth can occur several years after the initial release and can be sizable (**Chart B**). Since 1993, revisions to the first national accounts release of quarterly GDP growth have, on average, been slightly positive. Analytical techniques developed by Bank staff use information on the likely nature of revisions to evaluate a 'most likely path' for GDP, and a fan around that path (**Chart A**).⁽¹⁾

As with any data analysis, different approaches could give different results. The analysis underlying **Chart A** will capture

Chart B Successive estimates of GDP at market prices^(a)



(a) Chained-volume measure. Data shown to July 2011 GDP preliminary estimate.
(b) The range covers the estimates published in earlier vintages of the National Accounts.

revisions due to improvements to methods and samples — so, for example, some of the average upward revision might reflect the inclusion of new, fast-growing companies.⁽²⁾ An analysis that looked at revisions over a shorter revision window would give a somewhat smaller average revision. Additionally, ONS estimation and data collection methods continue to evolve; such changes could lead to smaller average data revisions over time.⁽³⁾

The current backcast

The MPC's backcast shown in **Chart A** suggests a larger than average upward revision to the level of GDP over 2009. That reflects evidence that weak early estimates of growth tend to be revised up by more than strong ones, together with the relative strength in contemporaneous business survey measures of activity. It also reflects a judgement that there are likely to be larger upward revisions during recessions.

There is considerable uncertainty around that judgement. There are no recessions in the sample used to calibrate the backcast itself. And although Bank staff have examined how data were revised following previous recessions, improvements to ONS methods mean that these revisions may not provide a good guide to revisions following this recession. So, while Bank analysis of recessions has led to an upward move in the most likely path for GDP, it has also been associated with a widening of the fan.

Overall, the MPC presently judges that current and recent levels of GDP are more likely to be revised up than down once the revisions process is complete (**Chart A**). The backcast suggests that there is just over a three-in-five chance that the current level of GDP will be revised up by more than 1%, it also incorporates around a one-in-five chance that GDP will be revised down, however.

A revision to GDP would be associated with changes in its expenditure components, and analytical techniques can also provide a guide to the mix of these. The historical pattern of revisions indicates that trade data have been prone to the largest upward revisions between first estimates and mature data (Table 1). Survey data provide an additional guide to which expenditure components are more likely to be revised at any point in time. For example, surveys indicate stronger service sector exports during the recovery than observed in current estimates. Reflecting the unusual nature of recessions, past average revisions to expenditure components may not provide an accurate guide to the allocation of revisions in recent years. Nonetheless, were GDP to be revised up in line with the central case in Chart A, Bank staff judge it most likely that these revisions would be concentrated in investment and exports, which have seen the largest variance of revisions over the past.

Possible implications of data revisions over the recession

If data revisions do occur in line with the MPC's best collective judgement, they could alter the interpretation of several puzzling features of the current data. One puzzle is the weakness of net trade despite the 25% depreciation of sterling since mid-2007 (Section 2). That net trade weakness reflects both the weakness of services exports and the strength of imports relative to total expenditure. It is plausible that some of the upward revision could be reflected in higher exports. And upward revisions to other components of demand would make strong import data more explicable.

A second puzzle is the recent weakness of labour productivity growth. Measures of employment fell by less than output over the recession. And in 2011 Q1 labour productivity per hour

Table 1 Revisions to selected expenditure components of demand^(a)

	Mean revision since first QNA release	Variance of revisions since first QNA release
Household consumption ^(b)	0.09	0.21
Whole-economy investment	0.08	3.59
Government consumption	-0.10	0.87
Economic exports ^(c)	0.39	1.94
Economic imports ^(c)	0.44	1.37
Real GDP at market prices	0.08	0.12

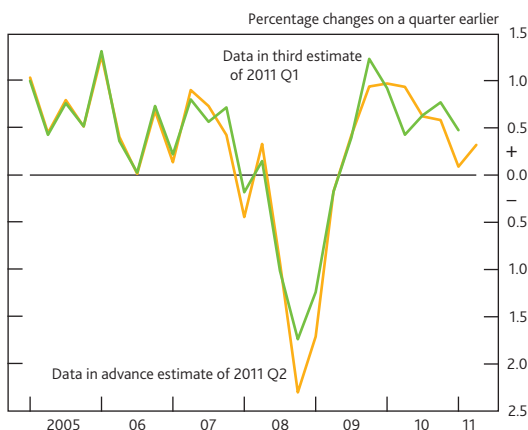
Sources: ONS and Bank calculations.

- (a) Based on revisions since the first Quarterly National Accounts release. Estimated using data released between 1993 and June 2011. Excludes revisions detailed in footnote (2). Chained-volume measures.
 (b) Includes non-profit institutions serving households.
 (c) Excluding the estimated impact of missing trader intra-community fraud.

remained around 7% below the continuation of its linear pre-recession trend suggesting substantial spare capacity. But sectoral surveys of capacity utilisation currently indicate a much smaller margin of spare capacity (Section 3). Future revisions to GDP may account for some of the divergence between these indicators of spare capacity. But the Committee's backcast indicates there is only around a 15% chance of data revisions halving the gap between productivity and its pre-recession trend. And to account for all of the discrepancy GDP would have to be revised to above the coloured area in Chart A.

- (1) Further information is available in Cunningham, A and Jeffery, C (2007), 'Extracting a better signal from uncertain data', *Bank of England Quarterly Bulletin*, Vol. 47, No. 3, pages 364–75. See the box on page 39 of the November 2007 *Inflation Report* for a fuller description of the GDP fan chart and what it represents.
 (2) The Bank's calculations exclude two significant sets of methodological revisions, however: excluded are changes in September 1998 when the National Accounts moved to a new accounting framework, and the move to annual chain linking in September 2003.
 (3) For example, see 'Understanding the quality of early estimates of GDP', *Economic and Labour Market Review*, Vol. 3, No. 12, pages 43–50.

Chart 2.11 US GDP^(a)



Sources: Bureau of Economic Analysis and Federal Reserve Bank of St. Louis.

(a) Chained-volume measures.

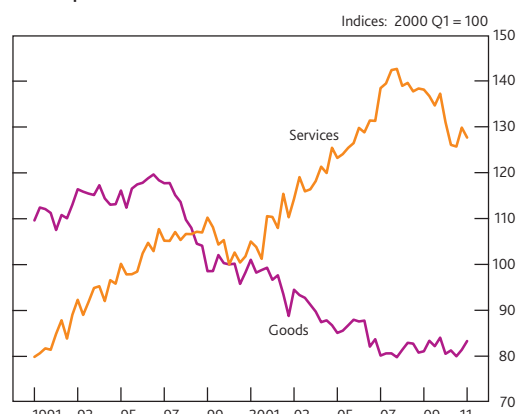
to the Japanese earthquake and tsunami, it could be relatively short-lived.

But there are some signs of more persistent weakness. In particular, after falling back around the turn of the year, the unemployment rate has picked up a little over the past few months to 9.2% in June. And the housing market remains weak — the S&P/Case-Shiller national home price index fell by around 5% in the year to 2011 Q1. In addition, some fiscal consolidation is planned over the next few years. These influences may continue to exert a drag on growth.

Emerging economies

Emerging economies have generally continued to grow robustly, although growth appears to have slowed a little since the second half of 2010. In part, that is likely to reflect the impact of monetary policy tightening implemented in some countries in response to elevated inflation. Nonetheless, output growth is likely to remain strong in the near term.

Chart 2.12 Ratios of UK exports to UK-weighted rest of G7 imports^(a)



Sources: ONS, Thomson Reuters Datastream and Bank calculations.

(a) Chained-volume measures excluding the estimated impact of MTIC fraud. UK goods (services) exports divided by imports of goods (services) in Canada, France, Germany, Italy, Japan and the United States, weighted using UK 2009 goods (services) export shares from the 2010 *Pink Book*.

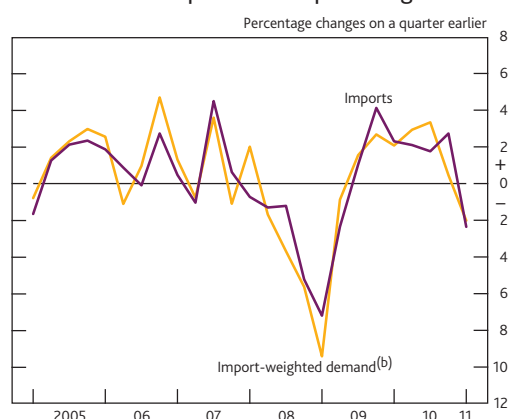
Table 2.B UK exports and export orders^(a)

	Averages				2011	
	1998–2007	2008	2009	2010	Q1	Q2
Manufacturing						
BCC orders ^(b)	5	4	-6	26	26	22
CBI orders ^(c)	-13	-13	-20	14	24	4
Agents' scores ^(d)	0.8	1.9	-1.1	2.2	3.5	3.3
CIPS/Markit orders ^(e)	50.3	45.5	47.4	55.4	58.4	53.1
ONS ^{(f)(g)}	0.6	-0.9	-0.7	2.4	4.7	n.a.
Services						
BCC orders ^(b)	7	3	-4	10	16	16
ONS ^(g)	1.8	-0.3	-1.7	-0.1	-1.2	n.a.

Sources: Bank of England, BCC, CBI, CBI/PwC, CIPS/Markit and ONS.

- (a) Dates refer to the period in which the survey was conducted.
 (b) Percentage balances of respondents reporting domestic orders to be 'up' relative to 'down' over the past three months. Data are non seasonally adjusted.
 (c) Percentage balance of respondents reporting the trend in export orders to be 'up' relative to 'down' over the past three months.
 (d) Volume of sales over past three months compared with same period a year ago. End-quarter observation. The scores are on a scale of -5 to +5, with positive scores indicating higher sales.
 (e) A reading above 50 indicates increasing orders/new business this month relative to the situation one month ago. Quarterly data are averages of monthly indices.
 (f) Goods exports excluding the estimated impact of MTIC fraud.
 (g) Quarterly growth. Chained-volume measures.

Chart 2.13 UK imports and import-weighted demand^(a)



- (a) Chained-volume measures, trade data exclude the estimated impact of MTIC fraud.
 (b) Calculated by weighting household consumption (including non-profit institutions serving households), whole-economy investment (excluding valueables), government spending, stockbuilding (excluding the alignment adjustment), and exports by their respective import intensities. Import intensities are estimated using the *United Kingdom Input-Output Analytical Tables 2005*. Scaled to match the mean and variance of imports since 1987.

2.3 UK trade flows

UK net exports contributed substantially to GDP growth in Q1, although in part that reflected erratically weak import growth. But net exports reduced output growth in five of the preceding six quarters. That is surprising, given that world imports, with each country's imports weighted by their share in UK exports, have generally grown more rapidly than UK import-weighted demand. Moreover, the significant depreciation of sterling since mid-2007 should be encouraging a rebalancing of demand towards goods and services produced in the United Kingdom.

UK exports

UK exports increased strongly in 2011 Q1. In part, that is likely to have reflected solid global demand. In addition, the lower level of sterling should also have continued to support UK exports. The UK trade share of goods has indeed stabilised over the past few years, having declined over the previous decade (**Chart 2.12**). But the UK service sector's export share remains below its pre-recession level. One possibility, consistent with survey evidence and discussed in the box on pages 22–23, is that services export growth may have been higher over the past few years than currently estimated. But it is also possible that some other factors, for example an adverse shift in global demand for services in which the United Kingdom specialises, have offset the impact of sterling's depreciation.

A slowing in world growth could already be weighing on UK export growth. Manufacturing export orders survey balances fell back somewhat in Q2, although they are still above historical averages (**Table 2.B**). ONS goods exports were weak in April and May, taken together, relative to Q1. The BCC survey of service sector export orders was unchanged in Q2, and continues to indicate above-average services export growth (**Table 2.B**).

Imports

UK import growth was very weak in 2011 Q1. That, in part, reflects the unwinding of strong aircraft imports associated with the change in VAT treatment (Section 2.1). But, even excluding that effect, imports appear to have been weak. In large part, that is likely to reflect the weakness of demand (**Chart 2.13**). With imports continuing to move broadly in line with import-weighted demand, there is little evidence so far that the depreciation of sterling has led to a significant switch away from imports and towards domestically produced goods and services. But, as discussed in the box on pages 22–23, there is a possibility that import-weighted demand could be revised up. ONS goods imports for April and May together were broadly stable relative to Q1.

3 Output and supply

Output is estimated to have risen by 0.2% in Q2. But temporary factors are likely to have depressed output somewhat. Employment continued to increase, albeit at a slower rate than earlier in the year, and average hours fell. There is likely to be some spare capacity still remaining within companies, but there is considerable uncertainty around its precise extent. Unemployment remains elevated.

Output is provisionally estimated to have risen by 0.2% in 2011 Q2, although it was reduced temporarily by several special factors (Section 3.1), including the extra bank holiday associated with the royal wedding. That additional bank holiday is also likely to have been the main factor behind a sharp decline in average hours worked, but the number of people employed continued to increase (Section 3.2). Over the past year, subdued output growth coupled with rising employment has meant that productivity has been broadly flat.

Growth in companies' supply capacity is likely to have slowed during the recession. The precise extent of spare capacity within companies remains unclear, but a limited degree of spare capacity within businesses is likely to remain (Section 3.2). There is, however, considerable slack in the labour market (Section 3.3).

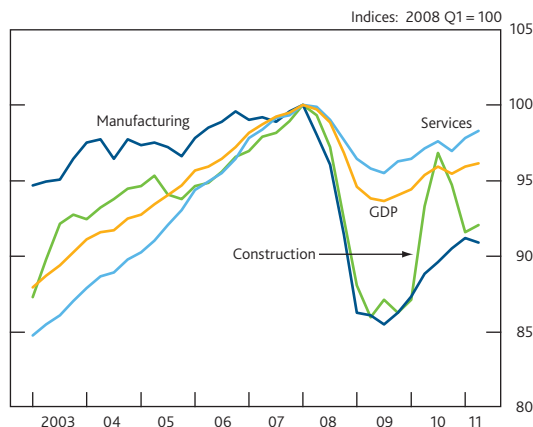
3.1 Output

GDP is estimated to be around 4% below its pre-crisis peak. As discussed in the box on pages 22–23, there is some uncertainty surrounding early estimates of GDP growth. Overall, the MPC judges that the current level of GDP is more likely to be revised up than down.

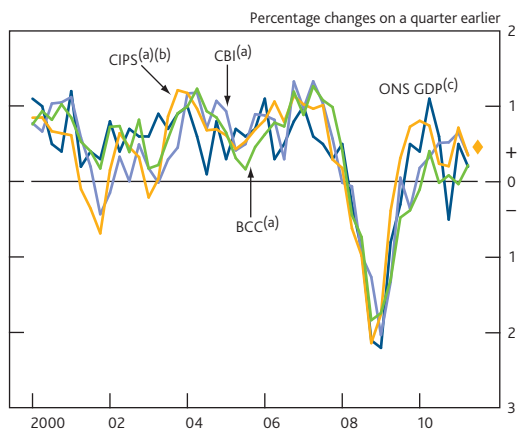
Output is provisionally estimated by the ONS to have risen by 0.2% in Q2 (Chart 3.1). Within that, service sector growth of 0.5% was partially offset by a 0.3% decline in manufacturing sector output. But, as discussed in the *May Report*, Q2 output was probably depressed by the additional bank holiday associated with the royal wedding in April, and by supply chain disruptions following the earthquake and tsunami in Japan.

The impact of supply chain disruptions was probably most pronounced in the manufacturing sector; for example, car production fell as several Japanese car manufacturers temporarily cut UK-based production. More broadly, the additional bank holiday in April coincided with a reduction in output for both manufacturing and service sectors in that

Chart 3.1 GDP and sectoral output^(a)

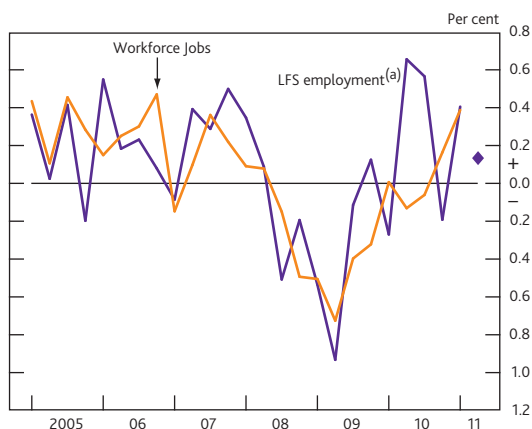


(a) Chained-volume measures. GDP is at market prices. Indices of sectoral output are at basic prices.

Chart 3.2 Indicators of aggregate output growth

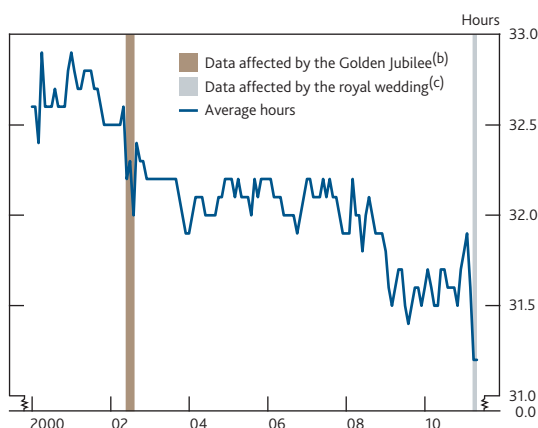
Sources: BCC, CBI, CBI/PwC, CIPS/Markit and ONS.

- (a) These measures are produced by weighting together surveys from the BCC (manufacturing and services), the CBI (manufacturing, financial services, business/consumer services and distributive trades) and CIPS/Markit (manufacturing, services and construction) using nominal shares in value added. The BCC data are non seasonally adjusted. Survey measures have been scaled to match the mean and variance of GDP growth since 2000.
- (b) The diamond shows July data.
- (c) Chained-volume measure at market prices.

Chart 3.3 Quarterly employment growth

Source: ONS (including the Labour Force Survey).

- (a) The diamond shows an estimate for 2011 Q2 based on employment in the three months to May.

Chart 3.4 Average actual weekly hours^(a)

Source: Labour Force Survey.

- (a) Average weekly hours worked in main and second job. Rolling three-month measure.
- (b) A reduction in average weekly hours associated with the Golden Jubilee bank holiday will have affected data between the three months to June and the three months to August 2002.
- (c) A reduction in average weekly hours associated with the royal wedding bank holiday will have affected data between the three months to April and the three months to May 2011, and will continue to affect data in the three months to June.

month. That drop in output is likely to have reflected the loss of a working day (Section 3.2). In addition, some companies may have brought forward planned factory closures for plant maintenance as the number of staff on holiday increased. Partially offsetting these effects, activity in some sectors such as hotels and restaurants may have been boosted by the additional bank holiday and warm weather in April.

There is uncertainty over the extent to which temporary factors affected growth in Q2. But overall, these temporary factors are likely to have reduced growth somewhat. Headline growth in Q3 is likely to be boosted as the factors weighing down on output in Q2 unwind. But CIPS/Markit data for July are consistent with modest underlying growth on the quarter (Chart 3.2). Within that, less support may be provided by manufacturing than earlier in the recovery; the CIPS/Markit manufacturing sector output index fell in July, and is now below its post-1997 average, and substantially below the high levels observed at the turn of the year. That could reflect the easing in global demand growth (Section 2.2).

3.2 Labour demand, productivity and companies' supply capacity

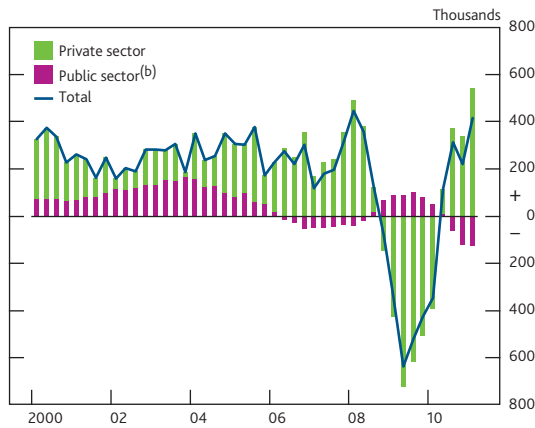
Labour demand

Both the Workforce Jobs and Labour Force Survey (LFS) measures of employment rose in 2011 Q1 (Chart 3.3). But the LFS measure of employment has risen by significantly more since mid-2010, and is closer to its pre-recession level than Workforce Jobs.⁽¹⁾ LFS data suggest that the pace of employment growth may have started to ease — LFS employment rose by just 50,000 in the three months to May, compared with 137,000 in the three months to February. In addition, survey indicators point to a little below average employment growth.

During the first part of the year, the increase in employment was accompanied by a pickup in average hours. But average weekly hours fell in the three months to May. A large part of that fall is likely to be due to the additional bank holiday in April — average hours also declined in 2002 at the time of the additional bank holiday for the Golden Jubilee (Chart 3.4) — and should be temporary. But this volatility makes it difficult to judge how far the data are from their underlying trend.

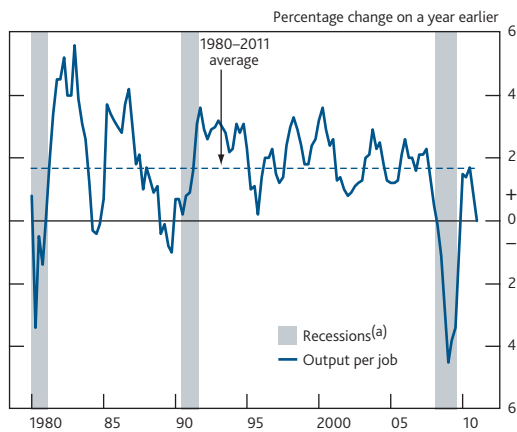
Increased LFS employment has been driven by the private sector, where employment rose by around 540,000 over the four quarters to Q1. In contrast, general government employment fell by 125,000 over the same period (Chart 3.5). According to Office for Budget Responsibility projections, general government employment is expected to fall by around

(1) See page 26 of the February 2011 Report for a discussion of differences between the LFS and Workforce Jobs employment data.

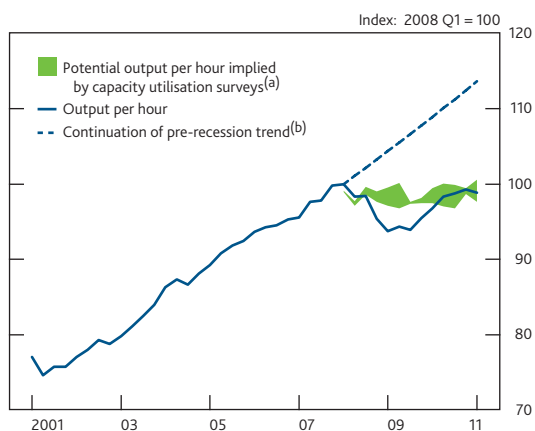
Chart 3.5 Four-quarter changes in employment^(a)

Source: ONS (including the Labour Force Survey).

- (a) Total employment changes are calculated from quarterly data. Public sector changes are calculated from data for the last month in the quarter. The private sector change is calculated as the difference between whole-economy and public sector changes.
 (b) Total general government employees (excludes public sector corporations).

Chart 3.6 Labour productivity

- (a) Recessions are defined as at least two consecutive quarters of falling output (at constant prices) estimated using the latest data. The recessions are assumed to end once output began to rise.

Chart 3.7 Manufacturing labour productivity

Sources: Bank of England, BCC, CBI, ONS and Bank calculations.

- (a) Based on capacity utilisation survey measures. The surveys have been adjusted so that the mean and variance matches that of an estimated gap between measured output per hour and its Hodrick-Prescott filtered statistical trend over the period 1998 Q1 to 2008 Q1. Includes measures of manufacturing capacity utilisation from the Bank's Agents and CBI, and of non-services capacity utilisation from BCC. The BCC data are non seasonally adjusted.
 (b) Calculated by projecting forward output per hour from 2008 Q2 using the average quarterly growth rate between 2003 Q2 and 2008 Q1 implied by the Hodrick-Prescott filtered statistical trend of measured output per hour.

400,000 over the next five years, although the majority of that reduction occurs from financial year 2013/14 onward.

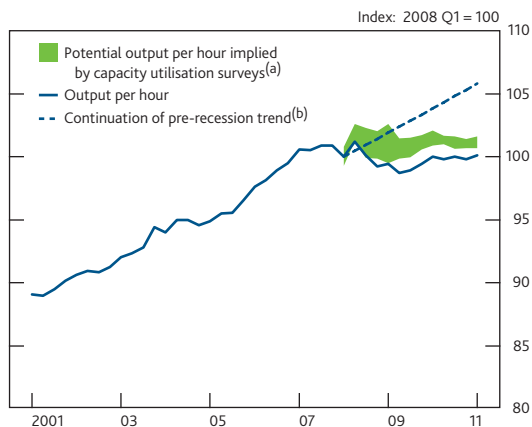
Productivity and supply capacity within companies

During the recession, employment declined by less than output, so that productivity fell (Chart 3.6). That took productivity well below a continuation of its pre-crisis trend. At face value, that suggested that there was significant spare capacity within companies; and that companies would be able to expand output during the recovery without significant hiring.

During the recovery to date, however, companies, in aggregate, have been hiring staff and productivity has grown at below-average rates (Chart 3.6). The level of productivity therefore remains substantially below its pre-crisis trend (Charts 3.7 and 3.8 illustrate this for the manufacturing and service sectors respectively). It is possible that some of the observed weakness in productivity reflects measurement errors or temporary factors. But business surveys of spare capacity, when compared with observed productivity data, are consistent with underlying productivity having been broadly flat. Judging the extent to which underlying supply has been affected by the recession is a key issue for the MPC.

It is possible that underlying productivity may not be as weak as the current data suggest. For example, downward revisions to estimates of employment or upward revisions to estimates of output would suggest that productivity growth over the recent past has been somewhat stronger — although, as discussed in a box on pages 22–23, such revisions are likely to be modest relative to the scale of the weakness in productivity. Alternatively, some of the weakness in measured productivity could reflect companies' concerns about finding and retaining employees with the right skills. Some businesses may have held on to staff during the downturn in anticipation of a recovery in demand. And some of the more recent strength in employment outturns may reflect companies who expect demand to pick up hiring new staff — particularly those with specialist skills — ahead of that. In both cases, measured productivity growth could rise quite sharply in the future — either as some companies eventually decide to let surplus staff go, or as output growth picks up. But such behaviour is difficult to reconcile with business surveys suggesting little spare capacity.

Sectoral changes to the composition of employment over the recession may also have dampened productivity growth — for example, if employment shifted from sectors with relatively high measured productivity, such as manufacturing and financial services, towards those with relatively low measured productivity. Changes in employment shares can, however, only explain a small proportion of the observed weakness in labour productivity; for example, in 2008 Q1, the share of Workforce Jobs employment in financial services was just 3.7%

Chart 3.8 Services labour productivity

Sources: Bank of England, BCC, CBI/PwC, ONS and Bank calculations.

- (a) Based on capacity utilisation survey measures. The surveys have been adjusted so that the mean and variance matches that of an estimated gap between measured output per hour and its Hodrick-Prescott filtered statistical trend over the period 1998 Q1 to 2008 Q1. Includes measures of capacity utilisation from the Bank's Agents, BCC and CBI. The CBI measure weights together financial services, business/consumer services and distributive trades surveys using shares in nominal value added. The BCC data are non seasonally adjusted.
- (b) Calculated by projecting forward output per hour from 2008 Q2 using the average quarterly growth rate between 2003 Q2 and 2008 Q1 implied by the Hodrick-Prescott filtered statistical trend of measured output per hour.

and that has since fallen by less than 0.1 percentage points. Moreover, productivity weakness is broad-based across a range of sectors.

Evidence from business surveys of spare capacity, when compared with productivity data, is consistent with the downturn having a persistent impact on supply capacity in both the manufacturing and service sectors over recent years. The swathes in **Charts 3.7** and **3.8** show ranges for manufacturing and service sector potential productivity since 2008 Q1, based on companies' responses to capacity utilisation surveys. The surveys suggest that manufacturing sector potential productivity has remained broadly constant since the recession — the initial fall in productivity was associated with a decline in capacity pressures, but that gap has closed as productivity has recovered (**Chart 3.7**). Capacity utilisation surveys also suggest broadly constant potential productivity in the service sector since the beginning of the recession (**Chart 3.8**), with capacity pressures tightening a little during the recovery despite very weak productivity growth.

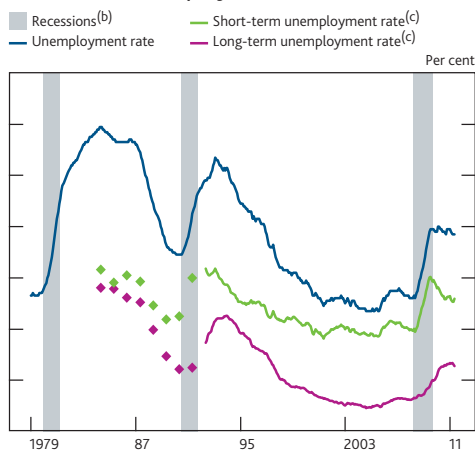
It is, however, difficult to judge how good a guide business surveys are to underlying productivity. One possibility is that they capture companies' immediately available capacity rather than their long-run capacity. So companies may be reporting pressures relative to the capacity that can be used immediately and at little additional cost, and excluding, for example, production lines that were temporarily mothballed during the recession, but which could be reactivated as demand increases. Another possibility is that companies in some sectors may report little spare capacity when demand is weak because they have to work harder to generate output — for example, estate agents will find it more difficult to match buyers and sellers in a sluggish housing market than in a buoyant one.

Chart 3.9 Participation rate^(a)

Source: ONS (including the Labour Force Survey).

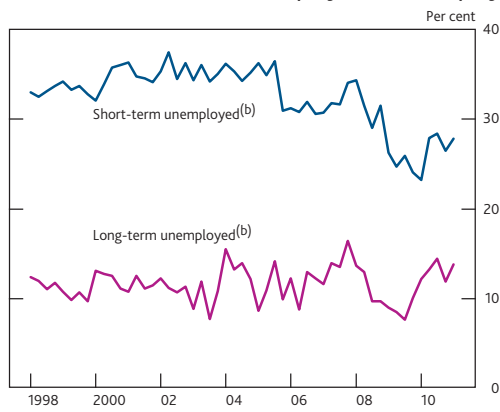
- (a) Percentage of the 16+ population. Three-month rolling measure.
- (b) Recessions are defined as in **Chart 3.6**.

There are, however, several channels through which underlying productivity growth may have been lower following the recession. As discussed in previous *Reports*, lower levels of business investment (Section 2) will have reduced the growth rate of the capital stock somewhat. And some companies and some of their capital were liquidated during the recession — although the rise in formal liquidations was more moderate than in previous recessions. At the same time, tighter credit conditions may have prevented some more productive businesses from entering markets or expanding. And a higher cost of working capital may have restricted some businesses' ability to meet demand. Additionally, the decline in hours worked during the recession may have impaired productivity growth through reducing the opportunity for employees to acquire skills on the job, or undertake workplace training. Overall, these channels suggest that productivity growth is likely to have been impaired in recent years. But they may not fully account for the weakness suggested by surveys.

Chart 3.10 Unemployment rates^(a)

Source: ONS (including the Labour Force Survey).

- (a) Rolling three-month measures unless otherwise stated.
 (b) Recessions are defined as in [Chart 3.6](#).
 (c) Defined as those people who have been unemployed for fewer (more) than twelve months divided by the economically active population. Data prior to 1992 are based on non seasonally adjusted, annual LFS microdata. These annual observations correspond to the March-May quarter.

Chart 3.11 Flows from unemployment to employment^(a)

Sources: Labour Force Survey and Bank calculations.

- (a) Based on LFS microdata that have been seasonally adjusted by Bank staff.
 (b) Flows into LFS employment by those who had been unemployed for fewer (more) than twelve months divided by the number of people who were unemployed for fewer (more) than twelve months in the previous quarter.

Table 3.A Selected indicators of labour market pressure

	Averages since 1998 ^(a)	2010				2011	
		Q1	Q2	Q3	Q4	Q1	Q2
LFS unemployment rate ^(b)	5.8	8.0	7.8	7.7	7.9	7.7	7.7
Claimant count unemployment rate	3.5	4.9	4.6	4.6	4.5	4.5	4.7
Vacancies/unemployed ratio ^{(b)(c)}	0.35	0.19	0.20	0.19	0.19	0.20	0.19
Recruitment difficulties							
Agents' scores ^(d)	0.7	-2.8	-1.9	-1.6	-1.0	-0.7	-0.5
BCC ^(e)	60	43	53	50	49	47	49
CBI skilled staff ^(f)	23	11	13	11	14	17	16
CBI unskilled staff ^(f)	6	2	2	4	1	3	2

Sources: Bank of England, BCC, CBI, CBI/PwC and ONS (including the Labour Force Survey).

- (a) Unless otherwise stated.
 (b) The figure for 2011 Q2 shows data for the three months to May.
 (c) Number of vacancies divided by LFS unemployment. Vacancies exclude agriculture, forestry and fishing. Average is since June 2001.
 (d) Agents' scores for recruitment difficulties in the most recent three months compared with the situation a year earlier. End-quarter observations. The scores are on a scale of -5 to +5, with positive scores indicating greater recruitment difficulties.
 (e) Percentage of respondents reporting recruitment difficulties over the past three months. Non seasonally adjusted. Services and non-services balances are weighted by shares in employment.
 (f) Balances of respondents expecting skilled/unskilled labour to limit output/business over the next three months (in manufacturing sector) or over the next twelve months (in the financial, business and consumer services sectors), weighted by shares in employment. Averages are since 1998 Q4.

Overall, the MPC judges that weak productivity growth over the past three years largely reflects weak underlying productivity growth. Nonetheless, there is likely to be some spare capacity still remaining within companies, broadly in line with that implied by business surveys. But there is considerable uncertainty as to the extent of spare capacity that remains (Section 5).

3.3 Labour supply

According to the LFS, employment remains around 230,000 below its 2008 Q1 level. The impact of this on labour market slack, and hence on wages, will depend on whether it has been accompanied by a change in labour supply.

The proportion of people participating in the labour market tends to decline in recessions, as some people are discouraged from looking for jobs by higher unemployment and reduced prospects of finding work. The participation rate did decline during the recent recession, but by much less than in the 1990s recession ([Chart 3.9](#)). And the fall may also prove less persistent than following previous recessions, as it is primarily accounted for by greater student numbers, while the sharp fall in the previous recession was also associated with increased long-term sickness and declining participation by older people.

Labour supply also depends on migrant flows. ONS estimates suggest that net inward migration over the four quarters to 2010 Q3 was above pre-recession levels.

The downward pressure that the unemployed put on wages probably declines the longer that they have been out of work. The long-term unemployment rate has risen by less than in the 1990s recession ([Chart 3.10](#)). And the share of the long-term unemployed finding work has returned to around its pre-recession level ([Chart 3.11](#)). The smaller rise in long-term unemployment could suggest that a greater number of individuals may have been able to maintain skills sought by employers, limiting the reduction in effective labour supply relative to previous recessions.

Effective labour supply may be reduced by structural changes in the economy, however. For example, over time the rebalancing between sectors could mean that some of the unemployed do not have the required skills, or are not in the right location, to fill available vacancies. If people need to retrain or relocate to re-enter employment then that may also reduce the pressure that elevated unemployment places on wages.

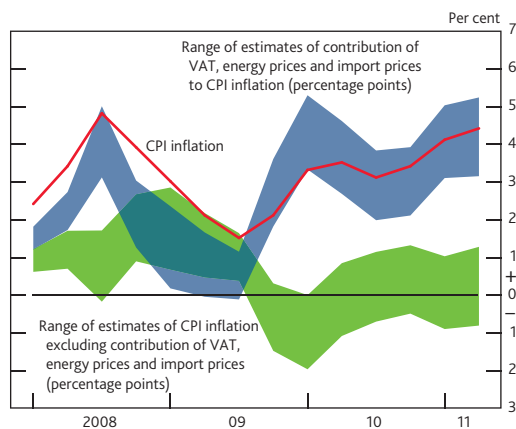
Overall, a considerable degree of slack in the labour market remains. At 7.7%, the LFS unemployment rate is well above its post-1998 average ([Table 3.A](#)), while the claimant count rate has edged up in recent months, reaching 4.7% in June. Other indicators are also consistent with continued labour market slack ([Table 3.A](#)).

4 Costs and prices

CPI inflation averaged 4.4% in 2011 Q2. The current elevated rate of inflation reflects increases in VAT, energy prices and import prices. Inflation is likely to rise further this year, boosted by increases in utility prices. Excluding the effects of VAT, energy prices and import prices, the prices of other goods and services have been rising at a rate well below the inflation target. Aggregate data suggest that profit margins have returned to pre-recession levels, although they may remain below normal in consumer-facing sectors. Nominal wage growth remained subdued. Evidence from movements in indicators of longer-term inflation expectations continued to be mixed.

CPI inflation remained well above the 2% target in 2011 Q2, and has now been above the target for much of the past five years. Further increases in domestic gas and electricity prices mean that inflation is likely to rise to around 5% later in the year. Increases in VAT, energy and non-energy import prices can largely account for the current elevated rate of inflation (Section 4.1). Assuming that commodity and import prices do not continue to rise rapidly and that the sustained period of above-target inflation does not put further upward pressure on prices, inflation should fall back as these temporary effects drop out of the twelve-month comparison.

Chart 4.1 CPI inflation and the contribution of VAT, energy prices and import prices^(a)



Sources: ONS and Bank calculations.

(a) The details behind these calculations are set out in the box on pages 34–35 of the February 2011 *Inflation Report*. The range of estimates of the impact of VAT on CPI inflation assumes that between 25% and 75% of the share of prices subject to VAT changed following the December 2008 and January 2010 VAT changes, and that between 50% and 100% of prices subject to VAT changed following the January 2011 VAT increase. The examples make the simplifying assumption that businesses only changed their prices in the month in which VAT was changed. The VAT range is adjusted to allow for changes in VAT on petrol prices already being incorporated in the energy price impacts. The lower bound of the range of estimates of the impact of energy prices on CPI inflation is based on the direct contribution from electricity, gas and other fuels and fuels and lubricants. The upper bound of the impact of energy prices range also includes an estimate of indirect effects, calculated as the average of the direct energy effects in the current and previous two quarters. The range of estimates of the impact of import prices on CPI inflation is based on differences between CPI goods inflation excluding energy and CPI services inflation excluding airfares. Further details can be found in the footnote to Chart B on page 34 of the February 2011 *Inflation Report*. The total range is calculated by adding together the top and bottom of the ranges of the individual impacts of VAT, energy prices and import prices. The green swathe shows CPI inflation less the minimum and the maximum of the blue swathe.

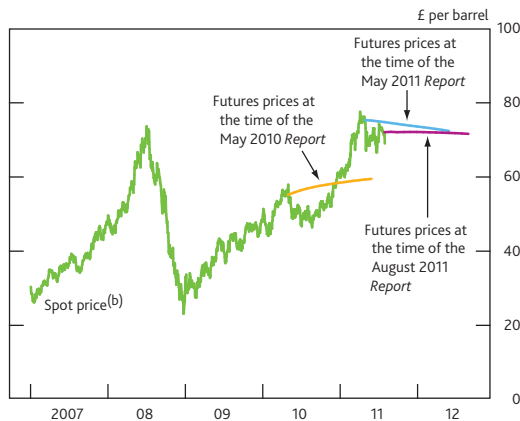
Over the recent past, prices excluding the factors temporarily raising inflation have increased at a rate below the inflation target. The outlook for domestically generated inflation will be affected by companies' pricing decisions (Section 4.2) and by what happens to their labour costs (Section 4.3). It will also depend on whether the sustained period of high inflation adds upward pressure to future pay and prices (Section 4.4).

4.1 Consumer prices

CPI inflation was 4.2% in June and averaged 4.4% in 2011 Q2. With April's CPI outturn of 4.5% lying more than 1 percentage point away from the target, the Governor, on behalf of the Committee, wrote an open letter to the Chancellor.⁽¹⁾

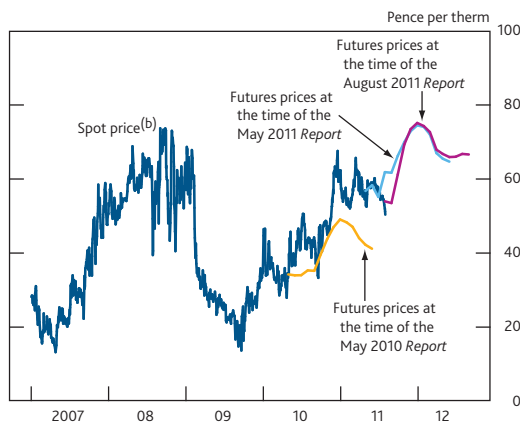
The current elevated rate of inflation reflects the temporary impact of rises in VAT, energy prices and import prices (Chart 4.1). These factors are likely to be able to explain why inflation was above target throughout 2010 and the first half of 2011. Bank analysis suggests that VAT, energy prices and import prices added around 3 to 5 percentage points to

(1) The letter is available at www.bankofengland.co.uk/monetarypolicy/pdf/cpiletter110517.pdf.

Chart 4.2 Sterling oil prices^(a)

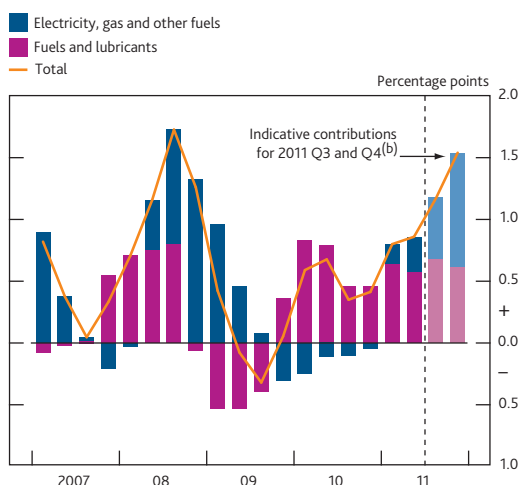
Sources: Bloomberg, Thomson Reuters Datastream and Bank calculations.

- (a) The futures prices shown are averages during the fifteen working days to 3 August 2011, 4 May 2011 and 7 May 2010. Each futures curve assumes that the sterling-dollar exchange rate remains constant at its average during those periods.
 (b) Brent forward prices for delivery in 10–21 days' time converted into sterling.

Chart 4.3 Sterling gas prices^(a)

Sources: Bloomberg, Thomson Reuters Datastream and Bank calculations.

- (a) The futures prices shown are averages during the fifteen working days to 3 August 2011, 4 May 2011 and 7 May 2010.
 (b) One-day forward price of UK natural gas.

Chart 4.4 Direct contribution of energy prices to CPI inflation^(a)

Sources: Bloomberg, Department of Energy and Climate Change, ONS and Bank calculations.

- (a) Data are non seasonally adjusted.
 (b) Bank staff estimates. Electricity, gas and other fuels estimates are conditioned on price increases announced by utility companies and an assumption that the other companies raise gas and electricity prices by an average of 16% by October. Fuels and lubricants estimates use Department of Energy and Climate Change petrol price data for July and are then based on the August 2011 sterling oil futures curve shown in Chart 4.2.

CPI inflation in 2011 Q2,⁽¹⁾ although it is impossible to identify the effects of those factors with any precision. The evolution of these factors, relative to what was expected at the time of the May 2010 Report, is discussed in the box on pages 48–49. The rest of this subsection discusses recent developments in the factors raising inflation in more detail, and also considers developments in domestically generated inflation.

VAT

The rise in VAT is likely to have added around 1 percentage point to CPI inflation in 2011. That estimate is based on Bank staff's assessment that around three quarters of the increase in the standard rate of VAT to 20% in January 2011 had been passed into consumer prices by the end of Q1. The size of this effect should remain broadly the same until it drops out of the twelve-month comparison in early 2012. But there is uncertainty around the extent of pass-through. Alternative pass-through assumptions of 50% or 100% would imply contributions of VAT to CPI inflation of 0.7 and 1.4 percentage points respectively.

Energy prices

Sterling oil and wholesale gas prices over the fifteen working days to 3 August were similar to those in the run-up to the May Report (Charts 4.2 and 4.3). But over the past year as a whole, oil and gas prices are around 45% and 25% higher respectively.

Those large rises in energy prices over the past year have put significant upward pressure on CPI inflation. Petrol prices directly contributed 0.6 percentage points to CPI inflation in the second quarter of 2011, and retail gas and electricity prices added a further 0.3 percentage points (Chart 4.4). But higher energy prices also have indirect effects that will have further added to CPI inflation, for example by raising production and transport costs.

In the fifteen working days to 3 August, the oil futures curve for the next twelve months was broadly flat (Chart 4.2), but the wholesale gas futures curve had an upward slope, even after smoothing through the usual seasonal pattern (Chart 4.3). Some features of the gas futures market, including the seasonal hump in winter, reflect difficulties in storing gas. The effects on future gas demand of the phasing out of nuclear power stations in Germany and the possibility of sustained growth in demand for liquefied natural gas from Asia may also be affecting gas prices.

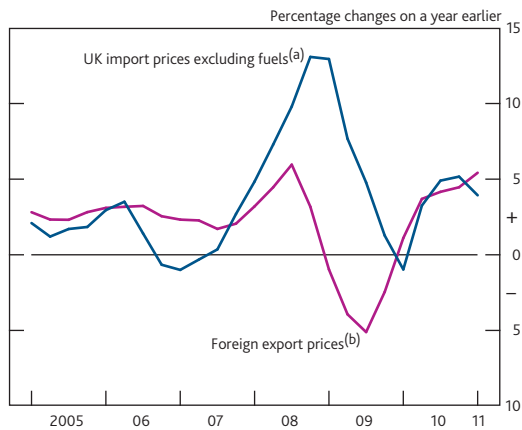
Developments in wholesale gas markets are a key determinant of domestic gas and electricity retail prices. The increases in wholesale spot and futures gas prices since late 2010 have led some suppliers to announce rises in retail gas and electricity

(1) The methodology used to calculate these estimates is described in a box on pages 34–35 of the February 2011 Inflation Report.

prices, averaging 18% and 13% respectively, with the first increases taking effect from August. The conditioning assumption underlying the MPC's latest central projection is that the other domestic energy suppliers raise prices by a similar amount by mid-October.

The contribution of energy prices to CPI inflation is likely to rise through the rest of 2011. The MPC's utility price assumptions, and a projection for petrol prices conditioned on the oil futures curve, imply that the direct contribution of energy to CPI inflation is likely to rise to around 1.5 percentage points by 2011 Q4, an increase of 0.6 percentage points on its contribution in Q2 (**Chart 4.4**). That energy price contribution is broadly similar to what was expected at the time of the *May Report* and accounts for all of the expected pickup in overall CPI inflation over the second half of the year.

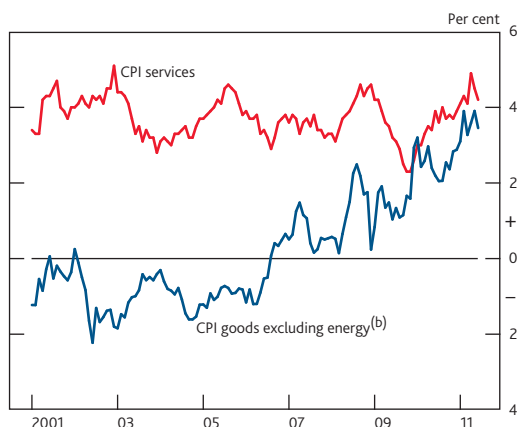
Chart 4.5 UK import prices and foreign export prices



Sources: ONS, Thomson Reuters Datastream and Bank calculations.

- (a) Goods and services deflator, excluding the impact of MTIC fraud.
 (b) Domestic currency export prices of goods and services of 45 countries weighted according to their shares in UK imports. The sample does not include major oil exporters.

Chart 4.6 CPI goods excluding energy and CPI services inflation^(a)



Sources: ONS and Bank calculations.

- (a) Data are non seasonally adjusted.
 (b) CPI goods excluding electricity, gas and other fuels and fuels and lubricants.

Non-energy import and commodity prices

UK import prices excluding fuels rose significantly following the depreciation of sterling between mid-2007 and the end of 2008. After stabilising around the end of 2009, non-energy import prices have picked up again, but this time driven by higher global prices rather than exchange rate movements (**Chart 4.5**).

Part of the recent strength in global price inflation is likely to reflect increases in non-energy commodity prices over the past year. Metals prices have risen by around 30%, while agricultural commodity prices are almost 40% higher than a year ago. Within agricultural commodities, food price changes tend to be passed through the supply chain to consumer prices quite quickly. CPI food price inflation rose to 6.5% in June, and is likely to remain high in the near term.

The precise extent and timing of the overall pass-through of higher import prices to UK inflation is uncertain. Considering the difference in the behaviour of domestic consumer goods and services prices can provide some clues. Increases in import prices are likely to have raised both goods and services prices, but goods are more import-intensive than services, and so rising import prices probably explain why the differential between goods inflation and services inflation has narrowed since 2007 (**Chart 4.6**).

Estimates based on differences between goods and services inflation, described in more detail in the February 2011 *Report*, suggest that import prices excluding fuels added between 1½ and 2½ percentage points to CPI inflation in 2011 Q2 — that is incorporated in the blue swathe in **Chart 4.1**. Overall, they may have added around 5% to 7% to the price level since 2007. It is likely that the increases in non-energy import prices already seen will continue to add to CPI inflation in the near term, as higher import prices continue to be passed through the supply chain into consumer prices.

Although the annual increases in non-energy commodity prices are still large and will continue to add to inflationary pressure in the near term, these prices have fallen in recent months and are now around 10% below their peak in early 2011. In the absence of further large increases in commodity prices, annual non-energy commodity price inflation should fall back during 2011. That would put downward pressure on foreign export and UK import price inflation.

Domestically generated inflation

Excluding estimates of the contribution of VAT, energy prices and import prices, the prices of other goods and services have increased at a rate well below the inflation target over the recent past (Chart 4.1). That suggests that domestically generated inflation has been low. But this is not a direct measure of what inflation would have been in the absence of the factors temporarily supporting inflation, since many other aspects of the economy would also have been different. For example, had energy prices not risen, households would have had more disposable income available to spend on other goods and services, which could have put upward pressure on the prices of those items.

Some margin of spare capacity in the economy (Section 3) is likely to be one factor contributing to the apparent low rate of domestically generated inflation. Spare capacity within companies reduces the cost of expanding output, and so puts downward pressure on prices. And spare capacity in the labour market puts downward pressure on wages and so companies' labour costs. But the extent to which developments in wages affect domestically generated inflation will also depend on companies' pricing decisions.

4.2 Companies' pricing decisions

Companies' profit margins were eroded during the recession (Chart 4.7). Their unit labour costs rose sharply as weak growth in nominal wages (Section 4.3) was not sufficient to offset the large fall in productivity (Chart 4.8). Other factors such as higher energy and import prices are likely to have also pushed down margins.

In aggregate, companies appear to have increased their profit margins over the past year. Although early estimates are subject to revision, the share of non-oil private non-financial company profits in total income has now recovered to its pre-recession level (Chart 4.7). In part, the recovery in margins appears to have been achieved by some moderation in the growth of unit labour costs (Chart 4.8).

The recovery in overall profit margins is likely to mask considerable divergence between sectors. In particular, evidence from the Bank's Agents, and the strength of export prices since sterling's depreciation in 2007–08, indicate that companies that export a large proportion of their output

Chart 4.7 Corporate profit share (excluding financial corporations and the oil sector)



Sources: ONS and Bank calculations.

- (a) Recessions are defined as at least two consecutive quarters of falling output (at constant market prices) estimated using the latest data. The recessions are assumed to end once output began to rise.
- (b) PNFCs' gross operating surplus (excluding the alignment adjustment) minus the gross trading profits of continental shelf companies, divided by nominal gross value added at factor cost.

Chart 4.8 Unit labour costs



(a) Recessions are defined as in Chart 4.7.

currently have higher profit margins than consumer-facing companies, relative to normal levels. That is because exporting companies have been able to boost their profits following the depreciation of sterling by not reducing their foreign currency prices in line with the exchange rate depreciation. If exporters have played an important role in boosting the overall profit share, the margins of companies selling mostly to the domestic market might still be below desired levels.

There may be upward pressure on CPI inflation if domestic producers seek any further rebuilding of their profit margins by raising domestic prices. But low margins for domestically orientated companies may also encourage some reallocation of resources towards more profitable exporting sectors, thus facilitating a rebalancing of the economy.

If, in aggregate, profit margins are now back to pre-recession levels that could lessen the downward pressure on unit labour costs and therefore wages. But wages will also be affected by other factors, such as productivity growth, spare capacity in the labour market (Section 3) and inflation expectations (Section 4.4). The next section discusses recent developments in labour costs.

Table 4.A Private sector earnings^(a)

Percentage changes on a year earlier	Averages 2001–07	2009	2010		2011	
			H1	H2	Q1	May ^(b)
(1) AWE regular pay	3.9	1.2	0.8	2.1	1.9	2.4
(2) Pay settlements ^(c)	3.3	2.5	1.6	1.7	1.9	2.1
(1)–(2) Regular pay drift ^(d)	0.6	-1.3	-0.9	0.4	0.0	0.3
(3) Total AWE	4.3	-1.0	2.1	1.8	2.3	2.5
(3)–(1) Bonus contribution ^(d)	0.4	-2.1	1.3	-0.3	0.4	0.1

Sources: Bank of England, Incomes Data Services, the Labour Research Department, ONS and XperHR.

(a) Based on quarterly data unless otherwise stated.

(b) Data in the two months to May.

(c) Average over the past twelve months, based on monthly data.

(d) Percentage points.

4.3 Labour costs

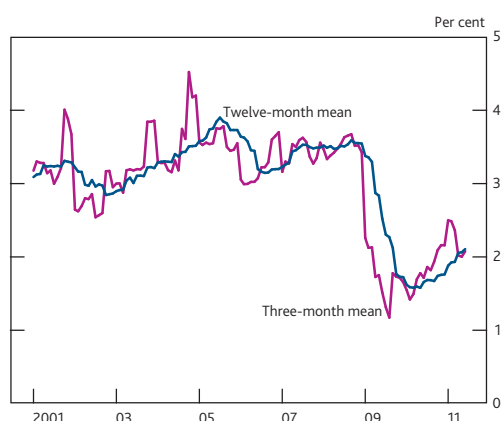
Earnings growth has risen slightly over the past few months to around 2.5%, but remains well below its pre-recession average (Table 4.A).

There has been a modest increase in private sector pay settlements over the past year (Chart 4.9). The twelve-month mean settlement has risen by 0.4 percentage points to 2.1%. That rise in settlements largely reflects a move from a period of pay freezes and very low settlements to one with more settlements between 2% and 3%. Nonetheless, settlements continue to be below their average past levels: that probably reflects some combination of continuing downward pressure from spare capacity in the labour market and weak underlying productivity growth (Section 3).

Regular pay drift — the difference between earnings growth excluding bonuses, and settlements — has been a little lower in 2011 than in the second half of 2010. Regular pay drift captures flexible elements of pay, such as merit pay and overtime, and its recent weakness may be related to the subdued growth of productivity.

The modest recent growth in earnings could mean that the current elevated rate of inflation and any associated increases in inflation expectations (Section 4.4), or any attempts by employees to recoup some of the erosion of their real incomes, have not put significant upward pressure on wage growth. But another possibility is that any upward pressure from the

Chart 4.9 Private sector pay settlements



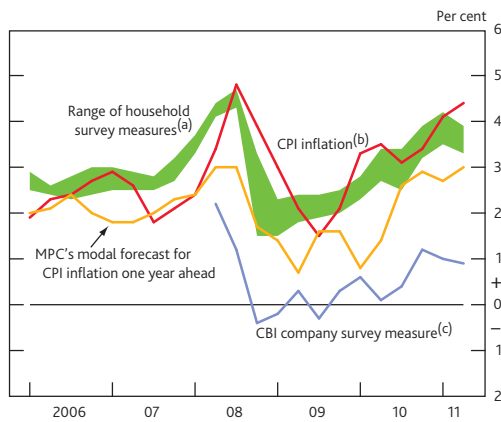
Sources: Bank of England, Incomes Data Services, the Labour Research Department, ONS and XperHR.

Table 4.B Indicators of longer-term inflation expectations

Per cent	Averages ^(a) since 2006	2008	2009	2010	2011		
					Q1	Q2	Q3 ^(b)
Expectations (number of years ahead)							
Households							
Bank/NOP (5) ^(c)	3.1	n.a.	2.9	3.2	3.5	3.3	n.a.
Barclays Basix (5) ^(c)	3.8	4.3	3.8	3.8	4.4	3.0	n.a.
YouGov/Citigroup (5–10) ^(c)	3.4	3.5	3.1	3.3	3.6	3.7	3.7
Professional forecasters							
Bank forecasters' survey (3)	2.0	2.0	1.9	2.0	2.1	2.2	2.1
HMT forecasters' survey (4) ^(d)	2.1	2.2	2.2	2.2	2.0	2.1	n.a.
Market-based							
RPI implied from gilts (5) ^(e)	3.5	3.7	3.5	3.6	3.7	3.7	3.6
RPI implied from swaps (5) ^(f)	3.5	3.7	3.9	3.5	3.4	3.4	3.4

Sources: Bank of England, Barclays Capital, Bloomberg, Citigroup, GfK NOP, HM Treasury, YouGov and Bank calculations.

- (a) Since 2009 Q1 for Bank/NOP data. Since 2008 Q3 for Barclays Basix data.
 (b) YouGov/Citigroup data are for July. RPI implied from gilts and swaps data are averages from 1 July to 3 August.
 (c) The questions ask about expected changes in prices, but do not reference a specific price index. Measures are based on the median estimated price change.
 (d) Taken from *Forecasts for the UK economy: a comparison of independent forecasts*. Based on the average of medium-term projections.
 (e) Five-year, five-year forward RPI inflation implied from gilts.
 (f) Five-year, five-year forward RPI inflation implied from swaps.

Chart 4.10 Inflation expectations for the year ahead

Sources: Bank of England, Barclays Capital, CBI (all rights reserved), Citigroup, GfK NOP, ONS and YouGov.

- (a) Includes measures of households' median inflation expectations one year ahead from the Bank/NOP, Barclays Basix and YouGov/Citigroup surveys. The questions ask about expected changes in prices, but do not reference a specific price index.
 (b) Data are non seasonally adjusted.
 (c) Manufacturing, business/consumer services and distribution sector data are weighted together using nominal shares in value added. Companies are asked about the expected percentage price change over the coming twelve months in the markets in which they compete.

elevated rate of inflation has been offset by a larger downward effect from spare capacity, weak productivity growth and increases in profit margins. The outlook for earnings will depend on how the balance of these different forces evolves (Section 5).

4.4 Inflation expectations

The degree to which inflation will fall back from its current elevated level will depend, in part, on developments in inflation expectations. If companies and households question the pace at which inflation will return to target, that may lead to changes in their wage and price-setting behaviour that makes above-target inflation persist for longer.

Recent evidence on direct measures of longer-term inflation expectations has been mixed (Table 4.B). Some measures of the longer-term inflation expectations of households have risen over the past year. But longer-term expectations of professional forecasters and financial market participants have been broadly stable. Overall, most indicators remain close to their series averages, and these data do not provide evidence of a material rise in longer-term inflation expectations, although they are imperfect and many only have a short backrun.

Even if longer-term inflation expectations remain anchored, companies and households may expect inflation to persist above the target for longer than in the past, perhaps because of the series of shocks that have affected inflation, or if they believe that the MPC has become more tolerant of temporary deviations of inflation from target. Companies' and households' one year ahead inflation expectations have risen over the past year (Chart 4.10). But those measures fell back slightly in 2011 Q2, and the increases over the past year are slightly smaller than the changes in the MPC's one year ahead inflation forecast.

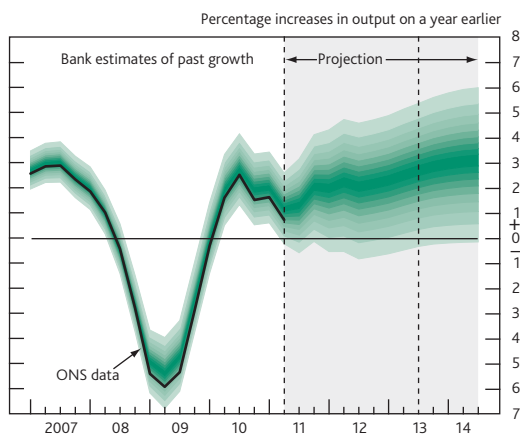
The signal from direct measures that inflation expectations remain broadly anchored appears consistent with the wider range of indicators that the MPC monitors, such as data on uncertainty around future inflation.⁽¹⁾ But the MPC will continue to monitor developments in inflation expectations closely.

(1) Recent developments in a wider range of indicators are discussed in a *Quarterly Bulletin* article. See Macallan, C, O'Grady, T and Taylor, T (2011), 'Assessing the risk to inflation from inflation expectations', *Bank of England Quarterly Bulletin*, Vol. 51, No. 2, pages 100–10.

5 Prospects for inflation

Output growth in the United Kingdom has been sluggish, and the outlook for the global economy has deteriorated. The stimulus from monetary policy should help to support UK demand. But the continuing squeeze on households' real incomes, stemming largely from increases in energy and import prices, will continue to weigh on growth in the near term. Rises in utility prices are likely to push CPI inflation higher over the coming months. Inflation should then fall back during 2012, as the impact of the factors temporarily raising it diminishes and downward pressure from spare capacity persists. But the precise timing and extent of that fall are uncertain. Under the assumptions that Bank Rate moves in line with market interest rates and the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion, the chances of inflation being above or below the target in the medium term are judged to be roughly equal.

Chart 5.1 GDP projection based on market interest rate expectations and £200 billion asset purchases



The fan chart depicts the probability of various outcomes for GDP growth. It has been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion throughout the forecast period. To the left of the first vertical dashed line, the distribution reflects the likelihood of revisions to the data over the past; to the right, it reflects uncertainty over the evolution of GDP growth in the future. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that the mature estimate of GDP growth would lie within the darkest central band on only 10 of those occasions. The fan chart is constructed so that outturns are also expected to lie within each pair of the lighter green areas on 10 occasions. In any particular quarter of the forecast period, GDP is therefore expected to lie somewhere within the fan on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions GDP growth can fall anywhere outside the green area of the fan chart. Over the forecast period, this has been depicted by the light grey background. In any quarter of the forecast period, the probability mass in each pair of identically coloured bands sums to 10%. The distribution of that 10% between the bands below and above the central projection varies according to the skew at each quarter, with the distribution given by the ratio of the width of the bands below the central projection to the bands above it. In Chart 5.1, the probabilities in the lower bands are slightly larger than those in the upper bands at Years 1, 2 and 3. See the box on page 39 of the November 2007 *Inflation Report* for a fuller description of the fan chart and what it represents. The second dashed line is drawn at the two-year point of the projection.

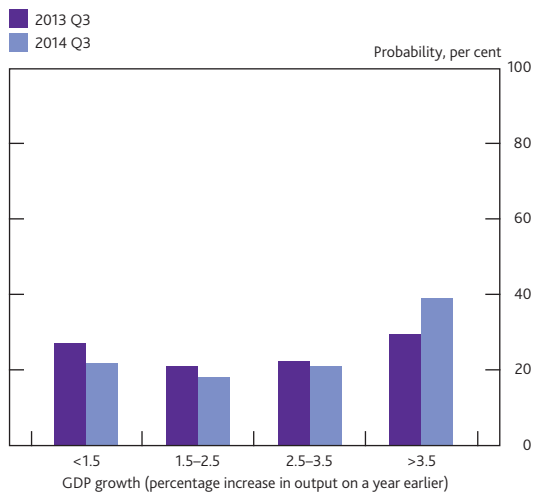
5.1 The projections for inflation and demand

CPI inflation has been well above the MPC's 2% target for some time and is likely to remain so for at least another year, until the temporary factors currently raising it dissipate. But rather than focusing on the near-term outlook, the MPC needs to set policy to balance the considerable, but opposing, risks to inflation in the medium term. To the upside, the sustained period of above-target inflation could prove more persistent if it leads to significant further upward pressure on wages and prices. But set against that, UK growth has been weak, and there continue to be substantial downside risks to demand, particularly stemming from abroad. A more prolonged period of weak growth, if accompanied by a widening in the margin of spare capacity, could pull inflation well below the MPC's target in the medium term.

Chart 5.1 shows the outlook for real GDP growth, on the assumption that Bank Rate follows a path implied by market interest rates. Along with all the other charts displaying the MPC's projections in this section, Chart 5.1 assumes that the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion throughout the forecast period.

Four-quarter GDP growth has slowed over the past year and is projected to remain weak in the near term, reflecting the continuing squeeze on households' real incomes. Further ahead, growth is likely to recover gradually, underpinned by a steady recovery in investment, a rebalancing of the economy towards external demand, and a moderate acceleration in consumption as household income growth recovers. But the continuing fiscal consolidation and

Chart 5.2 Frequency distribution of GDP growth based on market interest rate expectations and £200 billion asset purchases^(a)



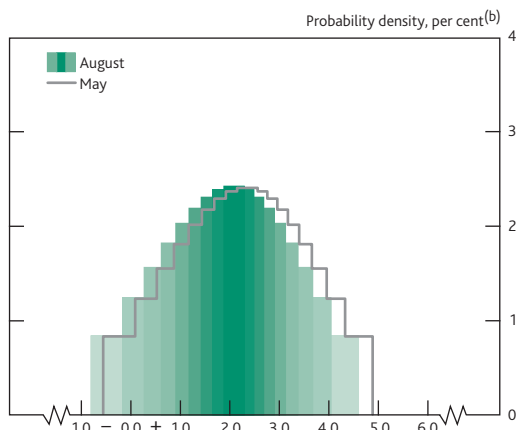
(a) These figures are derived from the same distribution as Chart 5.1. They represent the probabilities that the MPC assigns to GDP growth lying within a particular range at a specified time in the future.

restrictions on the supply of credit are likely to weigh on demand throughout the period.

There are substantial uncertainties around the outlook for output growth. The most significant risks to demand stem from abroad. Indicators of global growth have weakened, and it is possible that some of this slowdown will persist. The greatest risk stems from the euro area, where several countries face substantial challenges in improving their fiscal and external debt positions. A significant deterioration of conditions within the euro area, and renewed turmoil in financial markets, could have a material adverse impact on the UK and global economies. To the extent that such risks are already reflected in asset prices, funding costs and confidence, they will be captured in the MPC's projections. But beyond that, the MPC sees no meaningful way to quantify such risks and they are therefore excluded from its fan charts (see the box on page 38). Domestically, the strength of the recovery will hinge on how far households have adjusted their spending to the weakness in their real income growth and on the pace of the recovery in investment from its current unusually depressed level.

There remains a range of views among Committee members about the likely strength of these various factors. Based on the conditioning assumptions described above, the Committee's best collective judgement is that growth is likely to pick up gradually, so that by 2014, it is a little more likely to be above its historical average rate than below it (Chart 5.2). The distribution for growth is a little lower than in the *May Report* over the first half of the forecast period, but similar further ahead (Charts 5.3 and 5.4). That implies a somewhat lower level of output throughout the forecast period than was judged likely in May, despite the lower path for Bank Rate underlying

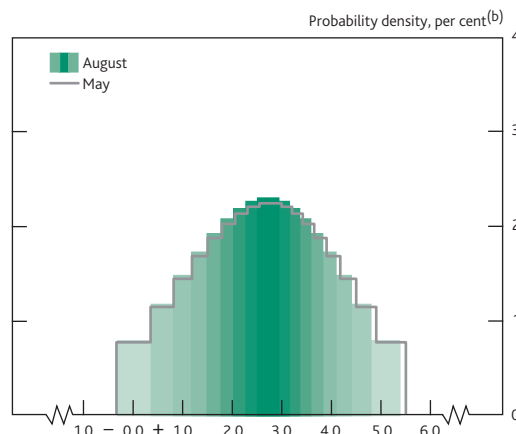
Chart 5.3 Projected probabilities of GDP growth in 2012 Q3 (central 90% of the distribution)^(a)



(a) Charts 5.3 and 5.4 represent cross-sections of the GDP growth fan chart in 2012 Q3 and 2013 Q3 for the market interest rate projection. They have been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion throughout the forecast period. The coloured bands in Charts 5.3 and 5.4 have a similar interpretation to those on the fan charts. Like the fan charts, they portray the central 90% of the probability distribution. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that GDP growth in 2012 Q3 and 2013 Q3 would lie somewhere within the range covered by the histogram on 90 occasions. GDP growth would lie outside the range covered by the histogram on 10 out of 100 occasions. The grey outlines in Charts 5.3 and 5.4 represent the corresponding cross-sections of the May 2011 *Inflation Report* fan chart, which was conditioned on the same assumption about the stock of purchased assets financed by the issuance of central bank reserves.

(b) Average probability within each band; the figures on the y-axis indicate the probability of growth being within ± 0.05 percentage points of any given growth rate, specified to one decimal place. As the heights of identically coloured bars on either side of the central projection are the same, the ratio of the probability contained in the bars below the central projection, to the probability in the bars above it, is given by the ratio of the width of those bars.

Chart 5.4 Projected probabilities of GDP growth in 2013 Q3 (central 90% of the distribution)^(a)



The impact of euro-area developments on the United Kingdom

A number of euro-area countries face substantial challenges in improving their competitiveness and the sustainability of their external and internal indebtedness. Since the start of May 2010, Greece, Ireland and Portugal have received financial support from the European authorities and IMF in order to continue to meet their debt obligations following sharp rises in their borrowing costs. In recent months, these countries' borrowing costs have risen further and the yields on Spanish and Italian government debt have also risen (Section 1). The package of measures agreed by eurozone leaders on 21 July alleviated the immediate financing pressures on Greece and, in principle, makes it easier for vulnerable euro-area countries to undertake the necessary structural adjustments.

The MPC's projections are conditioned on the assumption that there is a prolonged period of adjustment within the euro area, which acts as a significant drag on growth there. But there is a risk that concerns surrounding the sustainability of the indebtedness of some members of the euro area could intensify. The implications of such events for the functioning of the international banking system and the world economy are almost impossible to quantify. This box explains how an intensification of concerns about sovereign debt might affect the United Kingdom and why specific calibrations of such an event have not been incorporated into the MPC's fan charts.

How might events in the euro area affect the UK outlook?

First, any serious dislocation in the euro area, and subsequent slowing in euro-area activity, would have a direct impact on UK exports: just under half of UK exports go to the euro area. But the size of that impact would depend on the nature of events and how they affected growth in different euro-area countries. Over the past year, despite stagnant or falling output in the euro-area periphery, data on goods suggest that the United Kingdom's exports to the euro area in aggregate have grown at an above-average pace, reflecting the significant trade weight of those countries that have seen healthier growth (Section 2). But a more generalised slowing in euro-area demand would weigh significantly on UK exports.

A second channel through which developments in the euro area could feed into UK activity is financial and banking sector interlinkages. Although UK banks have limited direct exposures to the public sector debt of the most vulnerable countries, they have larger claims on their private sectors. Moreover, UK banks have substantial exposures to other euro-area countries, such as France and Germany, and so may be indirectly exposed to the most vulnerable countries, through the exposures of, say, French and German banks.⁽¹⁾ In

the June 2011 *Financial Stability Report*, the Financial Policy Committee concluded that sovereign and banking sector strains in some periphery euro-area countries constituted the most material and immediate threat to UK financial stability. Any substantial increase in losses for UK banks would be likely to lead to an increase in their funding costs and a tightening in credit conditions, in turn depressing spending by UK households and companies.

A third channel, perhaps the most significant if there were to be serious dislocation in the euro area, is through a disruption to the functioning of the international financial system more generally — hitting global asset prices, wholesale funding markets, and business and household confidence. That could depress economic activity in the United Kingdom directly, through reductions in domestic spending, and indirectly, through weaker global trade.

Implications for the MPC's fan charts and monetary policy

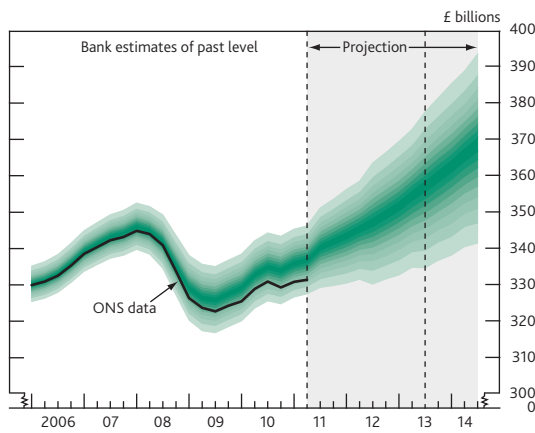
Some of these effects are already factored into the MPC's fan charts. Concerns about the euro area are likely already to be affecting the economic outlook through their impact on asset prices, bank funding costs and the level of household and business confidence. Reflecting this, and the prolonged period of economic adjustment facing some countries, the MPC's projections embody relatively slow growth in the euro area.

There are, however, further risks, which are almost impossible to calibrate. The MPC sees no meaningful way to incorporate into its fan charts the probability and impact of a further significant intensification of concerns about the sustainability of the indebtedness in the euro area. The fan charts are calibrated by reference to previous experiences, but the risks emanating from the current euro-area tensions have few obvious parallels. So the MPC's growth and inflation fan charts do not include a specific calibration of the impact on the United Kingdom from the risk of further serious economic and financial disruption.

Given the lags between changes in monetary policy and their impact on inflation, monetary policy needs to be set in a forward-looking way. So the MPC needs to consider all the possible risks affecting the UK economy, including all of those from the euro area, when forming its policy judgement. The extent to which the risks emanating from the euro area will affect individual members' policy decisions may vary.

(1) Banking sector interlinkages are discussed in more detail in Section 2.1 of the June 2011 *Financial Stability Report*.

Chart 5.5 Projection of the level of GDP based on market interest rate expectations and £200 billion asset purchases



Chained-volume measure (reference year 2006). See the footnote to Chart 5.1 for details of the assumptions underlying the projection for GDP growth. The width of this fan over the past has been calibrated to be consistent with the four-quarter growth fan chart, under the assumption that revisions to quarterly growth are independent of the revisions to previous quarters. Over the forecast, the mean and modal paths for the level of GDP are consistent with Chart 5.1. So the skews for the level fan chart have been constructed from the skews in the four-quarter growth fan chart at the one, two and three-year horizons. This calibration also takes account of the likely path dependency of the economy, where, for example, it is judged that shocks to GDP growth in one quarter will continue to have some effect on GDP growth in successive quarters. This assumption of path dependency serves to widen the fan chart.

the projections. As in May, the risks around the most likely path for growth are judged to be skewed slightly to the downside, reflecting the possibility that the slowing in global growth could prove more persistent, and the risks around the outlook for consumption.

GDP is likely to remain significantly below the level corresponding to a continuation of its pre-recession trend (Chart 5.5). Considerable uncertainty surrounds the degree to which that shortfall in output reflects persistent spare capacity in the economy, or alternatively is associated with a lower level of underlying productivity, and so a lower path for potential supply. The Committee's central judgement now is that the majority of this shortfall reflects weakness in the level of underlying productivity, but that some margin of slack, particularly in the labour market, is nonetheless likely to persist throughout the next three years.

Chart 5.6 shows the outlook for CPI inflation, on the assumption that Bank Rate follows a path implied by market interest rates. As in the *May Report* (Chart 5.7), inflation is judged likely to reach 5% later in 2011, boosted by increases in utility prices, and reflecting the continuing effects of the past increase in VAT and higher import prices. Inflation should then fall back through 2012, as those effects dissipate and downward pressure from slack in the labour market persists.

There remain significant uncertainties around the outlook for inflation. Inflation will continue to be sensitive to fluctuations in global commodity prices. Domestically, there is substantial uncertainty surrounding the outlook for demand, and also over: the level of underlying productivity, and so the margin of spare capacity within businesses; the downward pressure

Chart 5.6 CPI inflation projection based on market interest rate expectations and £200 billion asset purchases

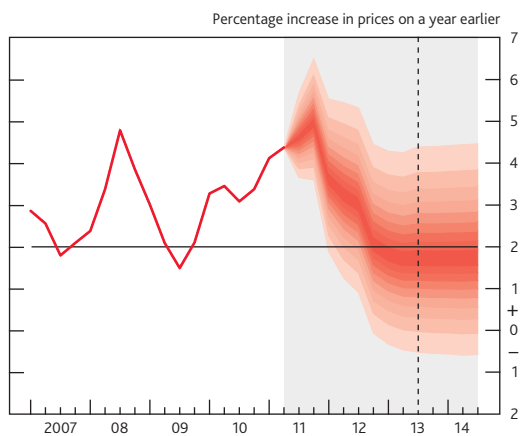
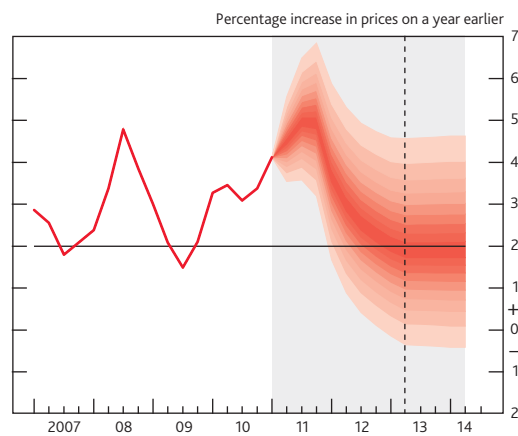
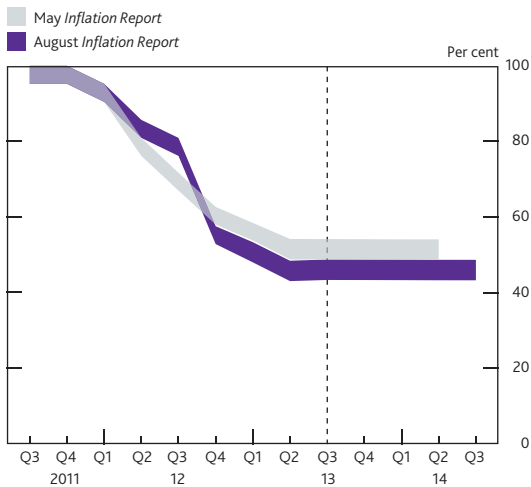


Chart 5.7 CPI inflation projection in May based on market interest rate expectations and £200 billion asset purchases



Charts 5.6 and 5.7 depict the probability of various outcomes for CPI inflation in the future. They have been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion throughout the forecast period. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that inflation in any particular quarter would lie within the darkest central band on only 10 of those occasions. The fan charts are constructed so that outcomes of inflation are also expected to lie within each pair of the lighter red areas on 10 occasions. In any particular quarter of the forecast period, inflation is therefore expected to lie somewhere within the fans on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions inflation can fall anywhere outside the red area of the fan chart. Over the forecast period, this has been depicted by the light grey background. In any quarter of the forecast period, the probability mass in each pair of identically coloured bands sums to 10%. The distribution of that 10% between the bands below and above the central projection varies according to the skew at each quarter, with the distribution given by the ratio of the width of the bands below the central projection to the bands above it. In Charts 5.6 and 5.7 the probabilities in the lower bands are slightly smaller than those in the upper bands at Years 1, 2 and 3, albeit that the upward skews in Year 1 are smaller than those at Years 2 and 3. See the box on pages 48–49 of the *May 2002 Inflation Report* for a fuller description of the fan chart and what it represents. The dashed lines are drawn at the respective two-year points.

Chart 5.8 An indicator of the probability inflation will be above the target



The August and May swathes in this chart are derived from the same distributions as Charts 5.6 and 5.7 respectively. They indicate the assessed probability of inflation being above target in each quarter of the forecast period. The width of the band at each point in time corresponds to the width of the band of the fan chart in which the target falls in that quarter, or, if the target falls outside the coloured area of the fan chart, the width of the band closest to the target. The bands in the fan chart illustrate the MPC's best collective judgement that inflation will fall within a given range. The swathes in Chart 5.8 show the probability within the entire band of the corresponding fan chart of inflation being close to target; the swathes should not therefore be interpreted as a confidence interval. The dashed line is drawn at the two-year point of the August projection. The two-year point of the May projection was one quarter earlier.

exerted on wages and prices by a given margin of spare capacity in the economy; and the upward pressure placed on wages and prices by the sustained period of above-target CPI inflation. There remains a range of views among Committee members over the likely effects of these influences. Chart 5.8 shows the Committee's best collective judgement of the probability of inflation being above the 2% target, and the corresponding probability from the May Report projection. On balance, the Committee judges that, based on the conditioning assumptions described above, the chances of inflation being above or below the target are roughly equal in the medium term. The most likely outcome is for inflation to be a little below the target in the medium term, but relative to that most likely path, the risks are judged to be skewed slightly to the upside.

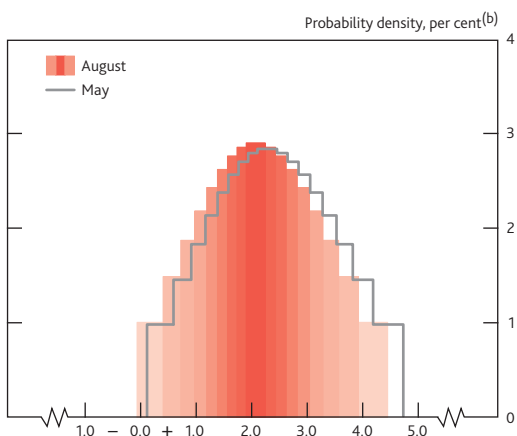
Charts 5.9 and 5.10 show the projected spread of outcomes for CPI inflation at the end of 2012 and 2013 in the August and May Reports. The projection is similar to that in May over the first year of the forecast, but a little lower in the medium term, largely reflecting the lower projected level of output. Chart 5.11 shows frequency distributions for inflation at the two and three-year points: there is judged to be a roughly three-in-four chance that inflation will be half a percentage point or more away from the target, with roughly equal probabilities to the upside and downside.

5.2 Key judgements and risks

How strongly will the world economy grow?

The composition of UK demand is continuing to rebalance away from public and private consumption and towards external demand. The lower level of sterling, following its depreciation in 2007 and 2008, should continue to encourage

Chart 5.9 Projected probabilities of CPI inflation outturns in 2012 Q4 (central 90% of the distribution)^(a)



(a) Charts 5.9 and 5.10 represent cross-sections of the CPI inflation fan chart in 2012 Q4 and 2013 Q4 for the market interest rate projection. They have been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion throughout the forecast period. The coloured bands in Charts 5.9 and 5.10 have a similar interpretation to those on the fan charts. Like the fan charts, they portray the central 90% of the probability distribution. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that inflation in 2012 Q4 and 2013 Q4 would lie somewhere within the range covered by the histogram on 90 occasions. Inflation would lie outside the range covered by the histogram on 10 out of 100 occasions. The grey outlines in Charts 5.9 and 5.10 represent the corresponding cross-sections of the May 2011 Inflation Report fan chart, which was conditioned on the same assumption about the stock of purchased assets financed by the issuance of central bank reserves.

(b) Average probability within each band; the figures on the y-axis indicate the probability of inflation being within ± 0.05 percentage points of any given inflation rate, specified to one decimal place. As the heights of identically coloured bars on either side of the central projection are the same, the ratio of the probability contained in the bars below the central projection, to the probability in the bars above it, is given by the ratio of the width of those bars.

Chart 5.10 Projected probabilities of CPI inflation outturns in 2013 Q4 (central 90% of the distribution)^(a)

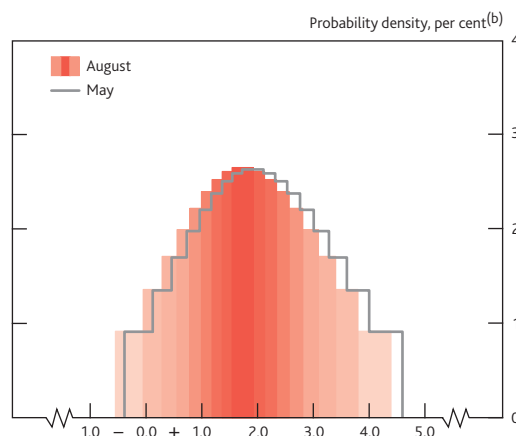
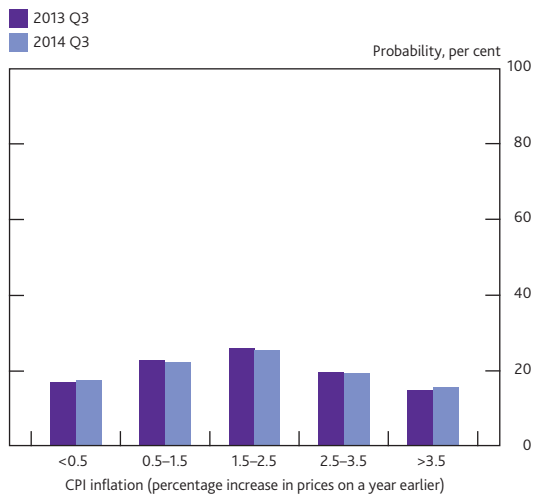


Chart 5.11 Frequency distribution of CPI inflation based on market interest rate expectations and £200 billion asset purchases^(a)



(a) These figures are derived from the same distribution as Chart 5.6. They represent the probabilities that the MPC assigns to CPI inflation lying within a particular range at a specified time in the future.

that rebalancing. But the support from net exports will also depend crucially on the strength of global demand.

Growth in the euro area, which accounts for just under half of UK exports, is likely to remain modest. Several euro-area countries face substantial challenges in improving their fiscal and external debt positions and preserving the stability of their banking systems. The process of adjustment in those countries is likely to act as a significant drag on their growth throughout the forecast period. And there continues to be a risk of a much more significant weakening in euro-area activity, with substantial implications for the United Kingdom and the global economy, if, for example, a significant intensification of market concerns over the sustainability of those countries' fiscal positions were to result in severe distress and dislocation in financial markets. A box on page 38 discusses how those issues may affect the United Kingdom, and the treatment of them in the MPC's projections.

The Committee's central judgement is that, despite only modest growth in the euro area, global demand is likely to be strong enough to enable UK exports to grow at or slightly above their historical average rate throughout the forecast period, supporting the rebalancing of the UK economy. Indicators of global growth have softened, however. In part that may reflect temporary factors (Section 2). But the possibility that the global slowdown will prove more prolonged poses a further downside risk to UK exports and so to the boost from net trade.

How strongly will domestic demand recover?

Growth in UK domestic demand has weakened substantially over the past year. In large part that reflects falling household consumption in response to the squeeze in household real incomes (Section 2). Assuming energy and other commodity prices stabilise, the Committee's central judgement is that real incomes should begin to grow again. Consumption growth is judged likely to pick up roughly in line with that recovery in incomes, settling around its historical average rate in the medium term.

There are significant risks on both sides of that judgement, however. These include substantial uncertainties around the outlook for wages, employment and inflation, and hence around real income growth. And there are also risks around the path of the household saving rate. Households have increased their saving since the onset of the global financial crisis, perhaps in response to the associated increase in uncertainty. If uncertainty recedes, or once households feel that they have built up a sufficient buffer of liquid assets, then saving may fall back. But, in the opposite direction, the recovery in consumption may lag the pickup in income growth, if there is more adjustment to the recent weakness of real incomes still to come.

Financial and energy market assumptions

As a benchmark assumption, the projections for GDP growth and CPI inflation described in **Charts 5.1** and **5.6** are conditioned on a path for Bank Rate implied by market interest rates (**Table 1**). In the period leading up to the MPC's August decision, the path implied by forward market interest rates was for Bank Rate to rise to 0.8%, on average, in 2012 Q4. Bank Rate was assumed to continue to rise thereafter. The path for Bank Rate at the time of the *August Report* was 0.9 percentage points lower, on average, than that assumed in the *May Report*.

Table 1 Conditioning path for Bank Rate implied by forward market interest rates^(a)

Per cent	2011		2012				2013				2014		
	Q3 ^(b)	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
August	0.5	0.5	0.6	0.6	0.7	0.8	0.9	1.0	1.2	1.4	1.5	1.7	1.9
May	0.7	0.8	1.0	1.2	1.5	1.7	2.0	2.2	2.4	2.6	2.8	3.0	

(a) The data are fifteen working day averages of one-day forward rates to 3 August 2011 and 4 May 2011 respectively. The curves are based on overnight index swap (OIS) rates.

(b) August figure for 2011 Q3 is an average of realised spot rates to 3 August, and forward rates thereafter.

The August projections are conditioned on an assumption that the total stock of asset purchases financed by the creation of central bank reserves remains at £200 billion throughout the forecast period, the same total scale of purchases assumed in the May projections.

The starting point for sterling's effective exchange rate index (ERI) in the MPC's projections was 79.2, the average for the fifteen working days to 3 August. That was 0.3% below the starting point for the May projections. Under the MPC's usual convention,⁽¹⁾ the exchange rate is assumed to be slightly higher in 2013 Q4, but is slightly lower throughout the forecast period than assumed in May.

The starting point for UK equity prices in the MPC's projections was 3032 — the average of the FTSE All-Share for the fifteen working days to 3 August. That was 2.7% below the starting point for the May projection. In the long run, equity wealth is assumed to grow in line with nominal GDP; in the short run, it also reflects changes in the share of profits in GDP.

Energy prices are assumed to evolve broadly in line with the paths implied by futures markets over the forecast period. Average Brent oil futures prices for the next three years were broadly unchanged (in US dollar terms) compared with at the time of the *May Report*. Wholesale gas futures prices were around 2% higher over the forecast period. The August projections for CPI inflation are conditioned on a benchmark assumption of increases in domestic gas and electricity prices of, on average, around 15% over the next three months from those energy suppliers who have not already announced increases in those prices since the *May Report*.

(1) The convention is that the sterling exchange rate follows a path which is half way between the starting level of the sterling ERI and a path implied by interest rate differentials.

Domestic demand growth will also depend on the pace of the recovery in business investment, which fell dramatically over the course of the recession. The Committee's central judgement is that investment is likely to recover steadily, as companies carry out investment projects deferred during the recession, and new capacity is installed in those sectors benefiting from the rebalancing of the UK economy. By the end of the forecast period, that recovery could take the share of business investment in GDP back to around its level before the onset of the crisis. But the precise pace of the recovery in capital expenditure, and therefore its contribution to growth, is uncertain.

The strength of domestic demand will also be sensitive to the cost and availability of credit over the forecast period. The spreads between Bank Rate and loan rates to households and companies rose sharply during the financial crisis, and remain well above their pre-crisis levels on average (see the box on pages 16–17). That partly reflects increases in the marginal cost of funding for banks, relative to Bank Rate, as well as an increase in the spreads charged over those funding costs, for riskier loans in particular.

The Committee's central judgement is that the average spread between loan rates and Bank Rate is likely to decline gradually over the forecast period, albeit to a level some way above that immediately prior to the recession, when those spreads had reached unsustainably low levels. But the pace at which that improvement in credit conditions will occur is highly uncertain, and there is a risk that loan rates could remain persistently elevated, for example if an intensification of euro-area sovereign debt concerns causes UK banks' funding costs to rise.

How much spare capacity is there within companies, and how will productivity evolve?

The degree of inflationary pressure associated with any given path of demand will depend crucially on the evolution of productivity. The level of labour productivity is currently lower than it was at the time of the peak in output in 2008, and is therefore far below the level implied by a continuation of its pre-recession trend (Section 3). A key judgement for the outlook for both output and inflation is whether that sustained weakness in productivity has resulted in a large margin of spare capacity within companies, or alternatively reflects a period of slow growth in underlying productivity and the supply capacity of the economy.

A significant margin of spare capacity may remain within companies, for example if they are holding on to staff in anticipation of a recovery in demand. Should that recovery materialise, then those companies would be able to increase production at relatively low cost, meaning that the economy could grow at a faster rate for a while without generating inflationary pressure. If, however, the recovery in demand is insufficiently strong, or if those companies operating with spare capacity turn out not to benefit from the rebalancing of the UK economy, then they may instead be forced to lay off staff. That would lead to increased slack within the labour market, and greater downward pressure on wages.

Alternatively, the weakness of productivity may prove more persistent if it reflected a period of weak growth in underlying productivity. Some features of the recovery do point to a weakening in potential supply — for example, employment growth over the past year has been solid and responses to business surveys indicate that spare capacity within companies is limited. That would suggest that there is little scope for the level of output to return towards its pre-recession trend, at least over the forecast period. Further, it is also possible that unusually low growth in underlying productivity might endure, so that the economy's sustainable rate of growth would remain lower than usual for a period.

The Committee's central judgement is that the weak growth in productivity over the past three years largely reflects weak underlying productivity growth. Nonetheless, the Committee judges that there is likely to be some margin of spare capacity still remaining within companies, broadly in line with the

responses to business surveys (Section 3). Productivity growth is judged likely to pick up from the beginning of the forecast period, as underlying productivity resumes its usual growth, and the margin of spare capacity closes. Combined with the outlook for demand, that suggests that slack in the labour market is likely to persist throughout the forecast period. But there is considerable uncertainty, and a range of views among Committee members, surrounding these judgements.

How much will wage growth rise?

The low rate of productivity growth over the past three years has been associated with a period of very weak nominal wage growth. But another important factor weighing on earnings has been the elevated level of unemployment following the recession (Section 4). It is difficult to isolate precisely the relative roles of labour market slack and weak productivity growth in pulling down on wages over the past and, therefore, to predict the extent to which earnings growth will pick up as productivity growth recovers but persistent labour market slack remains.

The Committee's central judgement is that earnings growth is likely to pick up during the first year of the forecast period. In part that reflects the projected recovery in productivity growth. But in addition, the sustained period of above-target inflation is likely to put some further upward pressure on earnings, particularly over the early part of the forecast period. Such effects could include employees trying to recoup some of the erosion of their real incomes, or employers increasing wages in order to retain or motivate staff. And they could also reflect some drift upwards in expectations of inflation.

Offsetting those effects, however, a degree of slack in the labour market is judged likely to continue to bear down on wage growth, so that wage growth remains at or below historical average rates throughout the forecast period. There are significant risks, in both directions, around that central judgement.

How quickly will external pressure on inflation fall back?

In addition to the outlook for labour costs, inflation will continue to be sensitive to external price pressures. UK import prices have risen sharply over the past twelve months, putting substantial upward pressure on inflation (Section 4). Much of that pressure has stemmed from increases in energy and other commodity prices (see the box on pages 48–49, which discusses how these and other factors have influenced inflation and GDP, compared with the judgements underlying the MPC's projections in the *May 2010 Report*).

The Committee's central forecast is conditioned on futures prices for energy and other commodities, and so assumes that most commodity prices will be broadly stable over the forecast period. In that case, import price inflation should fall back by

the second year of the forecast period, so that CPI inflation and the rate of domestically generated inflation converge. But there are two key risks around that forecast. First, the Committee's central judgement is that the past depreciation of sterling has now largely passed through into final prices. But there may be some further effect on prices still to come. Second, the outlook for commodity prices remains highly uncertain. It will depend, in large part, on the path of world output. But despite the recent weakening in global growth, commodity prices have remained elevated, perhaps reflecting supply constraints.

How will companies' pricing decisions affect inflation?

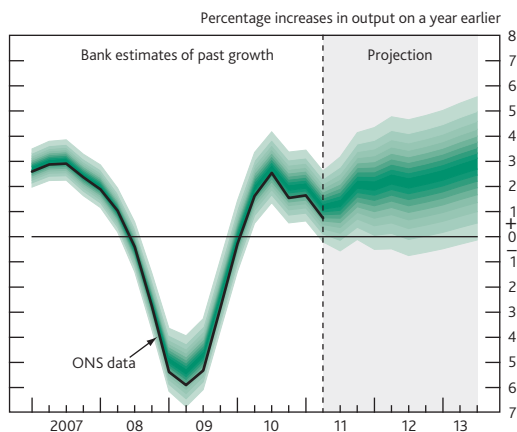
As well as the outlook for external price pressures and labour costs, inflation will also depend on companies' pricing decisions. Businesses' profit margins were eroded during the recession, as productivity fell and imported costs rose sharply. But the share of non-financial company profits in total income has now recovered to close to its pre-recession level (Section 4). At face value, that might appear to suggest little further upward pressure to inflation to come from the need to restore profit margins.

There are some risks to inflation stemming from companies' pricing decisions, however. First, while profit margins appear to have recovered to pre-recession levels on average, that masks some divergence between sectors. In particular, it is likely that profit margins in UK consumer-facing sectors remain, on average, below their levels prior to the recession, but that profit margins in those sectors that sell primarily overseas are above pre-crisis levels. Those divergences in profit margins may simply reflect the need for a rebalancing of the economy, and a reallocation of resources, towards the production of tradable goods and services. Nonetheless, attempts by UK consumer-facing companies to rebuild their margins through higher prices could put some further upward pressure on CPI inflation. Second, the sustained period of above-target inflation may cause some companies to expect inflation to return to target relatively slowly. That could prompt them to raise their own prices by more than otherwise, in anticipation of their suppliers and competitors doing likewise, causing the period of above-target inflation to be more enduring.

5.3 Summary and the policy decision

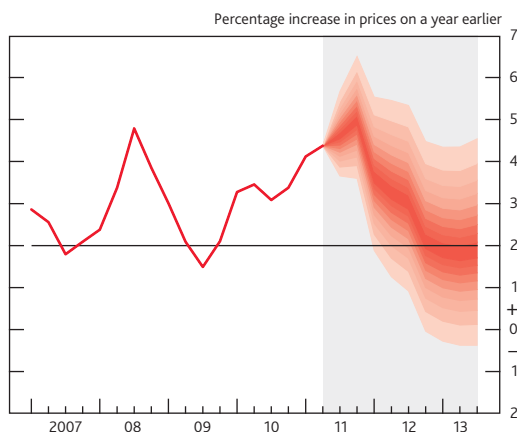
CPI inflation is likely to rise over the coming months, and remain above the target for at least the next year. But it is likely to fall back during 2012 and into 2013, as the effects of temporary factors dwindle, and a margin of spare capacity, particularly in the labour market, continues to weigh on wages and prices. The extent of the fall in inflation will depend on: the scale of that spare capacity, and the evolution of potential supply; the strength of the recovery in demand; the evolution of external price pressures; and on the degree to which the

Chart 5.12 GDP projection based on constant nominal interest rates at 0.5% and £200 billion asset purchases



See footnote to Chart 5.1.

Chart 5.13 CPI inflation projection based on constant nominal interest rates at 0.5% and £200 billion asset purchases



See footnote to Chart 5.6.

sustained period of above-target inflation puts upward pressure on wages and prices. There remains a range of views among Committee members about the strength of these various forces, and therefore around the overall outlook for inflation. The Committee's best collective judgement is that, conditioned on the assumptions described above, the chances of inflation being above or below the target are broadly equal in the medium term.

Charts 5.12 and 5.13 show the GDP and CPI inflation projections for the next two years under the alternative assumption that Bank Rate is held constant at 0.5%. Under that assumption for monetary policy, the chances of inflation being above or below the target at the two-year point are roughly equal.

In evaluating the outlook for growth, the Committee will focus on indicators of: the likely path of household incomes, and the evolution of household saving; the recovery in capital expenditure; and the prospects for the world economy, and in particular in the euro area.

In evaluating the outlook for inflation, the Committee will in addition focus on: evidence regarding the evolution of underlying productivity and spare capacity; measures of inflation expectations, and their impact on prices and wages; and the path of commodity prices.

At its August meeting, the Committee judged that the outlook for the global economy had deteriorated and that GDP growth in the United Kingdom would pick up only gradually. Inflation looked set to increase in the near term, boosted by higher utility prices. But under the assumption that Bank Rate moved in line with market yields, inflation was likely to fall back in the medium term, as the impact of the factors raising inflation diminished and some downward pressure from a degree of slack in the labour market persisted. In the light of that outlook, the Committee judged it appropriate at that meeting to maintain Bank Rate at 0.5% and the stock of asset purchases at £200 billion, in order to meet the 2% CPI inflation target over the medium term.

Other forecasters' expectations

Every three months, the Bank asks a sample of external forecasters for their latest economic projections. This box reports the results of the most recent survey, carried out during July. On average, CPI inflation was expected to fall back to 2.4% by 2012 Q3 and to remain marginally above the 2% target over the following two years (Table 1). Compared with three months ago, expectations were a touch higher in the near term and the distribution of central views about CPI inflation one year ahead had shifted upwards (Chart A). Despite that worsening in the near-term outlook for inflation, the average expectation for inflation at the three-year horizon was 0.1 percentage points lower than three months ago.

Table 1 Averages of other forecasters' central projections^(a)

	2012 Q3	2013 Q3	2014 Q3
CPI inflation ^(b)	2.4	2.1	2.1
GDP growth ^(c)	2.0	2.2	2.2
Bank Rate (per cent)	1.2	2.0	2.8
Sterling ERI ^(d)	79.4	81.0	81.8

Source: Projections of outside forecasters as of 28 July 2011.

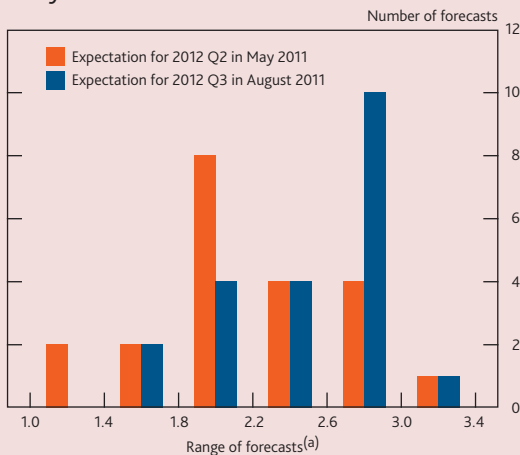
(a) For 2012 Q3, there were 21 forecasts for CPI inflation and GDP growth, 20 for Bank Rate and 15 for the sterling ERI. For 2013 Q3 and 2014 Q3 there were 17 forecasts for CPI inflation and GDP growth, 16 for Bank Rate and 14 for the sterling ERI.

(b) Twelve-month rate.

(c) Four-quarter percentage change.

(d) Where necessary, responses were adjusted to take account of the difference between the old and new ERI measures, based on the comparative outturns for 2006 Q1.

Chart A Distribution of CPI inflation central projections one year ahead



Sources: Projections of 21 outside forecasters as of 27 April 2011 and 21 outside forecasters as of 28 July 2011.

(a) A projection that is on the boundary of these ranges is classified in the higher bucket. For example, a 1.8% projection is included within the 1.8% to 2.2% bucket.

On average, forecasters expected four-quarter GDP growth to be 2.0% at the one-year horizon, rising to 2.2% in the medium term, both somewhat lower than three months ago.

Most forecasters expected Bank Rate to have risen by 2012 Q3, with further increases predicted over the following two years. But Bank Rate was now expected to rise more

slowly. On average, the sterling ERI was projected to appreciate gradually over the next three years.

The Bank also asks forecasters for an assessment of the risks around their central projections for CPI inflation and GDP growth (Table 2). On average, respondents assigned a slightly higher probability to inflation being more than 1 percentage point above the target at the one-year horizon than three months ago. But the average probability attached to inflation being above 3% three years ahead fell noticeably (Chart B). Consistent with the downward revisions to their central projections, respondents, on average, judged that growth was less likely to exceed 3% in both the near term and the medium term than they did three months ago. For example, the average probability assigned to growth being above 3% at the three-year horizon was 10 percentage points lower.

Table 2 Other forecasters' probability distributions for CPI inflation and GDP growth^(a)

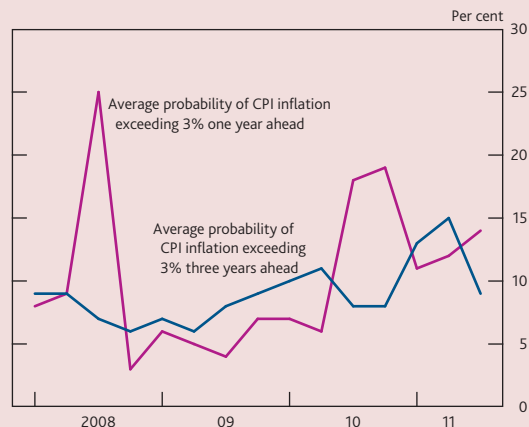
CPI inflation	Range:						
	<0%	0-1%	1-1.5%	1.5-2%	2-2.5%	2.5-3%	>3%
Probability, per cent							
2012 Q3	1	4	9	18	25	28	14
2013 Q3	2	6	12	26	25	17	12
2014 Q3	2	6	12	25	29	17	9

GDP growth	Range:					
	<-1%	-1-0%	0-1%	1-2%	2-3%	>3%
Probability, per cent						
2012 Q3	3	6	15	33	32	11
2013 Q3	4	7	13	27	33	16
2014 Q3	3	7	14	25	34	18

Source: Projections of outside forecasters as of 28 July 2011.

(a) For 2012 Q3, 21 forecasters provided the Bank with their assessment of the likelihood of twelve-month CPI inflation and four-quarter GDP growth falling in the ranges shown above; for 2013 Q3 and 2014 Q3, 17 forecasters provided assessments for CPI and GDP. The table shows the average probabilities across respondents. Rows may not sum to 100 due to rounding.

Chart B Other forecasters' average probabilities of CPI inflation exceeding 3% one year and three years ahead



Sources: Projections of outside forecasters provided for *Inflation Reports* between February 2008 and August 2011.

The MPC's forecasting record

This box, the latest in a series published each August, compares the MPC's projections for inflation and GDP growth with outturns. Given the inherent uncertainty about the future evolution of the economy, the MPC needs to consider the distribution of possible outcomes when setting policy. Reflecting that, the Committee's projections are published in the form of fan charts (see, for example, **Chart 5.1**), rather than point forecasts. When assessing the MPC's projections, it is therefore appropriate to examine outturns relative to those probability distributions.

The first half of this box examines where GDP growth and inflation outturns have fallen within the probability distributions since 1998 and discusses how that dispersion has changed over the past three years — a period during which the UK economy has experienced a severe recession and several large relative price shocks. Reflecting those events, GDP growth outturns since 2008 have tended to fall in the lower bands of the MPC's fan charts, and inflation outturns have tended to fall in the upper bands. GDP growth and inflation outturns over 2008 and 2009 were discussed in past boxes. The second half of this box focuses on how the economy has evolved relative to the distributions in the May 2010 *Report*.

The MPC's projections since 1998 and outturns

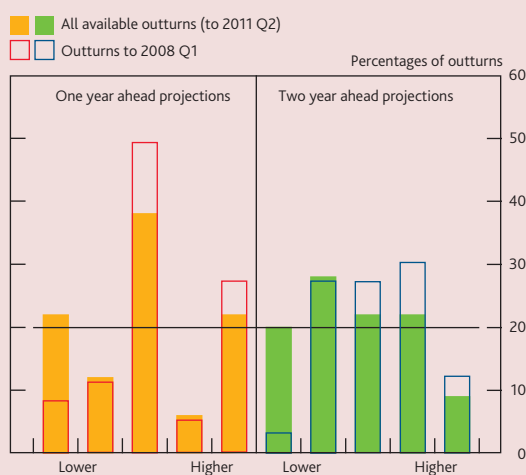
One way of assessing the MPC's projections is to examine where outturns have fallen within the probability distribution over a period of time.⁽¹⁾ **Chart A** shows what proportion of four-quarter GDP growth outturns have fallen within each quintile of the probability distribution at both the one-year and two-year horizons. **Chart B** shows how inflation outturns have been distributed. If the fan charts accurately described the uncertainty faced by the MPC, the fan chart conditioning assumptions were realised, and the sample was large enough, outturns would be expected to lie within each quintile on 20% of occasions — shown by the black line.

In order to isolate the impact of recent shocks, **Charts A and B** look at outturns up to 2008 Q1, as well as outturns over the whole period to 2011 Q2. In the period to 2008 Q1, GDP growth outturns at the one-year horizon fell in the central quintile more often than would have been suggested by the fan charts. The hollow red bars in **Chart A** show that around 50% of outturns at the one-year horizon fell in the middle quintile, rather than 20%, as might be expected in the long run. At the two-year horizon — shown in the hollow blue bars — around 85% of outturns fell in the middle three quintiles rather than 60% as might be expected.

Turning to inflation, up to 2008 Q1, the distribution of outturns relative to projections at the one-year horizon was

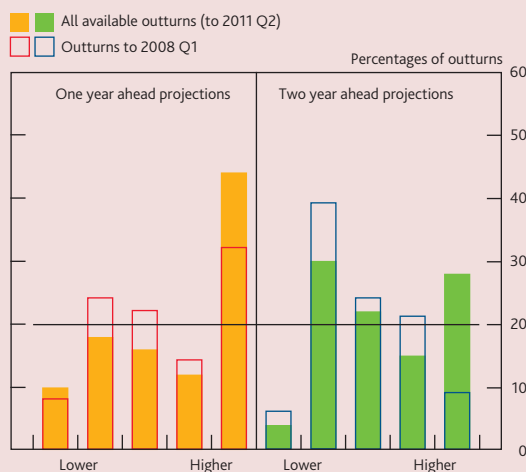
broadly similar to that suggested by the fan charts: 60% of outturns were in the middle three quintiles, although there were slightly fewer than 20% in the lowest quintile and slightly more in the highest (**Chart B**). But at the two-year horizon, inflation outturns were more clustered in the centre of the distribution than would have been suggested by the fan charts: about 85% of outturns fell in the middle three quintiles. That may be because that period was one of relative stability, during which few significant risks crystallised. But it may also reflect the response of monetary policy. The MPC's fan charts are conditioned on a given path for monetary policy. In practice, however, policy will vary from this path, as it responds to economic developments to bring inflation back to target. Inflation outturns over longer horizons are therefore likely to be more concentrated around the target than implied by the fan charts alone.⁽²⁾

Chart A Dispersion of GDP growth outturns across quintiles of the fan chart probability distributions^(a)



(a) Calculated for the market rate fan charts published since February 1998.

Chart B Dispersion of inflation outturns across quintiles of the fan chart probability distributions^(a)



(a) Calculated for the market rate fan charts published since February 1998. Inflation fan charts refer to RPIX inflation up to November 2003 and CPI inflation thereafter.

When the period up to 2011 Q2 is included — shown by the solid bars in **Charts A and B** — the picture changes somewhat. The proportion of GDP growth outturns in the lowest quintile of the distribution has risen at both the one-year and two-year horizons. Overall, the GDP outturns at the two-year horizon are quite close to the pattern implied by the fan chart distribution. The proportion of inflation outturns falling in the top quintile of the distribution has increased markedly at both the one-year and two-year horizons.

The boxes in August 2009 and August 2010 discussed economic developments relative to projections made in 2008 and 2009. The remainder of this box focuses on the outturns over the past year.

How has the economy evolved relative to the distributions in the May 2010 Report?

In 2011 Q2, CPI inflation was 4.4% — above the red area of the May 2010 fan chart (**Chart C**). The MPC attached a probability of less than 5% to an outturn as high or higher. In 2011 Q2, four-quarter GDP growth was 0.7% (**Chart D**). In May 2010, the MPC attached a probability of less than 15% to an outturn as low or lower. This section explains the factors driving developments in the economy over the past year.

As described in Section 4 and shown in **Chart 4.1**, it is likely that VAT and the impact of external factors — energy prices and other import and commodity prices — have been more than large enough to account for the elevated level of inflation over the past year. As discussed below, such significant relative price shocks were not incorporated in the May 2010 projection.

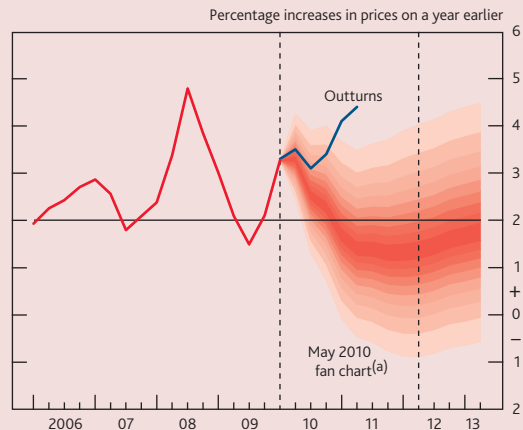
The rise in the standard rate of VAT to 20% is likely to have added around 1 percentage point to CPI inflation in 2011 Q2 (Section 4). The May 2010 forecast did not incorporate that increase, as it was conditioned on the March *Budget*, which did not include such a rise.

The MPC's May 2010 central projections were conditioned on futures prices for commodities. In 2011 Q2 most energy and non-energy commodity prices were significantly higher than implied by the futures curves available at the time of the May 2010 Report. For example, the sterling oil price was around 20% higher (see **Chart 4.2** on page 31). The increases in energy prices have led to higher petrol and utilities prices — the direct contribution of energy prices to CPI inflation in 2011 Q2 was 0.9 percentage points. Moreover, the general strength of commodity prices has been reflected in rising global prices, and so high UK import inflation excluding fuels.⁽³⁾

In describing its May 2010 growth projection, the Committee noted that consumption was expected to grow, albeit slowly, although there were significant downside risks to the growth

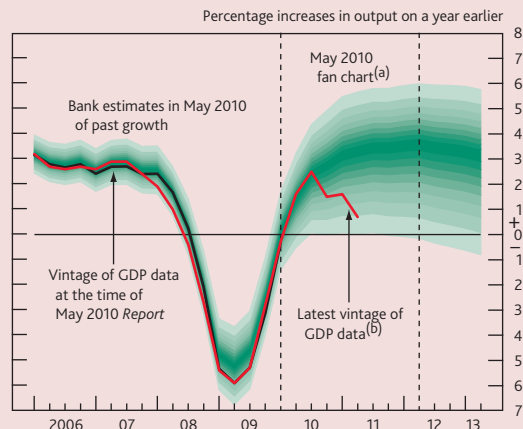
outlook. Consumption has in fact fallen over the past year (Section 2), and has been a key factor behind the weakness in GDP growth. That decrease in consumption has coincided with falling real household incomes, in large part due to the significant movements in VAT and commodity prices seen over the past year. In other words, it is likely that the weakness in GDP growth has been related to the strength in inflation.

Chart C CPI inflation outturns and projection in the May 2010 Inflation Report



(a) Based on market interest rate expectations and the assumption that the stock of purchased assets remained at £200 billion throughout the forecast period. See footnote to **Chart 5.6** for information on how to interpret the fan chart.

Chart D GDP outturns and projection in the May 2010 Inflation Report



(a) Based on market interest rate expectations and the assumption that the stock of purchased assets remained at £200 billion throughout the forecast period. See footnote to **Chart 5.1** for information on how to interpret the fan chart.

(b) Revisions to early estimates of GDP growth account for the gap between the red and black lines prior to the first vertical dashed line.

- (1) For further analysis on the MPC's forecasts, see Groen, J, Kapetanios, G and Price, S (2009), 'A real time evaluation of Bank of England forecasts of inflation and growth', *International Journal of Forecasting*, Vol. 25, pages 74–80.
- (2) Given the lags with which monetary policy affects the economy, this effect is more pronounced at longer time horizons. So this box does not discuss outturns relative to the fan chart at the three-year horizon.
- (3) For more details, see the box on pages 34–35 of the May 2011 *Inflation Report*.

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Text of Bank of England press notice of 9 June 2011**Bank of England maintains Bank Rate at 0.5% and the size of the Asset Purchase Programme at £200 billion**

The Bank of England's Monetary Policy Committee today voted to maintain the official Bank Rate paid on commercial bank reserves at 0.5%. The Committee also voted to maintain the stock of asset purchases financed by the issuance of central bank reserves at £200 billion.

The minutes of the meeting will be published at 9.30 am on Wednesday 22 June.

Text of Bank of England press notice of 7 July 2011**Bank of England maintains Bank Rate at 0.5% and the size of the Asset Purchase Programme at £200 billion**

The Bank of England's Monetary Policy Committee today voted to maintain the official Bank Rate paid on commercial bank reserves at 0.5%. The Committee also voted to maintain the stock of asset purchases financed by the issuance of central bank reserves at £200 billion.

The minutes of the meeting will be published at 9.30 am on Wednesday 20 July.

Text of Bank of England press notice of 4 August 2011**Bank of England maintains Bank Rate at 0.5% and the size of the Asset Purchase Programme at £200 billion**

The Bank of England's Monetary Policy Committee today voted to maintain the official Bank Rate paid on commercial bank reserves at 0.5%. The Committee also voted to maintain the stock of asset purchases financed by the issuance of central bank reserves at £200 billion.

The Committee's latest inflation and output projections will appear in the *Inflation Report* to be published at 10.30 am on Wednesday 10 August.

The minutes of the meeting will be published at 9.30 am on Wednesday 17 August.

Glossary and other information

Glossary of selected data and instruments

ABS – asset-backed security.

AWE – average weekly earnings.

CDS – credit default swap.

CMBS – commercial mortgage-backed security.

CPI – consumer prices index.

CPI inflation – inflation measured by the consumer prices index.

ERI – exchange rate index.

GDP – gross domestic product.

LFS – Labour Force Survey.

Libor – London interbank offered rate.

M4 – UK non-bank, non-building society private sector's holdings of sterling notes and coin, and their sterling deposits (including certificates of deposit, holdings of commercial paper and other short-term instruments and claims arising from repos) held at UK banks and building societies.

OIS – overnight index swap.

RMBS – residential mortgage-backed security.

RPI – retail prices index.

RPI inflation – inflation measured by the retail prices index.

RPIX – RPI excluding mortgage interest payments.

RPIX inflation – inflation measured by the RPI excluding mortgage interest payments.

Abbreviations

BBA – British Bankers' Association.

BCC – British Chambers of Commerce.

BIS – Department for Business, Innovation and Skills.

CBI – Confederation of British Industry.

CFO – chief financial officer.

CIPS – Chartered Institute of Purchasing and Supply.

EU – European Union.

FTSE – Financial Times Stock Exchange.

G7 – Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.

GfK – Gesellschaft für Konsumforschung, Great Britain Ltd.

HMT – Her Majesty's Treasury.

IMF – International Monetary Fund.

ISM – Institute for Supply Management.

LTV – loan to value.

MPC – Monetary Policy Committee.

MTIC – missing trader intra-community.

OBR – Office for Budget Responsibility.

OFCs – other financial corporations.

ONS – Office for National Statistics.

PNFCs – private non-financial corporations.

PwC – PricewaterhouseCoopers.

QNA – Quarterly National Accounts.

RICS – Royal Institution of Chartered Surveyors.

S&P – Standard & Poor's.

VAT – Value Added Tax.

Symbols and conventions

Except where otherwise stated, the source of the data used in charts and tables is the Bank of England or the Office for National Statistics (ONS) and all data, apart from financial markets data, are seasonally adjusted.

n.a. = not available.

Because of rounding, the sum of the separate items may sometimes differ from the total shown.

On the horizontal axes of graphs, larger ticks denote the first observation within the relevant period, eg data for the first quarter of the year.

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