

# Inflation Report

November 2010



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](http://www.bankofengland.co.uk/publications/inflationreport/infrep.htm).

The entire *Report* is available in PDF at [www.bankofengland.co.uk/publications/inflationreport/2010.htm](http://www.bankofengland.co.uk/publications/inflationreport/2010.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/2010.htm](http://www.bankofengland.co.uk/publications/inflationreport/2010.htm).



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# Overview

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The United Kingdom continued to recover from the recent deep recession. Global output and world trade grew robustly, although fragilities remain. The UK recovery is expected to continue, supported by expansionary monetary policy, further growth in global demand and the past depreciation of sterling. GDP growth is judged to be a little more likely to be above its historical average than below it for much of the forecast period. Even so, the large fall in output during the recession means that some spare capacity is likely to persist over the forecast period.

CPI inflation remained well above the 2% target, elevated by the restoration of the standard rate of VAT to 17.5% and the past depreciation of sterling. Inflation is likely to stay above the 2% target throughout 2011, given the forthcoming rise in VAT and continuing increases in import prices. As the impact of those factors on inflation diminishes, inflation is likely to fall back, reflecting continuing downward pressure from the persistent margin of spare capacity. But the timing and extent of that decline in inflation are highly uncertain. Under the assumptions that Bank Rate moves in line with market rates and the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion, the chances of inflation being either above or below the target by the end of the forecast period are judged to be roughly equal.

## Financial and credit markets

Since the *August Report*, the MPC has maintained Bank Rate at 0.5% and its stock of purchased assets at £200 billion. Market participants revised down further their expectations of the near-term path of Bank Rate and raised their expectations of future asset purchases by the MPC. Long-term government bond yields in the United Kingdom, United States and euro area declined further. UK corporate bond yields also fell, while equity prices rose. The sterling effective exchange rate remained around 25% below its mid-2007 level, albeit a little weaker than three months earlier.

Conditions in UK banks' wholesale funding markets improved, although banks continue to face significant challenges in refinancing maturing funding. The cost and availability of finance for large companies improved further, but credit conditions for small companies and households were still tight. Annual growth in both bank lending and broad money remained weak. Housing market activity continued to be subdued and house prices fell slightly.

## Demand

The robust recovery in global demand and world trade continued, albeit unevenly. Output in many emerging economies, especially in Asia, grew rapidly. Stronger activity in

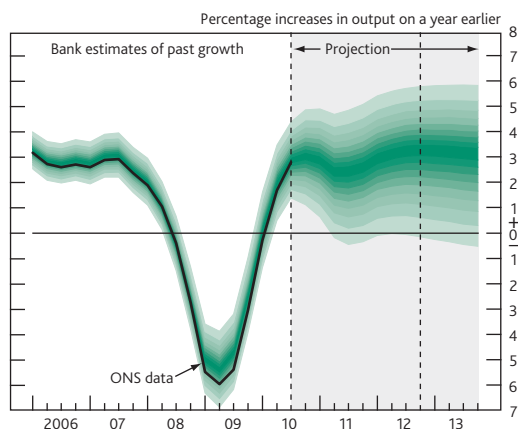
the euro area was concentrated in Germany and its neighbours. In contrast, some smaller European economies continued to face significant challenges as they responded to concerns about their sovereign debt positions. US GDP expanded at a moderate pace.

UK exports of goods grew robustly over the past year, supported by the rebound in world activity and the depreciation of sterling since mid-2007. But services exports continued to fall, perhaps in part reflecting a shift in global demand away from services in which the United Kingdom specialises, such as banking. The level of sterling should support a gradual narrowing in the trade deficit.

During the financial crisis, households and businesses in aggregate cut back sharply on spending relative to their incomes as the economic outlook deteriorated, uncertainty increased and credit became less available. But private domestic demand has since recovered to some extent. Consumer spending picked up over the past year despite weak income growth, so the household saving ratio fell back. In contrast, financial saving by the corporate sector remained elevated despite stronger investment and a return to inventory accumulation.

A significant fiscal consolidation is under way. The Committee's projections are conditioned on the plans set out in the June *Budget* and the October *Spending Review*. The *Spending Review* provided more detail on the Government's expenditure plans but contained little additional news for the macroeconomic outlook.

**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 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 1**, the ratios of the probabilities in the lower bands to those in the upper bands are approximately 6:4 at Years 2 and 3; the downward skew is somewhat smaller at Year 1. 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.

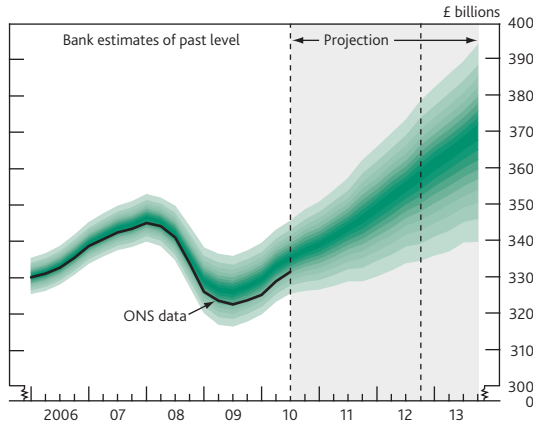
## The outlook for GDP growth

GDP growth was provisionally estimated to be 0.8% in 2010 Q3, similar to its average in the first half of the year. Growth over recent quarters appeared to have been stronger than the Committee had expected at the beginning of the year. But a number of surveys of output growth and confidence were below levels seen earlier in the year, suggesting that growth may slow in the near term.

**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. The considerable stimulus from monetary policy, together with a further expansion in world demand and the past depreciation of sterling, should support recovery. Those factors are likely to encourage private sector spending and some rebalancing of the economy towards net trade. But the strength of the recovery is likely to be tempered by the fiscal consolidation and the reduced availability of credit.

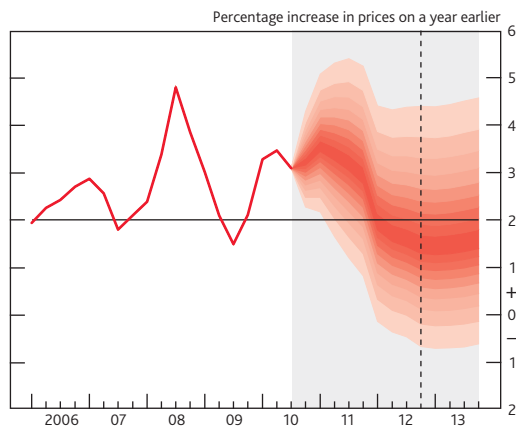
The outlook for growth is highly uncertain. The contribution of net trade to growth has so far been weaker than the

**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.

**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 outturns 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 ratios of the probabilities in the lower bands to those in the upper bands are approximately 4:6 at Years 2 and 3. The upward skew at Year 1 is smaller. 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.

Committee had expected, and it is unclear how persistent that weakness will prove to be. Private domestic demand could grow rapidly if confidence recovers, and if businesses reinstate investment projects previously put on hold. But there are also significant downside risks to the path of private demand, especially to household spending. Some households may not yet have fully adjusted to the forthcoming fiscal consolidation. In addition, there may be a further drag on consumption from weak confidence, higher savings for retirement, and some households' high levels of debt.

There is a wider than usual range of views among Committee members over the likely effects on growth of these various factors. The Committee continues to judge that relative to the most likely path — shown by the darkest band in **Chart 1** — the risks to growth are skewed to the downside. Taking into account that skew, the Committee's best collective judgement is that GDP growth is a little more likely to be above its historical average than below it for much of the forecast period. **Chart 2** shows that output is likely to remain significantly below the level implied by a continuation of its pre-recession trend.

## Costs and prices

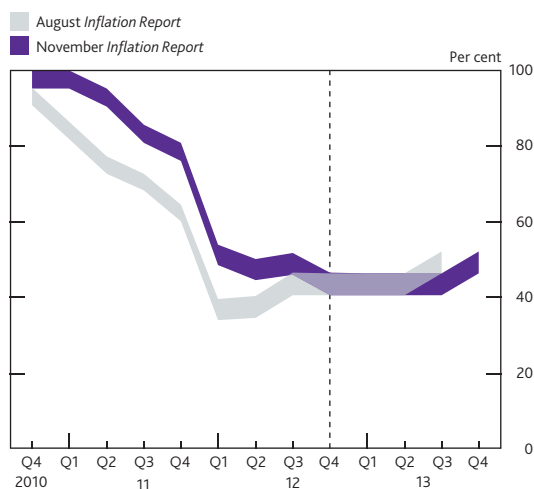
CPI inflation was 3.1% in September. The elevated level of inflation continued to reflect the restoration of the standard rate of VAT to 17.5% and the past depreciation of sterling. The forthcoming increase in VAT to 20% will put upward pressure on inflation throughout 2011. Prices of commodities and other traded goods and services have continued to increase, raising companies' costs and inflationary pressure.

Labour productivity has recovered to around its pre-crisis level. On the assumption that underlying productivity continued to grow during the recession, many companies should be able to increase output significantly using their existing workforce and capital. But other signs, such as the modest margin of spare capacity reported in business surveys and the pickup in employment, suggested that their scope to do so may be more limited. Unemployment was stable but continued to point to a sizable degree of slack in the labour market. Despite above-target inflation, measures of inflation expectations appeared broadly consistent with meeting the inflation target in the medium term and earnings growth remained subdued.

## 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**. Inflation is likely to pick up a little further in the near term, and to remain above the 2% target throughout 2011, boosted by a rebuilding of companies' margins and the forthcoming increase in VAT. The projection over the first half of the forecast period is higher than in August, in part reflecting further increases in import costs. As the impact of

**Chart 4** Assessed probability inflation will be above target



The November and August swathes in this chart are derived from the same distributions as **Chart 3** and **Chart 5.7** on page 40 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 November projection. The two-year point of the August projection was one quarter earlier.

those effects on inflation wanes, inflation is likely to fall back reflecting the continuing downward pressure on wages and prices from the persistent margin of spare capacity.

There are substantial risks to the inflation outlook. Inflation will be affected by future developments in commodity and other traded prices, the degree of spare capacity and its impact on wages and prices, and the evolution of inflation expectations. Continued strong growth in some emerging economies may lead to further upward pressure on the prices of commodities and other imported goods and services, so pushing up companies' costs. The degree of spare capacity and its impact on inflation in the medium term will depend on: the strength of demand; the persistence of the reduction in productivity; the performance of the labour market; and the sensitivity of wages to any labour market slack. Inflation may fall further than expected if the degree of spare capacity is larger or if it has a greater impact. But inflation may remain higher than otherwise if the current period of above-target outturns cause medium-term expectations of inflation to rise.

There is a wider than usual range of views among Committee members over the likely effects on inflation of these various factors. **Chart 4** shows the Committee's best collective judgement of the probability of inflation being above the 2% target along with the corresponding probability implied by the *August Report* projection. On balance, the Committee judges that, based on the monetary policy assumptions described above, the chances of inflation being either above or below the inflation target by the end of the forecast period are roughly equal. The most likely outcome is that inflation falls below target by 2013, but the risks around that most likely path are judged to be skewed to the upside.

## The policy decision

At its November meeting, the Committee judged that the recovery was likely to continue. The outlook for inflation in the near term was higher than previously expected, in part reflecting higher import prices. But inflation was still likely to fall back in the medium term, reflecting the continuing downward pressure from the persistent margin of spare capacity. In the light of that outlook, the Committee judged that maintaining Bank Rate at 0.5% and maintaining the stock of asset purchases financed by the issuance of central bank reserves at £200 billion was appropriate to meet the 2% CPI inflation target over the medium term. But the prospects for inflation remained highly uncertain and the Committee stood ready to respond in either direction as the balance of risks evolved.

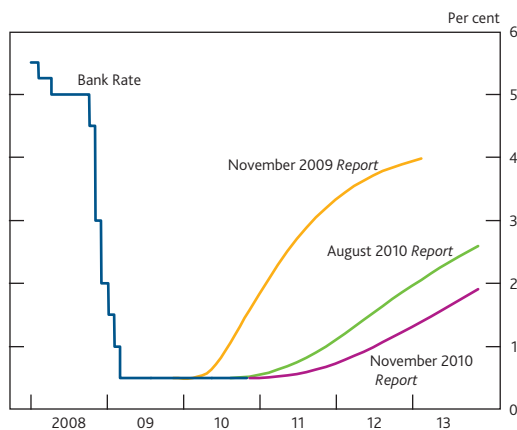
# 1 Money and asset prices

The MPC maintained Bank Rate at 0.5% and the stock of asset purchases financed by the issuance of central bank reserves at £200 billion. Since the *August Report*, market participants have revised down their near-term expectations for Bank Rate, and the likelihood they attached to further asset purchases has increased. Long-term interest rates fell further in the United Kingdom, the United States and the euro area. UK equity prices rose and corporate bond yields declined. Conditions in UK banks' wholesale funding markets improved. Credit conditions facing large companies appear to have eased over the past year, but conditions facing small businesses and households do not appear to have improved as much. Bank lending to businesses and households remained weak in Q3, as did broad money growth.

Since the *August Report*, market participants have revised down their near-term expectations for Bank Rate, and the likelihood they attached to further asset purchases has increased. In part reflecting those expectations of further monetary stimulus, government and corporate bond yields fell, and equity prices rose (Section 1.1).

One uncertainty surrounding the macroeconomic outlook is the extent to which deleveraging in the banking sector will continue to restrict the supply of credit. Wholesale funding conditions facing major UK banks have improved in recent months, and banks have made progress in strengthening their balance sheets. The banking sector continues, however, to face long-term challenges (Section 1.2). Credit conditions for large companies appear to have improved over the past year, but conditions for small businesses and households do not seem to have improved as much (Section 1.3). Broad money growth remained weak in 2010 Q3 (Section 1.4).

**Chart 1.1** Bank Rate and forward market interest rates<sup>(a)</sup>



Sources: Bank of England and Bloomberg.

(a) The November 2009, August 2010 and November 2010 curves are estimated using overnight index swap (OIS) rates in the fifteen working days to 4 November 2009, 4 August 2010 and 3 November 2010 respectively.

## 1.1 Financial markets

### Monetary policy and short-term interest rates

Since the *August Report*, the MPC has maintained Bank Rate at 0.5% — the level it was cut to in March 2009 — and the stock of asset purchases financed by the issuance of central bank reserves at £200 billion. The reasons behind the MPC's decisions in September and October are discussed in the box on page 10.

In the period running up to the MPC's November decision, market participants' interest rate expectations for the next three years, estimated from overnight index swap (OIS) rates, were on average 0.4 percentage points lower than in August 2010, and 2.3 percentage points lower than a year earlier (Chart 1.1).

## Monetary policy since the August Report

The MPC's central projection in the *August 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 for the recovery in economic activity to be sustained. Under the same assumptions, CPI inflation was likely to remain above the 2% target throughout 2011, before falling back below the target during the second half of the forecast period.

Developments in the month leading up to the MPC's meeting on 8–9 September were on balance consistent with a reduction in near-term growth prospects in the United Kingdom. A number of indicators suggested that service sector growth might decline during the second half of the year, probably associated with a slowing in the overall growth rate of the economy.

Overseas developments had been mixed. The latest indicators suggested slowing growth in the United States, but that second-quarter euro-area GDP growth had been stronger than expected. In a number of peripheral euro-area countries GDP had grown only slowly or had fallen, but this had been more than offset by above-average growth in several northern European countries, including a 2.2% expansion in German output. International short and medium-term interest rates had declined substantially over the month. The falls in interest rates would be likely to stimulate activity at home and overseas.

CPI inflation had remained at 3.1% in August, and pay growth measures had stayed subdued. Most indicators of inflation expectations were broadly unchanged. Overall, the Committee judged that the upside risk to inflation expectations, noted in the *August Report*, remained but had not changed materially over the month.

A number of Committee members thought there had been either a slight reduction or little change to the risks to activity, with weaker news about the prospects for 2010 H2 and the boost from lower market interest rates acting in opposite directions. Other members thought that recent developments indicated that the headwinds to a recovery in private sector demand in the United Kingdom and overseas were somewhat stronger than previously thought, and that the downside risks to activity had increased.

On balance, most members thought that the level of Bank Rate and stock of asset purchases financed by the issuance of central bank reserves remained appropriate to balance the risks to the inflation outlook in the medium term. But one member thought it was appropriate to start to withdraw some of the exceptional monetary stimulus. Eight members of the

Committee voted to maintain Bank Rate at 0.5% and keep the stock of asset purchases at £200 billion. One member voted to increase Bank Rate by 25 basis points.

The news during the month leading up to the MPC's meeting on 6–7 October had done little to alter the near-term growth outlook. Global activity data had been broadly as expected, and were consistent with a modest deceleration as the support from the inventory cycle faded. In the United Kingdom, activity had continued to recover from its depressed level. But that recovery seemed likely to be weaker in the second half of the year than it had been in the first.

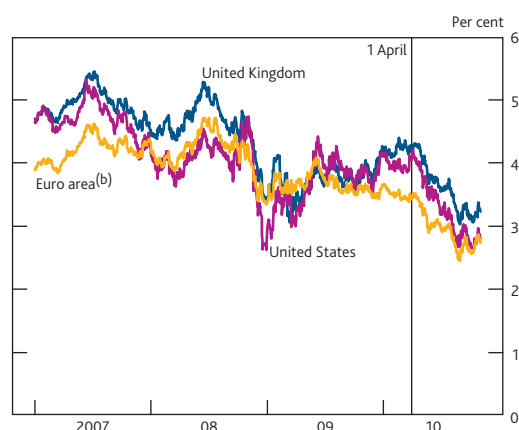
CPI inflation had remained unchanged at 3.1% in September. Recent increases in commodity and import prices and the 3% sterling depreciation over the previous month meant that inflation in the near term could be higher than the Committee had previously expected. The potential upside risk to inflation expectations did not seem to have changed substantially since the previous MPC meeting. Most measures of inflation expectations had moved little recently. And earnings and money growth had remained weak. But the likelihood of higher near-term inflation had the potential to exacerbate this risk.

Most members felt that the balance of risks had not altered sufficiently to warrant a change in the policy stance at this meeting. On the one hand, they continued to believe that the economy contained a considerable margin of spare capacity and, therefore, that demand could expand significantly before widespread capacity constraints put upward pressure on inflation. On the other hand, there were concerns about the risks to inflation expectations from the persistent and prospective above-target inflation outturns. Some of those members felt that the likelihood that further monetary stimulus would become necessary in order to meet the inflation target in the medium term had increased in recent months. But, for them, the evidence was not sufficiently compelling to imply that such a course of action was necessary at present.

For one member, however, the current degree of spare capacity in the economy was sufficiently large that monetary policy could afford to encourage more rapid growth without risking an undesirable increase in underlying inflationary pressures. Another member continued to take the view that it was appropriate to begin to withdraw some of the exceptional monetary stimulus. Seven members of the Committee voted to maintain the current stance of monetary policy. One member voted to increase the size of the asset purchase programme by £50 billion to a total of £250 billion. Another member voted for an increase in Bank Rate of 25 basis points.

At its meeting on 3–4 November, 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.

**Chart 1.2** International ten-year spot government bond yields<sup>(a)</sup>

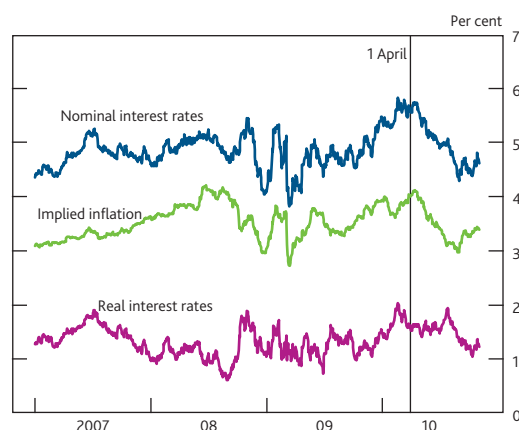


Sources: Bloomberg and Bank calculations.

(a) Zero-coupon yield.

(b) Derived from government bonds issued in France and Germany.

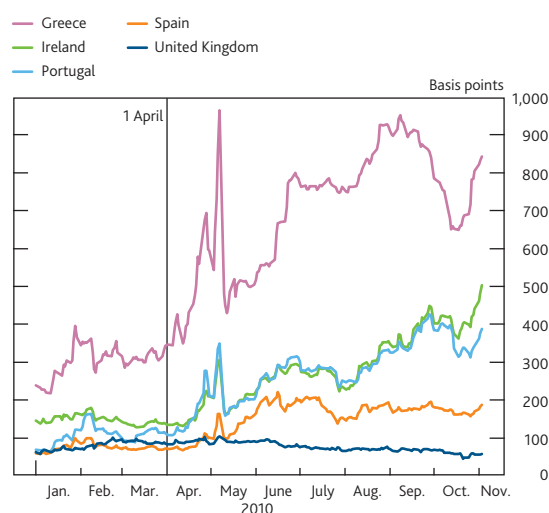
**Chart 1.3** UK five-year nominal and real interest rates, and implied inflation, five years forward<sup>(a)</sup>



Sources: Bloomberg and Bank calculations.

(a) Derived from the Bank's government liability curves.

**Chart 1.4** Selected European ten-year government bond spreads<sup>(a)</sup>



Sources: Bloomberg and Bank calculations.

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

## Longer-term interest rates

UK ten-year spot government bond yields have declined substantially since early April (Chart 1.2). In part, those declines reflect the fall in short-term interest rates, but longer-term interest rates have also declined. For example, the implied cost of government borrowing in five years' time for a period of five years has fallen markedly (Chart 1.3). Large falls in ten-year spot yields have also occurred in the United States and the euro area (Chart 1.2).

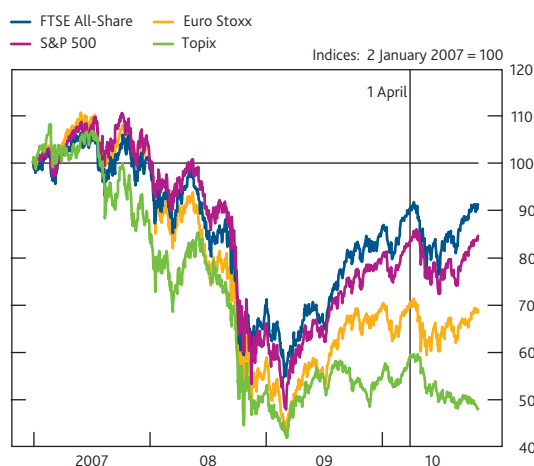
Nominal long-term interest rates can be decomposed into movements in real interest rates and an implied inflation rate, by comparing them with rates on index-linked government bonds. In the United Kingdom, the fall in five-year, five-year forward rates since April in part reflects a fall in real interest rates (Chart 1.3), but also a decline in implied inflation. A range of indicators of inflation expectations are discussed in Section 4.

Lower long-term interest rates will tend to support other asset prices and activity. But the extent of that support will depend on the cause of the decline in long rates. The recent fall is likely to reflect a combination of several factors, including: market perceptions that the risks associated with the UK government bond market are smaller than in some peripheral euro-area countries; expectations of additional asset purchases; and a reassessment of prospective global saving and investment. All of these explanations may be consistent with market participants revising down their view of economic growth in parts of the world economy.

Investors have become more concerned about the sustainability of fiscal positions in some peripheral euro-area countries since early April. That has encouraged investors to move towards the government bonds of countries where such sovereign risks are perceived to be smaller. As a consequence, government bond yields in Greece, Ireland and some other euro-area countries have risen markedly relative to German government bond yields since April (Chart 1.4). In contrast, the spread between ten-year UK gilts and German bond yields has narrowed slightly (Chart 1.4). Market contacts reported that the formation of a new UK government and the announcement of its plans for fiscal consolidation had reduced the perceived risks associated with holding UK gilts.

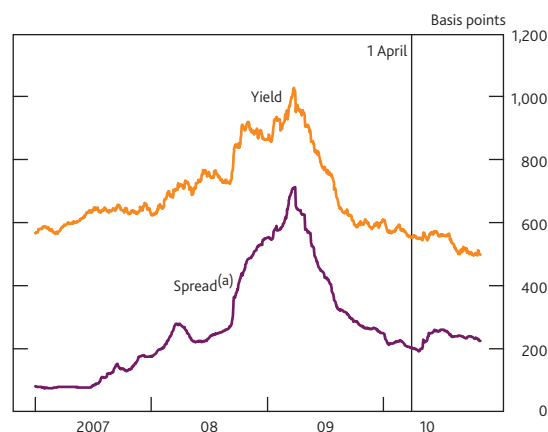
The fall in long-term interest rates is also likely to reflect higher expectations among market participants of further asset purchases by some central banks. Previous asset purchases have pushed down long-term interest rates.<sup>(1)</sup> Around 50% of economists responding to the October Reuters survey thought asset purchases in the United Kingdom would be resumed at some point, compared with 8% in the survey

(1) The impact of the Bank of England's programme of asset purchases on the gilt market is discussed in the box on pages 12–13 of the May 2010 Report.

**Chart 1.5** International equity prices<sup>(a)</sup>

Source: Thomson Reuters Datastream.

(a) In local currency terms.

**Chart 1.6** Sterling investment-grade corporate bond spread and yield

Source: Bank of America/Merrill Lynch.

(a) Option-adjusted spread over equivalent-maturity government bonds.

**Chart 1.7** Sterling non-bank investment-grade corporate bond spreads less CDS premia<sup>(a)</sup>

Sources: UBS Delta and Bank calculations.

(a) The data are based on individual corporate bond spreads (relative to asset swaps) less their corresponding CDS premia. The maturity of the bonds used in this calculation may not necessarily match the maturity of the corresponding CDS premia, as data are typically only available for five-year CDS. The chart shows a five-day moving average median measure.

conducted in late July. Both the US Federal Reserve and the Bank of Japan have announced additional asset purchases since the *August Report*.

The fall in long rates might also reflect a change in the prospective balance between global savings and investment. A rise in world savings, largely reflecting increased saving in Asian economies, was associated with low long-term interest rates and the emergence of global current account imbalances in the period running up to the financial crisis.<sup>(1)</sup>

### Equities and corporate bonds

The FTSE All-Share fell sharply in May, but has since recovered, rising by around 8% since the *August Report* (Chart 1.5). That has left UK equity prices at around the same level as in early April, when long-term interest rates began to fall.

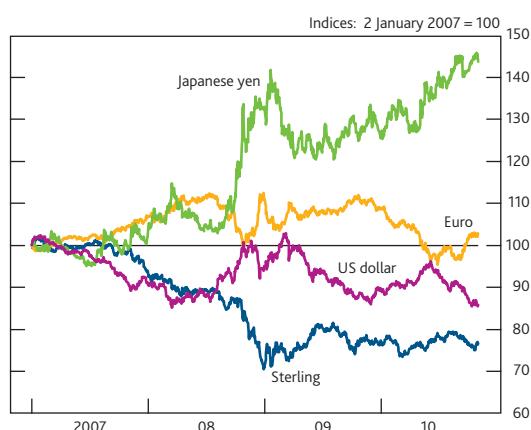
As discussed above, it is possible that falls in long-term rates in part reflected weaker growth prospects. That could lead to a weaker outlook for corporate earnings, and put downward pressure on equity prices, which would tend to offset the direct support to equities from lower interest rates themselves.

The available evidence does not suggest that earnings prospects have weakened, however. Analysts surveyed by the Institutional Brokers' Estimate System have not revised down their estimates of medium-term corporate earnings growth in the United Kingdom since April. Dividend swap prices for the FTSE 100, which give an indication of expected dividend growth, are around the levels seen in early April. And information from options prices suggests that the probability that market participants ascribe to a sharp fall in the FTSE has fallen back to around its level at the start of April, having risen sharply during April and May.

The fall in long-term interest rates has pushed up corporate bond prices and lowered yields (Chart 1.6). Corporate bond spreads have risen slightly since April (Chart 1.6), although spreads remain well below their late-2008 and early-2009 levels.

Conditions in the sterling secondary corporate bond market have continued to improve. For example, the difference between corporate bond spreads and credit default swap (CDS) premia — an indicator of illiquidity premia — has fallen during 2010 (Chart 1.7). The Bank has continued to act as a backstop buyer and seller of high-quality corporate bonds since August, on behalf of the Treasury, with purchases financed by the issuance of Treasury bills and the Debt Management Office's cash management operations.

(1) See the box 'The economics of low long-term bond yields' on pages 6–7 of the May 2005 *Inflation Report*.

**Chart 1.8** International nominal effective exchange rates

## Exchange rates

In the run-up to the *November Report*, the sterling effective exchange rate index (ERI) was 3% lower than at the time of the *August Report*. The US dollar effective exchange rate has fallen by around 5% since August, while the Japanese yen has appreciated further (**Chart 1.8**). The sterling ERI remains around 25% lower than in mid-2007. Section 4 discusses the impact of the exchange rate on consumer prices.

## 1.2 The banking sector

The major UK banks continue to face significant challenges. In particular, they will need to refinance substantial amounts of maturing funding over the coming years, including that presently supported by the official sector.<sup>(1)</sup> The availability and cost of that funding is likely to depend, in part, on investors' perceptions of the strength of banks' capital positions.

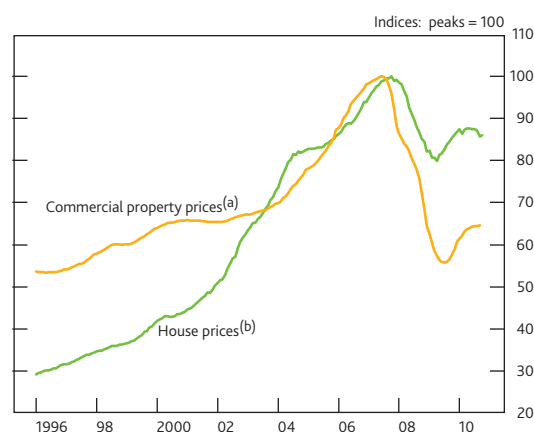
While these long-term challenges remain, banks' capital and funding positions have improved during 2010. Market sentiment towards banks has also improved. Announcements by the authorities may have contributed to that. For example, revised proposals for the new international prudential bank regulations — the so-called Basel III rules — were received positively by market participants. Market contacts reported that this was largely because the proposed rules were seen to allow a longer implementation period for banks to make necessary changes to their balance sheets than market participants had anticipated. But there remains uncertainty among market contacts about the extent to which banks will need to raise capital to meet regulatory requirements.

## Capital

The major UK banks have made progress in strengthening their balance sheets during 2010. The release of interim results for 2010 H1 showed that, in aggregate, the major UK banks' core Tier 1 capital ratio picked up further. In part, that reflected a rise in retained earnings as profits increased.

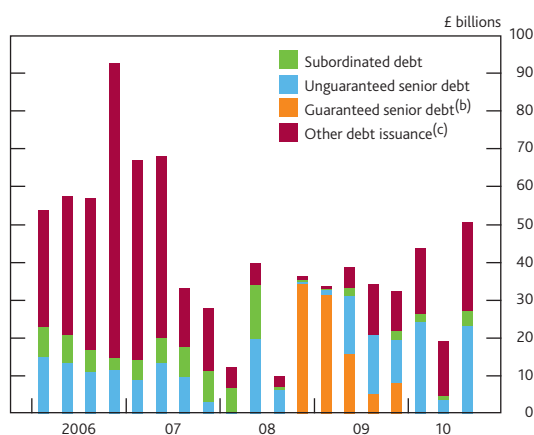
Banks' profitability has been supported by declines in losses on lending to UK companies and households. Write-offs on lending to private non-financial corporations (PNFCs) and on secured lending to households fell during 2010 H1, although write-offs on unsecured lending picked up. Lenders responding to the Q3 *Credit Conditions Survey* reported that default rates had fallen by more than expected in the previous survey, and that loss rates given default were also generally lower than had been anticipated.

(1) For further details, see the discussion on pages 50–52 of the June 2010 *Financial Stability Report*.

**Chart 1.9** Property prices

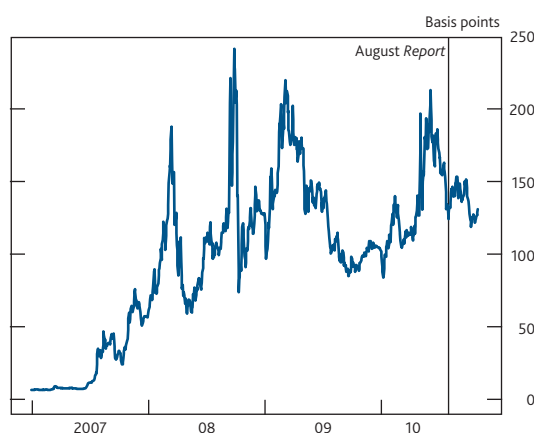
Sources: Halifax, Investment Property Databank, Nationwide, Thomson Reuters Datastream and Bank calculations.

- (a) Non seasonally adjusted. The latest observation is September 2010.  
 (b) The average of the Halifax and Nationwide measures. The published Halifax index has been adjusted in 2002 by Bank staff to account for a change in the method of calculation. The latest observation is October 2010.

**Chart 1.10** Debt issuance by the major UK lenders<sup>(a)</sup>

Sources: Dealogic and Bank calculations.

- (a) Issuance with a value greater than or equal to US\$500 million equivalent and original maturity greater than one year. Data are converted into sterling terms. Includes debt issuance by Banco Santander, Barclays, HSBC, Lloyds Banking Group, Nationwide and Royal Bank of Scotland. Data are shown at a quarterly frequency, the latest observation is 2010 Q3.  
 (b) Senior debt issued under HM Treasury's Credit Guarantee Scheme.  
 (c) Includes covered bonds, medium-term notes and residential, commercial and other asset-backed securities.

**Chart 1.11** Major UK banks' CDS premia<sup>(a)</sup>

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

- (a) The data show a weighted average of the CDS premia (at five-year maturity) of the major UK lenders, weighted by each bank's share in total assets.

The commercial real estate sector remains a key risk for the banking sector, accounting for around half of the stock of all loans by UK-resident lenders to UK PNFCs.<sup>(1)</sup> Although commercial property values have increased over the past year, they remain around 35% below their mid-2007 peak (**Chart 1.9**). And market contacts report that the rise in commercial property values has been driven by prime properties, with little increase in the value of non-prime commercial property. Some major UK lenders continue to report that they are generally accommodating breaches of loan to value covenants provided that rental incomes are sufficient to service the debt. If rental incomes fell, lenders might be less willing to accept those breaches, which could lead to a rise in losses.

## Funding

Banks' ability to obtain long-term funding has improved since the *August Report*. Debt issuance by the major UK lenders was strong in Q3 (as indicated in **Chart 1.10**), although issuance fell back in October. Banks have issued a range of debt instruments, including covered bonds and asset-backed securities (shown in the 'Other' bars in **Chart 1.10**). In addition to the debt instruments shown in the chart, market contacts have reported increased usage of other funding instruments, which has helped banks diversify across providers of funds and increase the maturity of their funding.<sup>(2)</sup>

Indicators of banks' wholesale funding costs have been broadly stable since the *August Report*. Three-month sterling Libor-OIS spreads have been little changed. Major UK banks' five-year CDS premia — movements in which would typically be associated with changes in banks' longer-term funding costs — have fallen a little relative to three months ago (**Chart 1.11**).

Major UK banks are likely to try to reduce their dependence on wholesale funding by attracting more retail deposits. The major UK lenders report that competition for retail deposits has remained intense, which is likely to have put upward pressure on deposit rates. Indeed, spreads on retail deposits — such as those over equivalent-maturity swap rates for three and five-year fixed-rate bonds — have picked up by around half a percentage point during 2010.

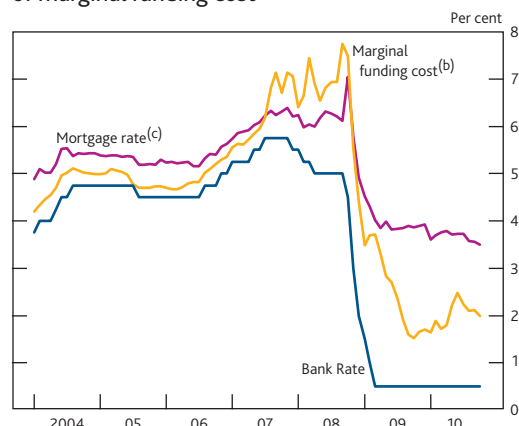
Changes in banks' funding costs are likely to have implications for the interest rates charged on business and household loans (Section 1.3). As discussed in a recent *Quarterly Bulletin* article, interest rates charged on new secured household lending have fallen by much less than Bank Rate in recent years, in part reflecting the rise in lenders' funding costs relative to Bank Rate (**Chart 1.12**).<sup>(3)</sup>

(1) Recent trends in lending to the real estate sector are discussed in a box on page 7 of the September 2010 edition of *Trends in Lending*.

(2) See the box on 'Innovations in money market instruments', *Bank of England Quarterly Bulletin*, Vol. 50, No. 3, pages 168–69.

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

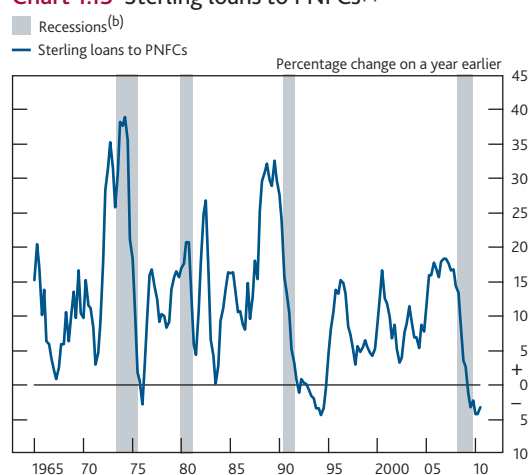
**Chart 1.12** New mortgage rate, Bank Rate and estimate of marginal funding cost<sup>(a)</sup>



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

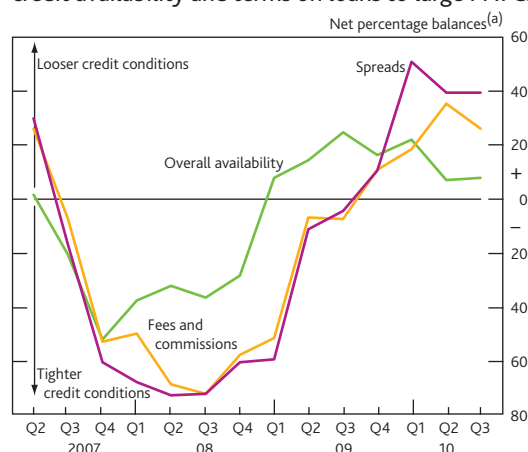
- (a) The latest observation is October 2010.  
 (b) This is an estimated marginal funding cost for extending variable-rate sterling-denominated loans. It is the sum of three-month Libor plus an average of the five-year CDS premia of the major UK lenders (Banco Santander, Barclays, HSBC, Lloyds Banking Group, Nationwide, Northern Rock and Royal Bank of Scotland). Marginal funding costs may vary across lenders. Lenders with a greater proportion of retail funding may consider the cost of deposits when setting their marginal funding cost.  
 (c) 75% loan to value Bank Rate tracker mortgage. Sterling-only end-month average quoted rate. The Bank's quoted interest rate series is currently compiled using data from up to 23 UK monetary financial institutions.

**Chart 1.13** Sterling loans to PNFCs<sup>(a)</sup>



- (a) M4 lending excluding the effects of securitisations and loan transfers.  
 (b) Recessions are defined as at least two consecutive quarters of falling output (at constant market prices). 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.

**Chart 1.14** Credit Conditions Survey: overall corporate credit availability and terms on loans to large PNFCs



- (a) Weighted responses of lenders. A positive balance indicates that more credit is available, or that spreads or fees and commissions are lower over the past three months.

## 1.3 Credit conditions

The extent to which companies and households face credit constraints will affect the speed and strength of the recovery. The data suggest that credit conditions facing large companies have improved over the past year. But the cost and availability of credit for small companies and households do not appear to have eased as much, and conditions remain tight relative to pre-financial crisis levels.

### Corporate credit conditions

The stock of bank loans to companies fell by around 3% in the year to 2010 Q3 (**Chart 1.13**). A tighter supply of bank credit relative to before the financial crisis has played an important role in that decline. As discussed in previous *Reports*, the reduced availability of credit since the financial crisis began reflects, in part, the withdrawal of foreign lenders from the UK market. UK-owned lenders also tightened credit conditions substantially through late 2007 and 2008. Lenders responding to the *Credit Conditions Survey* have, however, reported that overall corporate credit availability has improved over the past year (**Chart 1.14**).

That improvement in the availability of bank credit has been particularly marked for larger companies, according to reports from the Bank's Agents. And the cost of bank credit for large companies also appears to have fallen. The *Credit Conditions Survey* suggests that spreads, fees and commissions for large PNFCs, which increased very sharply in 2008 and early 2009, have begun to fall back over the past year (**Chart 1.14**).

Larger companies can also raise funds by issuing debt or equity. Following very strong corporate bond issuance in 2009, net issuance has fallen back sharply in 2010 (**Table 1.A**). Despite the slowdown in net issuance, there is some evidence that a wider range of companies are accessing these markets instead of borrowing from the banks. An unusually high proportion — around 40% — of those companies that have issued corporate bonds in 2010 did so for the first time. The fall in the cost of bond finance, as indicated by corporate bond yields (**Chart 1.6**), may have encouraged such issuance. Net issuance of equities has also fallen back but, on average, net issuance in 2010 has been stronger than in the years running up to the financial crisis, largely reflecting fewer share buybacks (**Table 1.A**).

Overall, the availability and cost of finance for large companies appears to have improved. A majority of the respondents to the 2010 Q3 *Deloitte CFO Survey* reported new credit was 'available' rather than 'hard to obtain' for the first time since the series began in 2007 Q3. But the demand for credit remains subdued according to the major UK lenders.

Smaller businesses, which are more dependent on bank credit, continue to have difficulty accessing affordable finance,

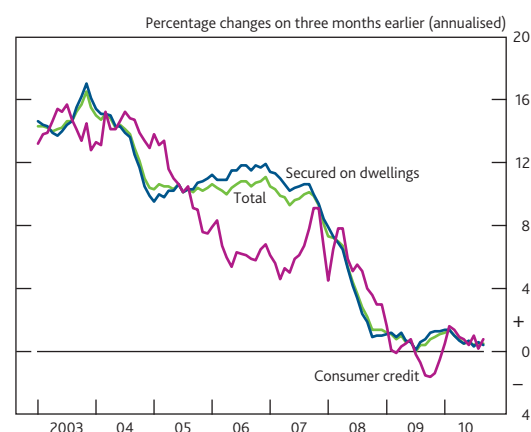
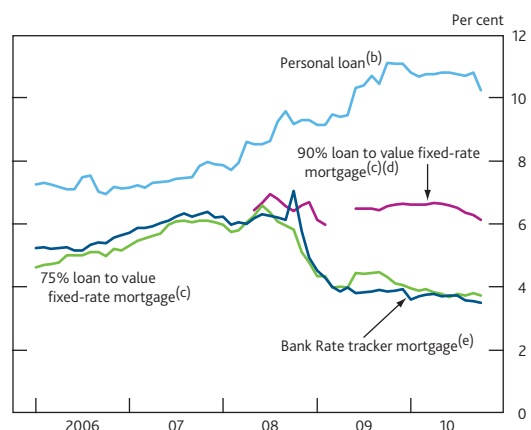
**Table 1.A** PNFCs' equity and debt issuance<sup>(a)</sup>

£ billions

|                                      | Averages |      | 2010 |      |      |
|--------------------------------------|----------|------|------|------|------|
|                                      | 2003–08  | 2009 | Q1   | Q2   | Q3   |
| <b>Equities</b>                      |          |      |      |      |      |
| Net issuance                         | -0.7     | 2.6  | 0.6  | 1.5  | 0.0  |
| Gross issuance                       | 0.8      | 2.7  | 0.8  | 1.8  | 0.3  |
| Repayments                           | 1.5      | 0.0  | 0.2  | 0.3  | 0.3  |
| <b>Corporate bonds<sup>(b)</sup></b> |          |      |      |      |      |
| Net issuance                         | 1.1      | 1.5  | 0.5  | -1.2 | 0.1  |
| Gross issuance                       | 2.6      | 4.3  | 2.4  | 1.4  | 1.7  |
| Repayments                           | 1.5      | 2.8  | 2.0  | 2.6  | 1.6  |
| <b>Commercial paper</b>              |          |      |      |      |      |
| Net issuance                         | 0.0      | -0.6 | 0.5  | 0.1  | -0.6 |
| Gross issuance                       | 4.4      | 3.3  | 3.0  | 2.0  | 2.4  |
| Repayments                           | 4.4      | 3.9  | 2.6  | 1.8  | 3.0  |

(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 1.15** Loans to individuals**Chart 1.16** Average quoted interest rates on new household borrowing<sup>(a)</sup>

(a) Sterling-only end-month average quoted rates. The Bank's quoted interest rates series is currently compiled using data from up to 23 UK monetary financial institutions. The data are non seasonally adjusted.

(b) Quoted interest rate on a £10,000 personal loan.

(c) Two-year fixed-rate mortgage.

(d) Series is only available on a consistent basis back to May 2008, and is not published for March–May 2009 as only two or fewer products were offered in that period.

(e) On mortgages with a loan to value ratio of 75%.

according to contacts of the Bank's Agents. The stock of loans to small businesses fell by around 5% in the twelve months to August 2010, according to data from the British Bankers' Association, although some of that decline is likely to reflect a fall in the demand for credit. Estimates of median interest rates charged on new variable-rate facilities to small and medium-sized enterprises, which account for the greater part of new facilities, have remained little changed over the past six months.<sup>(1)</sup>

### Household credit conditions and the housing market

Growth in the total stock of loans to individuals has remained very weak during 2010 (Chart 1.15). That reflects subdued growth in the stock of both mortgage debt, which represents around 85% of household debt, and also in the stock of consumer credit (Chart 1.15).

Lenders' responses to the *Credit Conditions Survey* suggest that secured credit availability to households has not changed significantly during 2010. There has also been little significant change in the cost of new secured borrowing: quoted rates on both two-year fixed-rate mortgages and Bank Rate tracker mortgages have edged down only a little since January (Chart 1.16).

Indicators of housing market activity, such as mortgage approvals and property transactions, have remained at low levels during 2010 (Table 1.B). In recent months, there have been some signs of a weakening in demand in the housing market. The *Credit Conditions Survey* suggested that demand for secured lending for house purchase fell in Q3. And forward-looking indicators of activity — such as the Royal Institution of Chartered Surveyors (RICS) new buyer enquiries balance — also declined (Table 1.B).

House prices have fallen in recent months: the average of the Halifax and Nationwide house price indices declined by 1.4% in the three months to October compared with the previous three months. The level of house prices in October 2010 was similar to that a year earlier, and around 14% below its October 2007 peak (Chart 1.9).

Lenders' responses to the *Credit Conditions Survey* suggest that the availability of unsecured credit has been broadly flat in 2010, having tightened markedly during 2008 and 2009. New unsecured lending rates, such as those on personal loans, have also been little changed in 2010, having risen markedly since the financial crisis began (Chart 1.16). The tightness of credit conditions for unsecured lending is likely to have weighed on the spending of some households (see the box on pages 22–23).

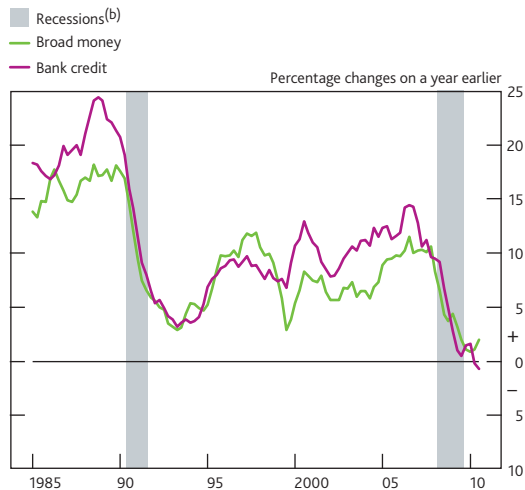
(1) Recent developments in lending to small and medium-sized enterprises are discussed in more detail in a box on pages 7–8 of the October 2010 edition of *Trends in Lending*.

**Table 1.B** Indicators of housing market activity<sup>(a)</sup>

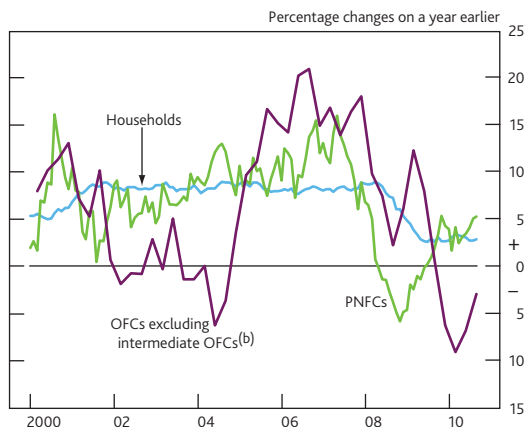
|                                              | Averages<br>since 2000 | 2009<br>Q4 | 2010 |      |      |
|----------------------------------------------|------------------------|------------|------|------|------|
|                                              |                        |            | Q1   | Q2   | Q3   |
| Property transactions (000s) <sup>(b)</sup>  | 102                    | 87         | 71   | 74   | 77   |
| Mortgage approvals (000s) <sup>(c)</sup>     | 92                     | 58         | 48   | 49   | 48   |
| RICS sales to stock ratio <sup>(d)</sup>     | 0.37                   | 0.30       | 0.27 | 0.27 | 0.24 |
| RICS new buyer enquiries <sup>(e)</sup>      | -2                     | 25         | -3   | 4    | -10  |
| RICS new instructions to sell <sup>(e)</sup> | 4                      | 14         | 10   | 21   | 23   |
| HBF net reservations <sup>(f)</sup>          | -6                     | 35         | 10   | -5   | -38  |
| HBF site visits <sup>(f)</sup>               | -14                    | 8          | -4   | -18  | -37  |

Sources: Bank of England, Her Majesty's Revenue and Customs, Home Builders Federation, Royal Institution of Chartered Surveyors and Bank calculations.

- (a) Averages of monthly data. All series are net percentage balances unless otherwise stated.  
 (b) Number of residential property transactions with value £40,000 or above. Average since April 2005.  
 (c) Number of mortgage approvals for house purchase.  
 (d) Ratio of sales recorded over the past three months relative to the level of stocks on estate agents' books at the end of the month.  
 (e) Compared with the previous month.  
 (f) Compared with a year earlier. Q3 data are an average of July and August. Seasonally adjusted by Bank staff.

**Chart 1.17** Broad money and bank credit<sup>(a)</sup>

- (a) The series are constructed using headline M4 and M4 lending (excluding securitisations) growth prior to 1998 Q4, and M4 and M4 lending (excluding securitisations) 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.  
 (b) Recessions are defined as in Chart 1.13.

**Chart 1.18** Sectoral broad money<sup>(a)</sup>

- (a) Monthly data, unless otherwise specified.  
 (b) Based on quarterly data. For the definition of intermediate OFCs see footnote (a) in Chart 1.17.

## 1.4 Money

The four-quarter growth rates of broad money and bank credit remained extremely weak in 2010 Q3 (**Chart 1.17**). Those trends reflect, in part, the severe monetary squeeze precipitated by the financial crisis: as banks tightened the supply of credit, fewer loans have been advanced, reducing deposit growth.

Household broad money growth has remained much weaker than its average in the years leading up to the financial crisis (**Chart 1.18**). In addition to subdued growth in bank lending, the weakness of household money growth may also reflect households buying financial assets rather than keeping their savings on deposit, given the low returns available. Consistent with that, data from the Investment Management Association show that sales of unit trusts have been very strong since the beginning of 2009.

PNFC broad money growth has picked up from very low levels in early 2009 (**Chart 1.18**). That pickup may have in part reflected very strong levels of capital market issuance during 2009 (Section 1.3), although some of the proceeds appear to have been used to pay down bank debt. The pickup may also have reflected companies' desire to build up cash buffers in the face of uncertainty about future demand and credit availability (Section 2).

The deposits of non-bank financial institutions excluding intermediaries have fallen sharply in recent quarters, pulling down broad money growth (**Chart 1.18**). That may reflect in part those institutions buying the debt and equity issued by PNFCs and UK banks. Purchases of PNFCs' debt and equity would not directly affect headline M4 growth. But purchases of UK banks' net long-term debt and equity (Section 1.2) would push down total broad money growth.

## 2 Demand

UK real GDP rose by 1.2% in 2010 Q2 and is provisionally estimated to have increased by 0.8% in Q3. Growth in the second quarter was driven by final domestic demand and stockbuilding. Net trade in goods supported growth, but that was more than offset by an adverse contribution from services trade. The October *Spending Review* set out plans for government spending over the next four years, consistent with the reduction in public sector net borrowing announced in the June *Budget*. The world economy has grown strongly in recent quarters. But, as in the United Kingdom, a continuation of the recovery in private final demand will need to supplant the waning boost from stockbuilding if growth is to be sustained.

**Table 2.A** Expenditure components of demand<sup>(a)</sup>

Percentage changes on a quarter earlier

|                                               | Averages    |             | 2009        |             | 2010        |             |
|-----------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                                               | 1997–2008   | 2009 H1     | Q3          | Q4          | Q1          | Q2          |
| Household consumption <sup>(b)</sup>          | 0.7         | -1.0        | -0.1        | 0.8         | 0.0         | 0.7         |
| Government consumption                        | 0.6         | -0.3        | -0.5        | 0.7         | 0.7         | 1.0         |
| Investment                                    | 0.9         | -7.0        | 1.5         | -2.0        | 2.9         | 1.4         |
| of which, business investment                 | 1.2         | -9.6        | -2.7        | -3.5        | 7.9         | 0.7         |
| of which, dwellings investment <sup>(c)</sup> | 0.3         | -9.3        | 3.3         | -5.3        | 0.2         | 10.4        |
| <b>Final domestic demand</b>                  | <b>0.7</b>  | <b>-1.8</b> | <b>0.0</b>  | <b>0.4</b>  | <b>0.5</b>  | <b>0.9</b>  |
| Change in inventories <sup>(d)(e)</sup>       | 0.0         | -0.2        | 0.6         | 0.1         | 0.2         | 0.8         |
| Alignment adjustment <sup>(e)</sup>           | 0.0         | 0.3         | -0.8        | 0.1         | 0.5         | -0.5        |
| <b>Domestic demand</b>                        | <b>0.7</b>  | <b>-1.6</b> | <b>-0.2</b> | <b>0.7</b>  | <b>1.2</b>  | <b>1.2</b>  |
| 'Economic' exports <sup>(f)</sup>             | 0.9         | -5.0        | 0.8         | 3.6         | -0.7        | 2.3         |
| 'Economic' imports <sup>(f)</sup>             | 1.2         | -5.0        | 1.1         | 4.5         | 2.0         | 2.4         |
| <b>Net trade<sup>(e)(f)</sup></b>             | <b>-0.1</b> | <b>0.1</b>  | <b>-0.1</b> | <b>-0.3</b> | <b>-0.7</b> | <b>-0.1</b> |
| of which, goods <sup>(e)(f)</sup>             | -0.1        | 0.3         | -0.2        | -0.4        | -0.4        | 0.3         |
| of which, services <sup>(e)</sup>             | 0.0         | -0.2        | 0.1         | 0.1         | -0.3        | -0.4        |
| <b>Real GDP at market prices</b>              | <b>0.6</b>  | <b>-1.6</b> | <b>-0.3</b> | <b>0.4</b>  | <b>0.4</b>  | <b>1.2</b>  |

(a) Chained-volume measures.

(b) Includes non-profit institutions serving households.

(c) Whole-economy dwellings investment.

(d) Excludes the alignment adjustment.

(e) Percentage point contributions to quarterly growth of real GDP.

(f) Excluding the estimated impact of missing trader intra-community (MTIC) fraud.

Nominal GDP rose by 1.3% in 2010 Q2, reflecting a 1.2% increase in real activity and a 0.2% rise in the deflator. Developments in nominal spending are discussed in the box on page 19. Real GDP was provisionally estimated to have increased by 0.8% in 2010 Q3 (Section 3).

Following a fall of around 6½% during the recession, real GDP rose by 2% during the three quarters to 2010 Q2. That was driven by domestic demand, notably by the boost from the turnaround in the stock cycle and by household spending (Table 2.A). Government spending and business investment also contributed to the recovery. Net trade reduced growth substantially, in part reflecting measured weakness in financial services exports. The box on page 48 discusses how that pattern of expenditure differs from recoveries following past recessions.

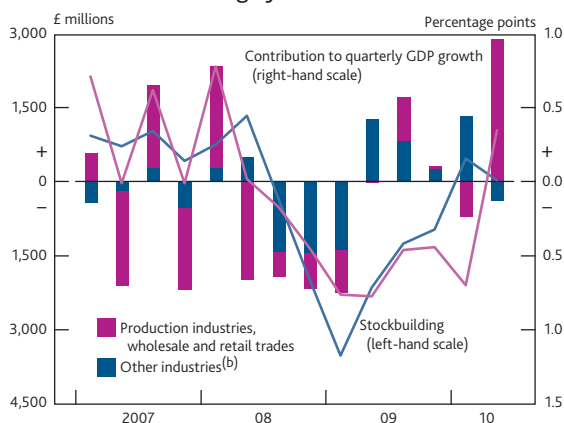
In order for activity to continue to strengthen, a further recovery in private final demand is likely to be necessary to offset a waning boost from the working out of the stock cycle and slower growth in government spending. Section 2.1 examines the prospects for domestic demand. Section 2.2 considers external demand, including the outlook for UK exports. Section 2.3 summarises developments in imports.

### 2.1 Domestic demand

#### Stockbuilding

Stockbuilding contributed 0.8 percentage points to GDP growth in 2010 Q2, following positive, but smaller, contributions over the previous four quarters. The Q2 strength was driven by an increase in inventories held by manufacturers and retailers after extended de-stocking (Chart 2.1). Much of stockbuilding's contribution prior to that was driven by other industries — including construction and motor trades.

**Chart 2.1** Stockbuilding by sector<sup>(a)</sup>



(a) Chained-volume measures.

(b) Excluding the alignment adjustment.

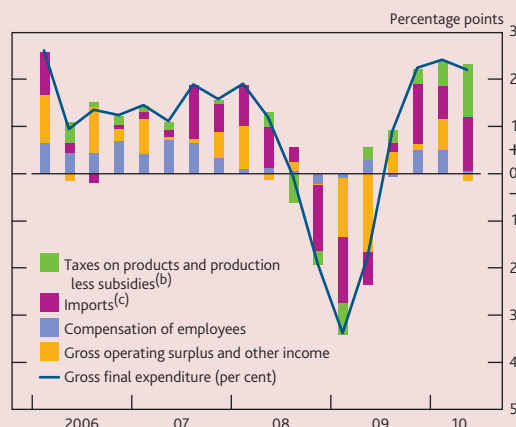
## Nominal demand and income

Nominal GDP fell sharply between mid-2008 and mid-2009, but has since grown strongly. Other indicators of nominal spending have also grown robustly recently. For example, gross final expenditure — the sum of domestic spending and overseas spending on UK exports — has risen by over 2% during each of the three quarters to 2010 Q2. This box sets out some of the counterparts to that strong recovery in nominal spending.

All spending in the economy generates income that accrues to either domestic households and companies in the form of wages and profits, to the government in the form of taxes, or to overseas companies via spending on imports. **Chart A** shows that, following a period of weakness, growth in household and corporate income has recovered a little over the past year.

Much of the recovery in gross expenditure growth, however, reflected stronger spending on imports and higher taxes, including the restoration of the standard rate of VAT to 17.5% in 2010 Q1 and the temporary bank payroll tax in 2010 Q2 (**Chart A**). That highlights the impact of significant movements in the price of energy and other imports, as well as the VAT increase; in the absence of those price rises, nominal spending might have grown less strongly. But it is also likely that higher prices for some goods and services

**Chart A** Counterparts to growth in gross final expenditure on a quarter earlier<sup>(a)</sup>



(a) At market prices.  
(b) Includes a statistical discrepancy.  
(c) Excluding the estimated impact of MTIC fraud.

squeezed household and corporate incomes. And, in their absence, private sector income growth might have been stronger.

Temporary effects on inflation — including the increase in the standard rate of VAT to 20% at the start of 2011 (Section 4) — may continue to influence nominal demand. But strength in nominal demand growth will also depend on the extent to which household and corporate income growth recover further (Section 5).

Stockbuilding is unlikely to provide such a large contribution to growth in coming quarters. But the ratio of stocks to GDP remains well below its pre-recession level. So a further temporary boost to growth is possible if companies wish to return the stock-output ratio closer to that level.

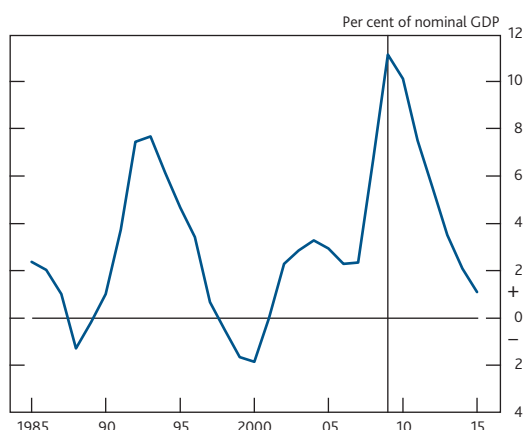
## Government spending and fiscal policy

A substantial fiscal consolidation is under way in the United Kingdom. The MPC's forecast is conditioned on the fiscal plans set out in the June *Budget* and the October *Spending Review*. As discussed in the August *Report*, the *Budget* projected a large decline in public sector net borrowing (**Chart 2.2**). During the first half of 2010/11, cumulative borrowing has been broadly in line with that projection.

The consolidation is to be achieved primarily through reduced public sector expenditure as a share of GDP; higher receipts play a smaller role. The *Spending Review* confirmed the current expenditure path announced in the June *Budget* and set out departmental spending budgets from 2011/12 to 2014/15, and more detail on non-departmental spending (**Table 2.B**).

The deterioration in the public finances during the recession was associated with an increase in net saving by households

**Chart 2.2** Public sector net borrowing<sup>(a)</sup>



Sources: HM Treasury, Office for Budget Responsibility and ONS.

(a) Excluding the temporary effects of financial interventions. Data are for financial years. Observations to the right of the vertical line are projections. Projections come from the Office for Budget Responsibility's *Budget Forecast*. Data for 2009/10 and earlier are based on ONS data.

**Table 2.B Public spending<sup>(a)</sup>**

Percentage changes on financial year earlier

|                                         | Average    |            |            | Financial years |            |            |            | Memo:                                  |
|-----------------------------------------|------------|------------|------------|-----------------|------------|------------|------------|----------------------------------------|
|                                         | 1997–2008  | 2009       | 2010       | 2011            | 2012       | 2013       | 2014       | projected share in 2010 <sup>(b)</sup> |
| Current expenditure                     | 5.5        | 6.4        | 6.1        | 2.2             | 2.1        | 2.1        | 2.1        | 91                                     |
| of which, benefits <sup>(c)</sup>       | n.a.       | 10.0       | 3.5        | 2.8             | 1.1        | -0.1       | 2.9        | 28                                     |
| of which, debt interest <sup>(d)</sup>  | n.a.       | 1.3        | 40.1       | 7.4             | 12.7       | 10.3       | 9.0        | 6                                      |
| of which, other spending <sup>(e)</sup> | n.a.       | 5.1        | 4.6        | 1.3             | 1.3        | 2.2        | 0.7        | 58                                     |
| Gross investment                        | 12.2       | 5.5        | -13.4      | -14.8           | -4.3       | -6.0       | 3.5        | 9                                      |
| <b>Total managed expenditure</b>        | <b>5.9</b> | <b>6.3</b> | <b>4.1</b> | <b>0.7</b>      | <b>1.6</b> | <b>1.6</b> | <b>2.2</b> | <b>100</b>                             |

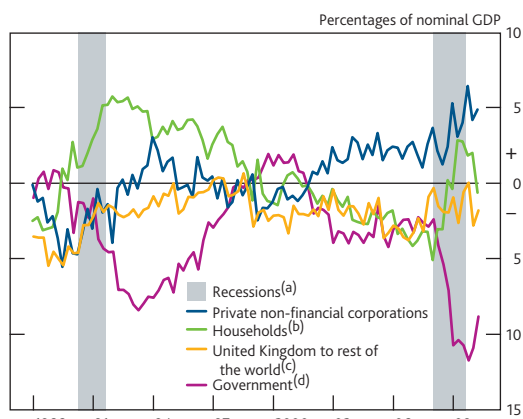
Sources: HM Treasury, Office for Budget Responsibility, ONS and Bank calculations.

(a) Current prices. The public spending projections are consistent with the 2010 *Spending Review*. All of these projections will be reviewed by the Office for Budget Responsibility in their autumn forecast, which is due to be published on 29 November 2010.

(b) Per cent of total managed expenditure.

(c) Includes social security benefits and tax credits. Projections from the June 2010 *Budget* have been adjusted by the welfare measures announced in the 2010 *Spending Review*.(d) Central government debt interest. Projections from June 2010 *Budget*.

(e) Calculated as a residual.

**Chart 2.3 Financial balances by sector**

(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) 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.

**Chart 2.4 Contributions to four-quarter growth in real household disposable income<sup>(a)</sup>**

(a) Chained-volume measure. Includes non-profit institutions serving households.

(b) Transfers, including general government benefits minus employees' National Insurance contributions, less taxes, including income tax and Council Tax.

(c) Wages and salaries plus mixed income.

(d) Calculated as a residual.

and, to a lesser degree, private non-financial corporations (**Chart 2.3**). With a major fiscal consolidation now in train, lower government borrowing will need to be matched by corresponding adjustments in the financial balances of the private and external sectors. The nature of the adjustments will have important implications for the strength of the recovery. For example, during the previous large fiscal tightening in the 1990s, lower government borrowing was counterbalanced by reduced private sector net saving. But those adjustments could also occur by way of a larger fall in the current account deficit, associated with weaker imports stemming from weak domestic spending. Section 5 discusses the uncertainties around the path of private saving given the fiscal tightening.

### Recent household spending and income data

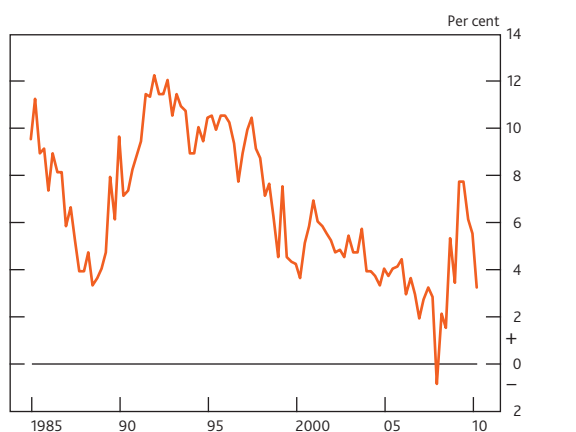
Household spending increased by 0.7% in 2010 Q2, having been flat in Q1. But that comparison is likely to overstate the underlying increase in growth, as the Q1 weakness in part reflected the restoration of the standard rate of VAT to 17.5% and the heavy snowfall in January. Retail sales volumes rose by 1% in 2010 Q3 after growing by 1.6% in Q2. And, following the expiry of the government scrappage scheme, private new car registrations continued to decline in Q3. Overall, household spending growth may have weakened slightly in 2010 Q3 relative to Q2.

Developments in income will influence the path of spending. Real disposable income fell by 1.6% in Q2 and by 2.6% on a year earlier. Within that, a partial recovery in nominal pre-tax income from employment was more than offset by higher inflation, while the boost to income from government transfers net of taxes also waned (**Chart 2.4**).

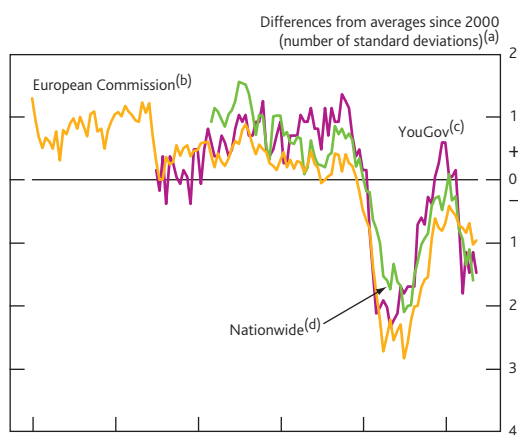
### Influences on household saving

The household saving ratio is estimated to have risen by 9 percentage points between the start of 2008 and mid-2009 (**Chart 2.5**). As discussed in previous *Reports*, that increase is likely to have reflected a combination of influences: weaker income expectations, including possible concerns over future pension provision; higher precautionary saving; tighter credit conditions; and heightened debt concerns. The main financial counterpart to increased saving was a sharp fall in household borrowing. The box on pages 22–23 discusses developments in household balance sheets in more detail, including the results of the latest survey carried out for the Bank by NMG Financial Services Consulting.

The saving ratio had reversed around half of its previous increase by 2010 Q2, reflecting stronger consumer spending and weaker income (**Chart 2.5**). Some of the sharp decline in saving in Q2 may have been due to erratically low income. But the lower level is also likely to reflect economic factors.

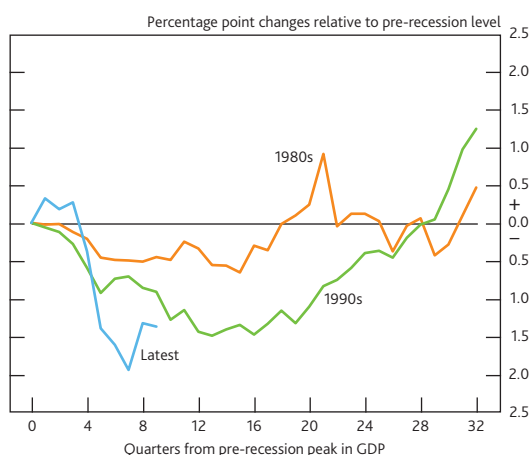
**Chart 2.5** Household saving ratio<sup>(a)</sup>

(a) Percentage of household post-tax income (not adjusted to account for the impact of FISIM).

**Chart 2.6** Indicators of consumer confidence

Sources: Research carried out by GfK NOP on behalf of the European Commission, Nationwide and YouGov.

- (a) Unless otherwise stated.  
 (b) This aggregate confidence index is derived by averaging the answers to questions 1, 2, 3, 4 and 8 in the GfK NOP survey carried out on behalf of the European Commission.  
 (c) Overall prosperity index derived from the answers to questions 1, 2d, 4 and 5 of the YouGov survey. Differences from average since January 2003.  
 (d) Differences from average since May 2004.

**Chart 2.7** Business investment to GDP ratio<sup>(a)</sup>

(a) Chained-volume measures. Recessions are defined as in footnote (a) of Chart 2.3.

The low level of interest rates, both short-term and longer-term (Section 1), is likely to have been one factor supporting spending, relative to income.

The decline in saving could also suggest that households had completed much of the adjustment to spending warranted by the perceived reduction in their future incomes following the financial crisis, or that they had revised down the scale of reduction in incomes that they felt was likely. And households may have started to reduce the amount of saving undertaken for precautionary reasons as financial and economic instability eased.

Movements in consumer confidence may, to some degree, reflect those changes in income expectations and the desire to save for precautionary reasons; confidence was increasing during some of the period when the saving ratio fell back (Chart 2.6). Confidence has, however, fallen since 2010 Q1.

A greater awareness of the extent of fiscal consolidation in prospect may be affecting saving, and could in part explain the recent fall in consumer confidence. Fiscal tightening will directly reduce some households' income growth over the coming years, in part due to the freeze in public sector pay, prospective reductions in public sector employment and the slower growth of benefit payments. Households who think that they might be affected could increase their saving. But there is considerable uncertainty about the strength of that channel and the extent to which households have already adjusted. A series of special questions in this year's NMG survey suggested that households who receive more than half of their labour income from the public sector were more concerned than other households about losing their job or suffering lower wages. But, somewhat surprisingly, they were no more likely than other working households to say that they were saving more in response to the fiscal consolidation.

Overall, the MPC judges that consumption is likely to continue to recover gradually, although significant risks remain (Section 5). In the near term, it is possible that the increase in the standard rate of VAT to 20% in January 2011 will encourage households to bring forward some spending into 2010.

## Investment

Real business investment stood 17% below its pre-recession level in Q2. Relative to GDP, the fall was somewhat larger than in previous recessions (Chart 2.7). As investment is more import-intensive than other forms of expenditure, one reason for that weakness may have been a rise in the price of investment goods, relative to the prices of other goods and services, following the large depreciation of sterling that started in mid-2007. That stands in contrast to falling relative prices during previous recessions.

Tight credit conditions may have also been restraining investment. But there has been a gradual improvement in

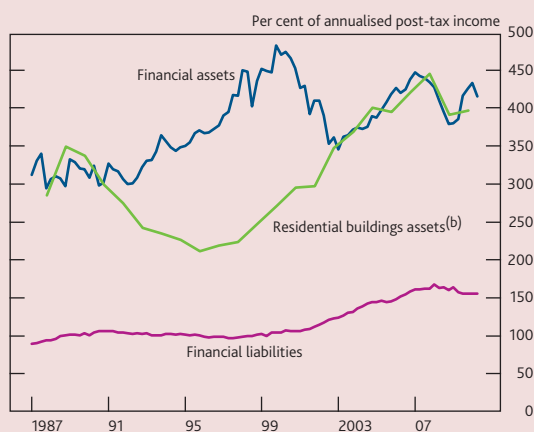
## Household balance sheets

The outlook for household spending depends in part on the extent to which households choose to strengthen their balance sheets in the wake of the financial crisis. This box summarises recent developments in household balance sheets, and uses the latest annual survey carried out for the Bank by NMG Financial Services Consulting to look at the distribution of debt.<sup>(1)</sup>

### Aggregate balance sheets and household spending

The stock of household financial and housing assets is considerably larger than the stock of debt: in aggregate the household sector holds significant net wealth (**Chart A**).<sup>(2)</sup> Developments in those household balance sheet positions are driven by patterns of asset and liability accumulation, as well as by changes in asset values.

**Chart A** Household financial assets, residential buildings assets and financial liabilities<sup>(a)</sup>



(a) Financial assets and liabilities data are non seasonally adjusted.  
(b) Annual data. The last observation is for end-2009.

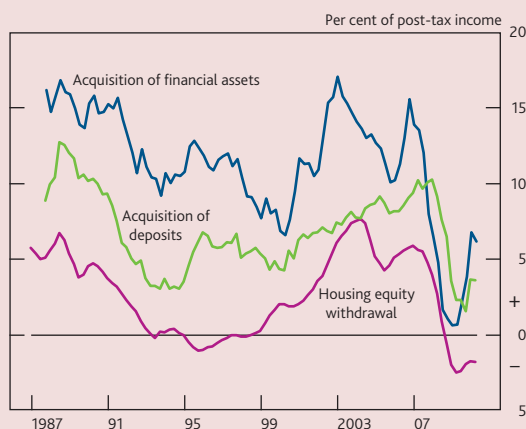
Asset — largely equity — prices are a significant influence on gross financial wealth. For example, the falls in financial assets as a share of income in 2007 and 2008, and the subsequent rebound in 2009, were driven by fluctuations in equity markets (**Chart A**). Those sharp changes in asset values may have led some households to reassess their future wealth and adjust their spending.

Movements in house prices have similarly affected the value of housing assets over that period: asset values fell for the first time in twelve years in 2008, but recovered a little in 2009 (**Chart A**). Those changes may have influenced household spending in a number of ways, including by affecting the value of collateral against which households can borrow to fund consumption. And consumption could also have been affected if different types of people are more sensitive to house price changes. For example, spending by households who benefit from falling house prices, such as those wishing to trade up or

enter the market for the first time, may have been affected differently to spending by those who suffer from falling prices, such as those wishing to trade down or leave the owner-occupied market.

The path of household secured debt is closely related to movements in house prices. As house prices rose prior to the financial crisis, households needed to take out bigger mortgages to purchase a house, raising household debt. That period of rising debt was associated with an increase in housing equity withdrawal.<sup>(3)</sup> But only some of those withdrawals were used to finance household spending directly. Instead, many occurred naturally as houses changed hands: for example, those who had built up considerable housing equity withdrew it as they left the housing market, at the same time as first-time buyers took out increasingly large loans. The equity extracted by last-time sellers, together with those trading down in the market, appears to have been used mainly to build up their financial assets including bank deposits (**Chart B**), while first-time buyers, and those trading up, accumulated higher debts. Since the start of the recession, the weakness of housing transactions has therefore limited the amount of equity withdrawal, and has been associated with slower accumulation of financial assets.

**Chart B** Household equity withdrawal and net acquisition of financial assets including deposits<sup>(a)</sup>



(a) Four-quarter moving averages. Acquisition of financial assets and deposits data are non seasonally adjusted.

Unsecured debt holdings, although a much smaller proportion of household debt, also increased prior to the financial crisis. And taking secured and unsecured debt together, the gross financial liability to income ratio has fallen back only slightly since then (**Chart A**), despite the weakness of net lending to individuals (Section 1). The impact of those debts on household spending will partly depend on the cost of debt servicing. Debt interest payments are, in aggregate, currently quite low relative to household income, reflecting the accommodative stance of monetary policy. But distributional data on the ability of consumers to service that debt may shed

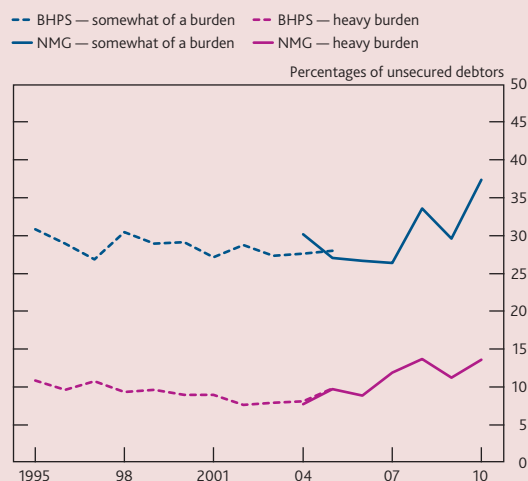
additional light on the degree to which some households wish to strengthen their balance sheets.

### Results from the 2010 NMG survey

Respondents to the 2010 NMG survey reported, on average, greater difficulties in keeping up with bills and credit commitments than in the 2008 and 2009 surveys. And a net balance of respondents also reported that they had become more concerned about their level of debt over the past two years. When asked about their response to those concerns, around 40% of households mentioned cutting back on spending and around 30% mentioned avoiding taking out further debt, while only one in ten were actively making overpayments on their existing debts. Nevertheless, respondents who reported that they planned to, or had started to, increase their saving tended to attribute that, in part, to the need to reduce debts.

Around half of households hold some form of unsecured debt. And difficulties in servicing that debt appear to have increased across a wide range of those households in the latest NMG survey. For example, the proportion of respondents reporting that unsecured debt was somewhat of a burden rose to its highest level since at least 1995 (Chart C).

**Chart C** Burden of unsecured debt<sup>(a)</sup>



Sources: British Household Panel Survey (BHPS), NMG Financial Services Consulting survey and Bank calculations.

(a) Question: 'To what extent is the repayment of these loans and the interest a financial burden on your household?'

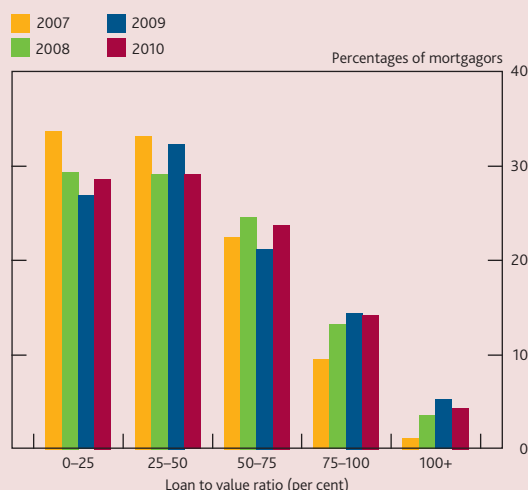
The ability to service debt will depend not only on outstanding debt holdings but also on servicing costs and disposable income. Some of the recent increase in payment difficulties among unsecured debtors may reflect the rise in interest rates charged on some credit cards. Respondents to the NMG survey who reported that unsecured debt was a heavy burden also reported larger falls in available incomes over the past year than the average household. And a larger proportion of respondents than in previous surveys attributed difficulties

paying bills and credit commitments to becoming unemployed.

Evidence from the NMG survey suggests that households with high loan to value (LTV) ratios on their mortgages were more likely to find unsecured debt to be a burden than other mortgagors or renters. That may reflect the fact that mortgagors with high LTV ratios tend to hold higher amounts of unsecured debt than the average household, perhaps because it is difficult for them to access more secured credit.

According to the NMG survey, the proportion of respondents reporting that the value of their house was less than the value of their secured debt fell slightly in 2010 (Chart D). But the proportion reporting an LTV ratio over 75% remained higher than in 2007 or 2008.

**Chart D** Distribution of loan to value ratios on mortgagors' outstanding secured debt<sup>(a)</sup>



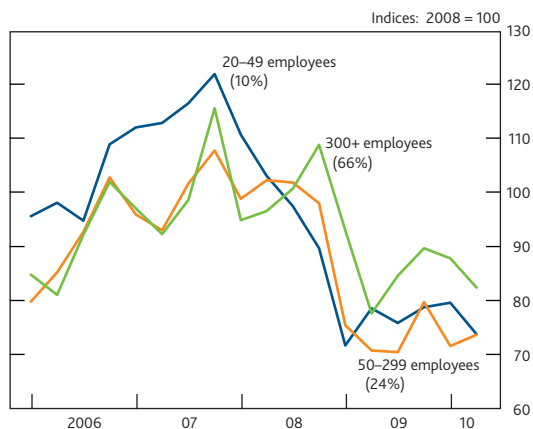
Sources: NMG Financial Services Consulting survey and Bank calculations.

(a) Outstanding mortgages and property values used in this survey are self-reported.

### Conclusion

The stock of financial and housing assets is considerably larger than the stock of household debt. But that aggregate position masks significant differences in net wealth among different types of households. The 2010 NMG survey suggests that there has been a fairly sharp rise in the burden of unsecured debt for some households, as well as an increase in concerns about the level of debt. The MPC judges that concerns about balance sheets pose a downside risk to household spending in the medium term (Section 5).

- (1) The survey was conducted between 24 and 30 September 2010.
- (2) The role of human capital in household wealth is discussed in Dale, S (2009), 'Separating fact from fiction: household balance sheets and the economic outlook', available at [www.bankofengland.co.uk/publications/speeches/2009/index.htm](http://www.bankofengland.co.uk/publications/speeches/2009/index.htm). Detailed data on property, financial, physical and private pension wealth are presented in Office for National Statistics (2009), 'Wealth in Great Britain: main results from the Wealth and Assets Survey 2006/08'.
- (3) For further details on housing equity withdrawal, see the box on page 146 of 'House prices and consumer spending', *Bank of England Quarterly Bulletin*, Summer 2006, pages 142–54.

**Chart 2.8** Capital expenditure by company size<sup>(a)</sup>

Sources: ONS and Bank calculations.

(a) These data are from the ONS Quarterly Capital Expenditure Inquiry, and account for around two thirds of total business investment. The data are for the private sector, at current prices, and are non seasonally adjusted. Figures in parentheses are shares of capital expenditure in 2009.

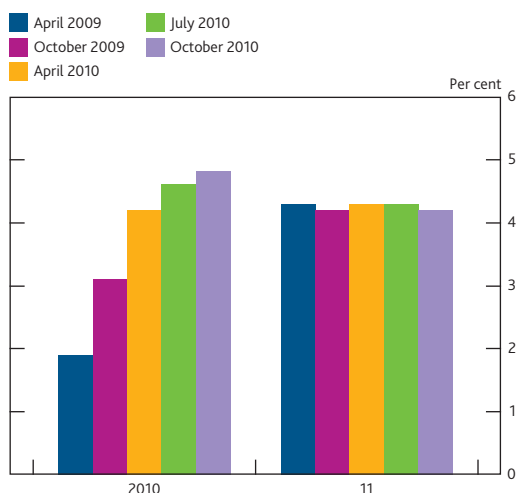
**Table 2.C** Surveys of investment intentions (plant and machinery)<sup>(a)</sup>

Net percentage balances

|                      | Averages  |      | 2009 |     | 2010 |     |    |
|----------------------|-----------|------|------|-----|------|-----|----|
|                      | 1999–2007 | 2008 | H1   | H2  | Q1   | Q2  | Q3 |
| <b>Manufacturing</b> |           |      |      |     |      |     |    |
| BCC                  | 11        | -3   | -34  | -10 | -6   | 7   | 11 |
| CBI                  | -15       | -34  | -40  | 0   | 1    | 2   | 10 |
| <b>Services</b>      |           |      |      |     |      |     |    |
| BCC                  | 16        | -4   | -20  | -6  | -5   | 2   | -1 |
| CBI                  | -6        | -24  | -46  | -22 | -15  | -14 | -5 |

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

(a) Net percentage balances 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). BCC data are non seasonally adjusted and cover the manufacturing and services sectors. CBI data cover the manufacturing, financial, retail and consumer/business services sectors. The CBI services surveys are weighted together using shares in real business investment.

**Chart 2.9** IMF world GDP growth projections<sup>(a)</sup>

Source: IMF World Economic Outlooks.

(a) At constant prices.

corporate credit conditions over the past year, at least for large businesses (Section 1). And the number of businesses reporting to the CBI that the availability of external finance was constraining investment has fallen since 2009.

Indicative data on investment split by company size may shed additional light on the impact of credit. A somewhat greater fall in investment by smaller companies during the recession (**Chart 2.8**) could indicate that they were struggling to raise external finance: large businesses are likely to have access to more sources of external funding (Section 1).

Businesses may also be able to finance spending internally. Private non-financial corporations have continued to run a substantial surplus of profits over investment since the end of the recession (**Chart 2.3**). And evidence from a special survey by the Bank's Agents suggests that businesses currently have above-normal cash holdings. That survey also suggested that, on balance, companies intend to reduce their cash holdings over the next twelve months, in part by increasing investment.

Uncertainty about the outlook could continue to hold back investment, however. Indicators of business confidence have fallen and reports from the Bank's Agents suggest that may have reflected some businesses' uncertainty ahead of the *Spending Review*. The results of another special survey by the Bank's Agents carried out just before the *Spending Review* suggested that, on balance, more businesses planned to expand capital expenditure over the next twelve months than during the past twelve months, although one third intended to review those plans following the *Spending Review*.

Overall, the outlook for business investment appears to have strengthened somewhat, consistent with recent news in some investment intention surveys (**Table 2.C**).

## 2.2 External demand

The global economy has grown strongly in recent quarters. And the IMF's projections for world GDP growth in 2010 have been revised up significantly over the past 18 months, to a rate above the average of about 4% over the decade prior to the financial crisis (**Chart 2.9**). Their projection for growth in 2011 has remained broadly unchanged.

### The euro area

Euro-area GDP rose by 1.0% in 2010 Q2, the strongest growth for four years. Within that, German GDP increased by 2.2%, in part driven by a pickup in final domestic demand (**Table 2.D**). Indicators of near-term activity are nevertheless consistent with some slowing in GDP growth in Germany and across the euro area as a whole in Q3.

Demand prospects remain weaker in a number of euro-area economies that are undergoing substantial fiscal

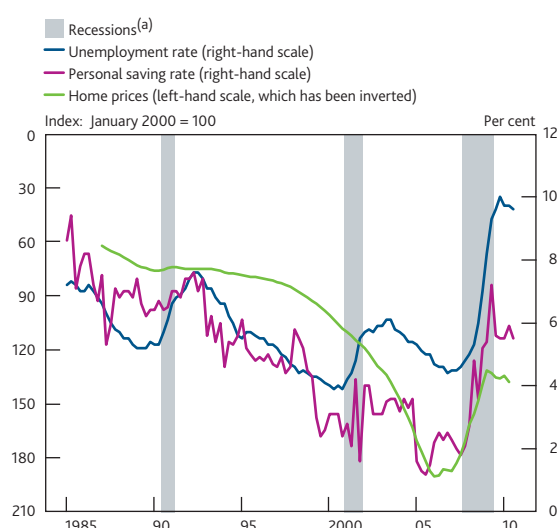
**Table 2.D** Final domestic demand in the United Kingdom's major trading partners<sup>(a)</sup>

Percentage changes on a quarter earlier

|                            | Averages |      |      | 2010 |     |      |
|----------------------------|----------|------|------|------|-----|------|
|                            | 2000–07  | 2008 | 2009 | Q1   | Q2  | Q3   |
| Euro area (43%)            | 0.5      | -0.3 | -0.5 | 0.1  | 0.5 | n.a. |
| of which, Germany (9%)     | 0.2      | 0.1  | -0.4 | 0.6  | 1.4 | n.a. |
| of which, France (7%)      | 0.6      | -0.1 | 0.1  | -0.2 | 0.4 | n.a. |
| of which, Netherlands (7%) | 0.4      | 0.2  | -1.0 | 0.1  | 0.9 | n.a. |
| of which, Ireland (6%)     | 1.3      | -2.3 | -2.8 | -2.8 | 1.5 | n.a. |
| United States (17%)        | 0.7      | -0.6 | -0.4 | 0.3  | 1.1 | 0.6  |
| Japan (2%)                 | 0.3      | -0.6 | -0.4 | 0.5  | 0.1 | n.a. |

Source: Thomson Reuters Datastream.

(a) Chained-volume measures. Figures in parentheses are shares in UK goods and services exports in 2009.

**Chart 2.10** US household indicators

Sources: Bureau of Economic Analysis, NBER, Standard &amp; Poor's/Case-Shiller and Thomson Reuters Datastream.

(a) Recession bars use NBER dating methodology.

consolidations. For example, in Ireland — a relatively important trading partner for the United Kingdom — the Government recently announced that the fiscal adjustment over the next four years would need to be much larger than set out previously. And Irish GDP fell by 1.2% in 2010 Q2, although these data are extremely volatile.

### The United States

US GDP increased by 0.5% in 2010 Q3, slightly faster than in Q2, but slower than around the turn of the year. Taking Q2 and Q3 together, final domestic demand growth strengthened somewhat (**Table 2.D**), while the stock-cycle boost began to fade. Net trade reduced growth substantially.

The path of consumer spending will be a key determinant of the strength of the recovery in final demand. The saving rate of US households has risen markedly since the start of the financial crisis (**Chart 2.10**). That period saw a doubling in the unemployment rate and a large fall in house prices. It is difficult to know whether households wish to increase their rate of saving further in order to repair their balance sheets. Conditions in the labour market may continue to weigh on spending. But the Federal Open Market Committee's recent decision to provide additional monetary stimulus should support demand.

### Asia

Activity in Asia has recovered significantly over the past year. Robust GDP growth was maintained in the most recent data, although there was a moderation in the pace of expansion in some economies, reflecting, in part, earlier policy tightening. For example, four-quarter growth in China slowed from 10.3% in 2010 Q2 to 9.6% in Q3. Business surveys have, however, suggested strengthening growth in some large Asian economies in recent months.

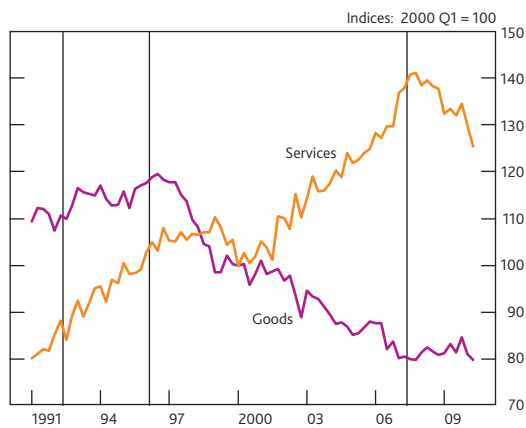
### World trade and UK exports

The prospects for exports depend in large part on the sustainability and strength of the recovery in international trade. World trade has grown more quickly than world GDP since the end of the global recession, following an unusual period in which it fell more sharply.<sup>(1)</sup> Growth in world imports of goods slowed to 2% in the three months to August compared with the three months to May, weaker than the 6% rates recorded around the turn of the year. That may reflect the waning influence of the stock cycle on global trade flows.

The outlook for UK exports will also depend on the extent to which improved competitiveness for some companies, following the 25% depreciation of the sterling exchange rate since mid-2007, boosts external demand. UK exports of goods and services increased by 2.3% in 2010 Q2, following a

(1) See 'Interpreting the world trade collapse', *Bank of England Quarterly Bulletin*, Vol. 50, No. 3, pages 183–89.

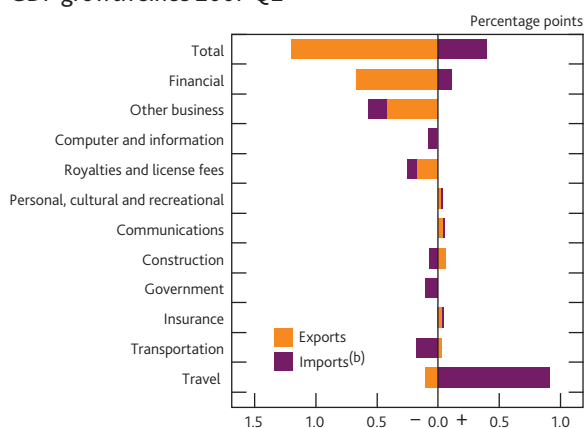
**Chart 2.11 Ratios of UK exports to UK-weighted M6 imports<sup>(a)</sup>**



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*. The vertical lines mark the beginning of the major nominal exchange rate movements that began in 1992 Q3 (a depreciation), 1996 Q2 (an appreciation) and 2007 Q3 (a depreciation).

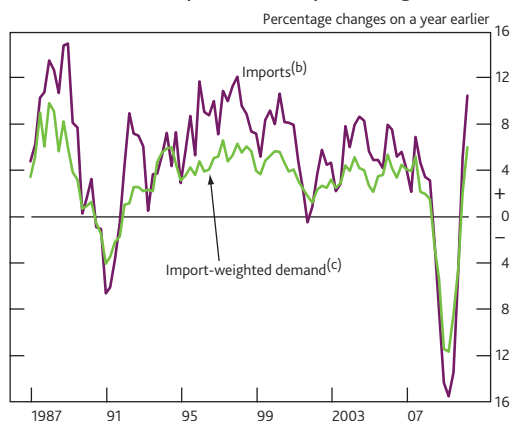
**Chart 2.12 Cumulative contributions of services trade to GDP growth since 2007 Q2<sup>(a)</sup>**



Sources: ONS and Bank calculations.

(a) Chained-volume measures.  
(b) A positive (negative) contribution to GDP growth from imports represents a fall (rise) in imports.

**Chart 2.13 UK imports and import-weighted demand<sup>(a)</sup>**



Sources: ONS and Bank calculations.

(a) Chained-volume measures.  
(b) Excluding the estimated impact of MTIC fraud.  
(c) Calculated by weighting household consumption (including non-profit institutions serving households), whole-economy investment (excluding valuables), government spending, stockbuilding (excluding the alignment adjustment) and exports (excluding the estimated impact of MTIC fraud) by their respective import intensities. Import intensities are estimated using the *United Kingdom Input-Output Analytical Tables, 1995*.

weather-related fall of 0.7% in Q1. Given rapid growth of world trade in 2010 H1, that suggests that exporters continued to lose global market share.

But that aggregate picture masks differences between goods and services exports. Indicative estimates of UK exports relative to world imports suggest that the fall in sterling has supported goods exports over the past two years relative to previous trends (Chart 2.11). In contrast, services exports appear to have underperformed relative to global demand.

That weakness has in large part been driven by falls in exports of financial services — which the United Kingdom specialises in (Chart 2.12). That may reflect the impact of the crisis on the demand for these, relative to other, services. It could also reflect difficulties in measuring financial services exports — particularly during the past few quarters, when respondents to the CBI's *Financial Services Survey* have reported strong growth in overseas business, but when UK exports of financial services are estimated to have fallen sharply.

Overall, the MPC judges that the past exchange rate depreciation will continue to boost UK exports although the extent of that boost remains uncertain (Section 5).

## 2.3 Imports

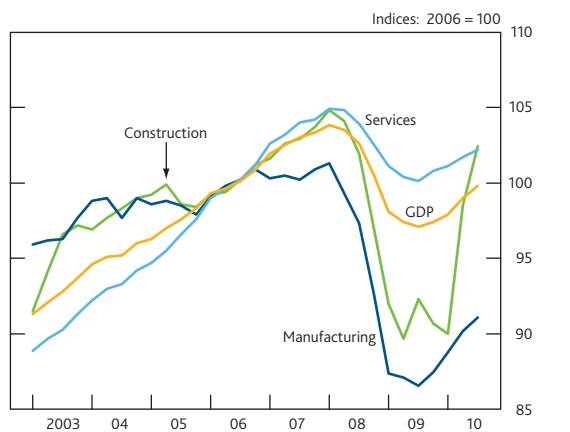
Imports depend on the level and composition of demand in the economy, as well as the price of foreign goods and services relative to domestically produced ones. Imports increased by over 10% in the year to 2010 Q2, while import-weighted demand rose by only around 6% during that same period. That strength stands in contrast to developments during the recession, when imports declined more quickly than import-weighted demand (Chart 2.13).

Such large swings in imports relative to demand make it harder to identify the extent of expenditure switching towards UK-produced goods and services following the increase in import prices resulting from the mid-2007 depreciation of sterling. Disaggregated data suggest that imports of travel services — spending overseas by UK residents — have fallen sharply since that depreciation (Chart 2.12). But substitution away from imports in other sectors may take time as UK companies build a presence in markets currently supplied by overseas producers.

# 3 Output and supply

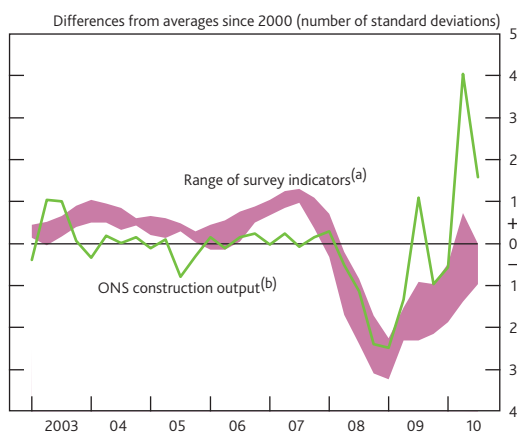
Output growth was estimated to be 0.8% in Q3, similar to its average in the first half of the year, and slightly above its long-run average. Companies' effective supply capacity is likely to have fallen during the recession relative to a continuation of its pre-recession trend. But the extent to which that is temporary or permanent is highly uncertain and will depend in part on the evolution of output growth. There is mixed evidence regarding the extent of spare capacity within companies. Employment appears to have begun to recover but considerable labour market slack remains.

**Chart 3.1** GDP and sectoral output<sup>(a)</sup>



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

**Chart 3.2** Indicators of construction output growth



Sources: Bank of England, CIPS/Markit, Experian and ONS.

(a) Measures included are the Bank's Agents' end-quarter score for construction output relative to a year ago, the quarterly average of the CIPS/Markit construction activity index and the quarterly average of the Experian construction activity index. Data are to 2010 Q3.

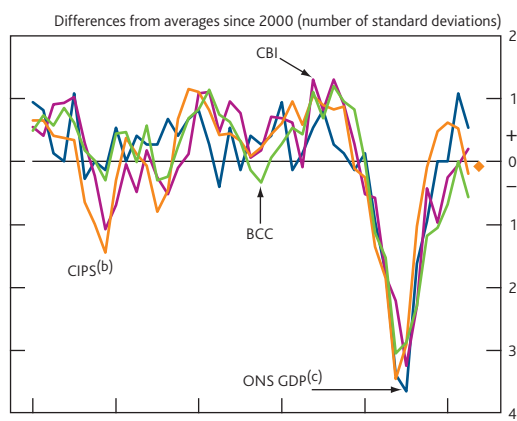
(b) Quarterly growth.

Output growth in 2010 Q3 was in line with its average in the first half of the year (Section 3.1). Different indicators offer contrasting views of the margin of spare capacity within companies. Surveys suggest limited spare capacity within companies, but productivity data imply that there may be more spare capacity. The signal from these data depends crucially on the extent to which the fall in the supply capacity of the economy relative to a continuation of its pre-recession trend is temporary or permanent (Section 3.2). There have been signs of some recovery in employment, but there is conflicting evidence on the pace of that recovery (Section 3.3).

## 3.1 Output

Quarterly GDP growth in 2010 Q3 was provisionally estimated to be 0.8%. That was lower than growth of 1.2% in Q2, but in line with its average in the first half of the year. Despite a year of expansion, the level of output in Q3 was still around 4% below its pre-recession peak (**Chart 3.1**), and further still below the level implied by a continuation of its pre-recession trend. As discussed in the box on page 48, growth in the first year of this recovery has been somewhat faster than during the first year of both the 1980s' and 1990s' recoveries.

Growth in both Q2 and Q3 was boosted by strong growth in the construction sector. Construction output is estimated to have increased by 9.5% in Q2, accounting for around half of the growth in GDP. That increase was partly due to a recovery following bad weather in Q1. Moreover, the rise was larger than implied by survey indicators of construction output (**Chart 3.2**). Construction was provisionally estimated to have grown by 4% in Q3 — again that was stronger than implied by business surveys. But other indicators are more consistent with marked strength in construction: employment rose robustly in Q2 (Section 3.3) and building materials manufacturers reported their strongest output growth since 1995 in the October *CBI Quarterly Industrial Trends Survey*.

**Chart 3.3** Indicators of aggregate output growth<sup>(a)</sup>

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

- (a) These measures are produced by weighting together surveys from the BCC (manufacturing, services), the CBI (manufacturing, financial services, business/consumer services, distributive trades) and CIPS/Markit (manufacturing, services, construction) using nominal shares in value added. The BCC data are non seasonally adjusted.
- (b) The diamond shows October data.
- (c) Quarterly growth, chained-volume measure at market prices.

Service sector output grew by 0.6% in Q3, the same rate as in Q2 and close to its historical average growth rate. The Q3 data are provisional — for example, Index of Services data are only available for the first two months of Q3 — so it is possible that they may be revised in due course. But they suggest that services output growth was broadly based; growth ranged from 0.5% to 0.7% across the main subsectors.

Since the trough in GDP, manufacturing output has grown more strongly than services output (**Chart 3.1**). That pattern continued in Q3. The larger fall in manufacturing output during the recession and the faster recovery is consistent with manufacturing being more cyclical than services. The demand for durable goods is highly cyclical. And inventories tend to be more prevalent in manufacturing, so stocks will have made larger contributions to manufacturing growth as the stock cycle has progressed (Section 2). Moreover, manufacturing tends to be more export-intensive than services, and goods exports have been stronger than services exports (Section 2), suggesting that manufacturers have received a greater boost from the recovery in world trade and the lower exchange rate.

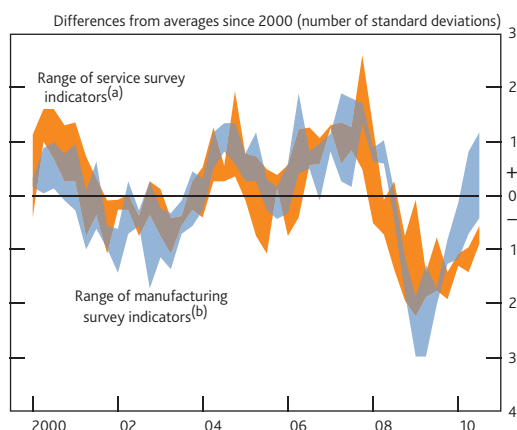
CIPS/Markit business activity indices in October were similar to their Q3 averages (**Chart 3.3**). But those, and some other survey indicators of output growth and confidence, are below levels seen earlier in the year, suggesting growth may slow in the near term.

## 3.2 Capacity pressures and companies' supply capacity

Inflation depends, in part, on the level of output relative to potential supply. The resultant margin of spare capacity can be located either within companies or in the labour market.

A significant margin of spare capacity opened up within companies during the recession, but its exact size is difficult to quantify. One approach is to use evidence from surveys. A second is to consider movements in productivity relative to a measure of trend productivity; this proxies how much output was produced relative to what could have been produced. Taken at face value, the two approaches give differing views about the amount of spare capacity within companies.

Business surveys suggest that there is relatively limited spare capacity within companies at present. Spare capacity in services appears to have narrowed in recent quarters, although some remains (**Chart 3.4**). But surveys suggest that capacity utilisation within manufacturing companies has closed more quickly and is now close to pre-recession levels.

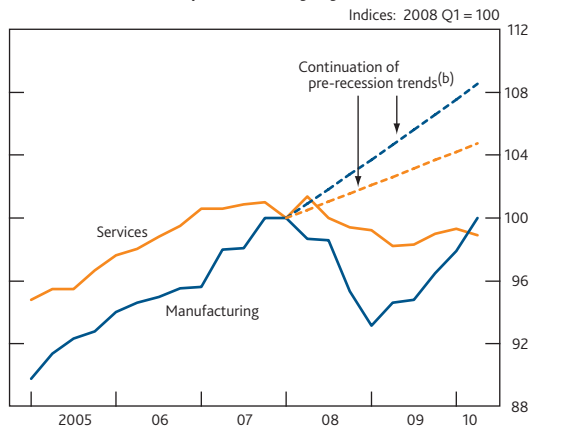
**Chart 3.4** Survey measures of capacity utilisation by sector

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

- (a) Includes measures of services 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) Includes measures of manufacturing capacity utilisation from the Bank's Agents, BCC and CBI. The BCC data are non seasonally adjusted.

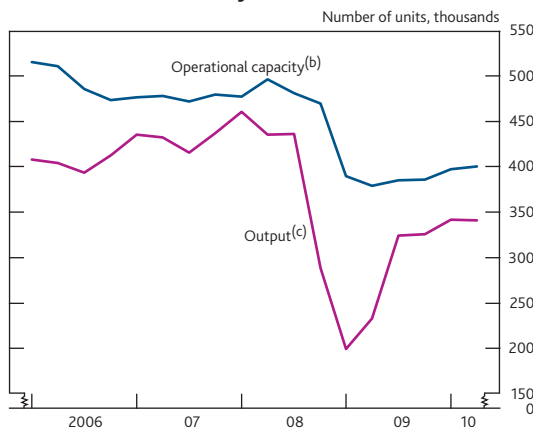
Productivity data appear to imply a larger amount of spare capacity within companies. The fall in hours worked during the recession was proportionally smaller than the fall in output,

**Chart 3.5 Labour productivity by sector<sup>(a)</sup>**



(a) Output per hour.  
(b) Pre-recession trends are calculated by projecting forward labour productivity from 2008 Q2 using the average quarterly growth rate between 1996 Q1 and 2008 Q1.

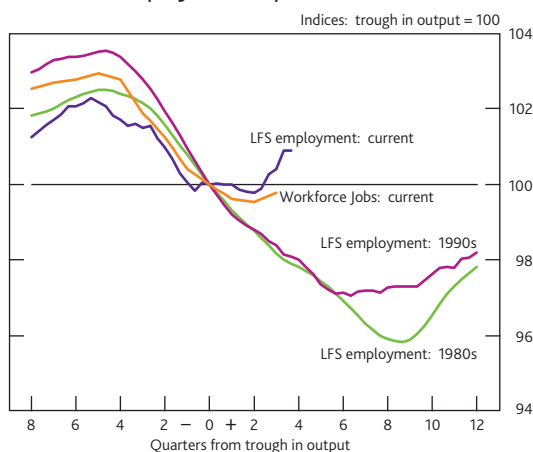
**Chart 3.6 Operational capacity and output in the UK automotive industry<sup>(a)</sup>**



Sources: PwC Autofacts and Bank calculations.

(a) The data cover all light vehicle manufacturing plants and powertrain plants. The plant-level data are aggregated to produce industry-level measures of operational capacity and output. Data have been seasonally adjusted by Bank staff.  
(b) Operational capacity is a measure of the number of units that a factory can produce each quarter. It is defined as the product of the number of working days, the number of shifts per day, the number of hours per shift and the number of units each shift can produce in one hour.  
(c) Units assembled each quarter.

**Chart 3.7 Employment in previous recoveries<sup>(a)</sup>**



Source: ONS (including the Labour Force Survey).

(a) Recessions are defined as at least two consecutive quarters of falling output (at constant market prices) estimated using the latest data. And the recoveries are assumed to begin in the quarter that follows the trough in output. LFS data are rolling three-month measures. Workforce Jobs data are quarterly.

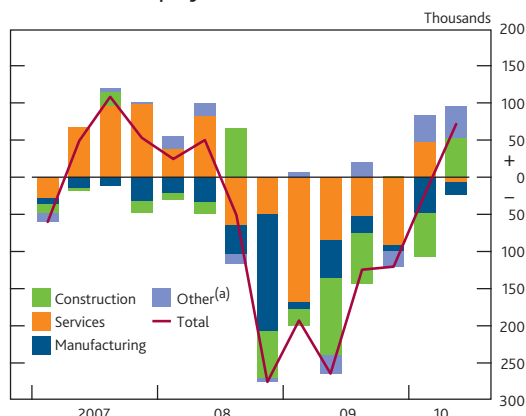
and therefore hourly labour productivity fell (**Chart 3.5**). Recent developments in output (Section 3.1) and employment (Section 3.3) mean that manufacturing productivity has begun to recover, although services productivity has remained subdued. But productivity in both sectors remains far below what would be implied by a continuation of pre-recession trends. If the recession had little or no impact on the rate of underlying productivity growth, that would suggest that companies have substantial spare capacity. In that case, they should be able to meet higher demand without expanding their workforce, by increasing productivity back towards its trend level. But if potential productivity growth has been weaker than its pre-recession trend, there will be somewhat less spare capacity.

One way to reconcile the surveys and productivity data is a fall in the effective supply capacity of the economy relative to its previous trend. That includes factors that might have temporarily restricted companies' ability to produce output but that do not affect their longer-run supply capacity. And if companies do not take into account temporarily unavailable capacity when responding to surveys, survey measures may understate the extent of capacity available to businesses in the longer run.

Examples of shorter-run factors that may have reduced effective supply include restricted access to the working capital required for day-to-day operations, and temporary reductions in capacity, such as shutdowns of some production lines that are costly or difficult to reverse quickly. The UK auto industry is one example of an industry in which productive capacity was reduced during the recession by shutdowns of production lines and reductions in the number of shifts. Plant-level data show that a measure of capacity in this industry fell by around 20% during the recession (**Chart 3.6**). The airline sector is another industry in which capacity fell in the recession as companies withdrew aircraft from service in response to weak demand (Section 4).

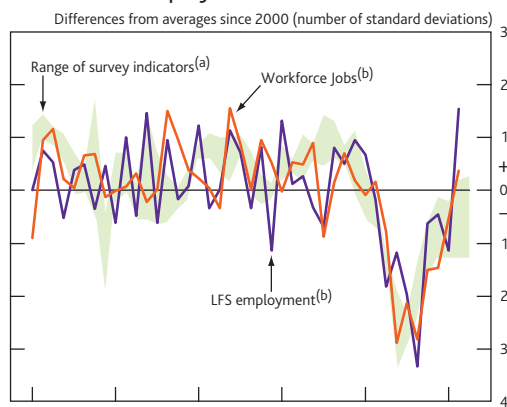
But surveys and productivity data could also be reconciled by a more permanent hit to supply capacity. Supply may be permanently lower relative to its pre-crisis trend if the economic restructuring associated with the recession has led to a shift away from high-productivity industries towards industries with lower productivity. And if skills acquired while working and while producing output are an important source of productivity gains, then the falls in hours worked and in output during the recession may have reduced the growth of underlying productivity. Moreover, weak investment and a rise in corporate liquidations are likely to have had a permanent effect on supply during the recession. But the impact through these channels is likely to have been relatively modest; quarterly investment flows are small relative to the size of the capital stock, and corporate liquidations rose by less than in the early 1990s recession, despite a larger fall in output.

**Chart 3.8** Quarterly changes in the Workforce Jobs measure of employment



(a) Includes agriculture, forestry and fishing, mining and quarrying, electricity, gas, steam and air conditioning supply, and water supply, sewerage, waste and remediation activities.

**Chart 3.9** Surveys of employment intentions and measures of employment

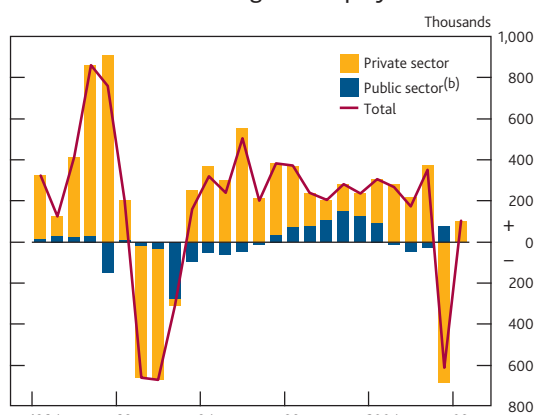


Sources: Bank of England, BCC, CBI, CBI/PwC, Manpower and ONS (including the Labour Force Survey).

(a) Measures included are based on employment intentions balances from the Bank's Agents (manufacturing and services), the BCC (manufacturing and services) and the CBI (manufacturing, financial services, business/consumer services) and are weighted using employment shares from Workforce Jobs. The BCC data are non seasonally adjusted. The Manpower data which are also included cover the whole economy.

(b) Percentage changes on a quarter earlier. Data are to 2010 Q2.

**Chart 3.10** Annual changes in employment<sup>(a)</sup>



Source: ONS (including the Labour Force Survey).

(a) Total employment change is Q2 to Q2. Public sector employment changes are June to June. The private sector change is defined as the difference between the whole economy and the public sector changes. The dates on the chart show the year that the change in employment is from, for example, 1999 represents the change in employment between 1999 Q2 and 2000 Q2. (b) Total general government employees (excludes public sector corporations). Prior to 1991 changes in general government employment are estimated using Workforce Jobs data. Changes in public and private sector employment are affected by reclassifications of organisations between the public and private sectors. In particular, the transfer of further education college and sixth-form school employees from the public to the private sector in April 1993 accounts for a significant part of the fall in public sector employment between June 1992 and June 1993.

The MPC judges that, on balance, there is likely to be significant spare capacity within companies; some that is immediately available and some that could be brought back as demand recovers. But, if demand remains weak, companies may scrap that capacity, and potential supply will become permanently lower. The implications of spare capacity for the MPC's forecast are discussed in Section 5.

### 3.3 The labour market

#### Labour demand

Temporarily low productivity and significant spare capacity within companies should allow companies to meet higher demand without expanding their workforce.

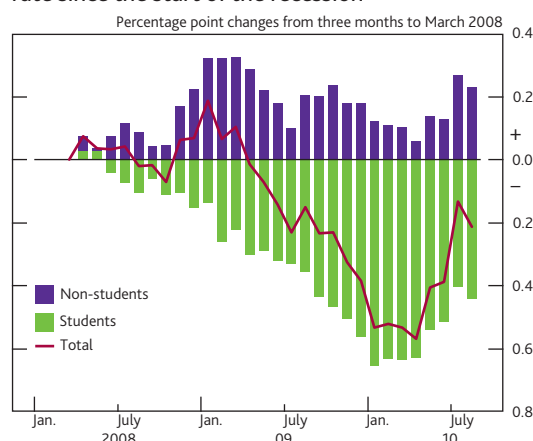
The latest employment data paint a mixed picture on this, however. According to the Labour Force Survey (LFS), employment increased by 178,000 between the three months to May and the three months to August. But the less timely Workforce Jobs data suggest a more modest pace of recovery in employment. Workforce Jobs increased by 70,000 between March and June, less than half the increase in LFS employment over the equivalent period. Using either the Workforce Jobs or LFS measures, employment appears to have stabilised, or begun to recover, earlier than during the previous two recoveries where employment continued falling for around two years after output had started rising (Chart 3.7).

Sectoral differences in employment are potentially informative, although a reliable breakdown is only available for Workforce Jobs. 53,000 of the increase in Workforce Jobs between March and June was in construction (Chart 3.8), consistent with the large increase in construction output in Q2 (Section 3.1). In manufacturing, Workforce Jobs data suggest that employment has continued to decline: increases in output appear to have been met by a recovery in hours and through higher hourly productivity. In services, employment has shown signs of stabilisation in recent quarters following previous large declines. Increases in average hours within the service sector have only been modest, perhaps related to an increase in part-time working.

Overall, recent employment data look a little stronger than might have been expected given the likely substantial degree of spare capacity within companies. But that difference is less marked for Workforce Jobs than the LFS data, and it is too early to draw strong signals from such movements. Further, evidence from surveys of employment intentions tend to point to somewhat weaker near-term employment growth than shown by either measure of employment (Chart 3.9).

Developments in demand and the extent of spare capacity within companies will be key determinants of the prospects for employment. But the outlook for employment will also be affected by the prospective fiscal consolidation. The public sector supported employment during the recession

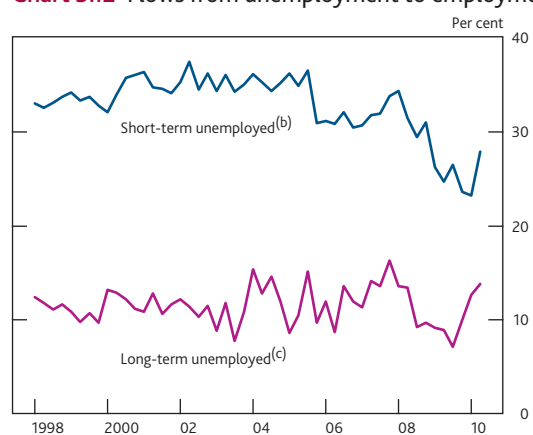
**Chart 3.11** Contributions to changes in the participation rate since the start of the recession<sup>(a)</sup>



Source: Labour Force Survey.

(a) Percentages of the 16+ population. Rolling three-month measures.

**Chart 3.12** Flows from unemployment to employment<sup>(a)</sup>



Sources: Labour Force Survey and Bank calculations.

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

**Table 3.A** Selected indicators of labour market pressure

|                                                   | Averages   | 2010 |      |      |
|---------------------------------------------------|------------|------|------|------|
|                                                   | since 1998 | Q1   | Q2   | Q3   |
| LFS unemployment rate <sup>(a)</sup>              | 5.7        | 8.0  | 7.8  | 7.7  |
| LFS long-term unemployment rate <sup>(a)(b)</sup> | 1.4        | 2.4  | 2.5  | 2.6  |
| Vacancies/unemployed ratio <sup>(a)(c)</sup>      | 0.36       | 0.19 | 0.20 | 0.19 |
| <b>Recruitment difficulties</b>                   |            |      |      |      |
| Agents' scores <sup>(d)</sup>                     | 0.8        | -2.8 | -1.9 | -1.6 |
| BCC <sup>(e)</sup>                                | 60         | 43   | 53   | 50   |
| CBI skilled staff <sup>(f)</sup>                  | 24         | 11   | 13   | 11   |
| CBI unskilled staff <sup>(f)</sup>                | 6          | 2    | 2    | 4    |

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

- (a) The figure for 2010 Q3 shows data for the three months to August.  
 (b) Defined as those who have been unemployed for more than twelve months divided by the economically active population.  
 (c) Number of vacancies divided by LFS unemployment. Vacancies exclude agriculture, forestry and fishing. Average 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 more recruitment difficulties.  
 (e) Percentage of respondents reporting recruitment difficulties over the past three months. Non seasonally adjusted. Manufacturing and services balances are weighted by shares in employment.  
 (f) Balances of respondents expecting skilled and unskilled labour to limit output/business over the next three months (in the manufacturing sector) or over the next twelve months (in the financial, business and consumer service sectors), weighted by shares in employment. Averages since 1998 Q4.

(Chart 3.10). But, according to Office for Budget Responsibility projections, public sector employment is expected to fall by approximately 500,000 — just under 2% of aggregate employment — by 2015.

### Labour supply

Labour supply may have been impaired by the recession, but so far these effects appear to have been modest. The participation rate — the number of people working or seeking work as a percentage of the adult population — has risen recently and was only a little below its pre-recession level in the three months to August (Chart 3.11).

The fall in the participation rate during the recession was entirely accounted for by an increase in the number of students. And the unwinding of that explains much of the recent pickup in the participation rate. The fall in participation in the latest recession was smaller, and so far less persistent, than the falls associated with past recessions. For example, in the early 1990s there was a large rise in inactivity associated with long-term sickness and a fall in older-worker participation. In contrast, participation by older workers increased during this recession.

Migration continues to boost labour supply. The data are subject to significant uncertainty, but provisional ONS estimates suggest that net inward migration has recovered somewhat, having fallen during the recession. Future migration may be constrained by the cap on non-EU migration that was initially implemented as a temporary cap in July 2010.

Even though measured labour supply has begun to recover, it is possible that there may still be downward pressure on effective labour supply from increases in long-term unemployment. The long-term unemployed have a lower probability of finding work than those who have been unemployed for shorter periods (Chart 3.12), possibly because long periods of unemployment impair the skills of those affected.

Long-term unemployment has continued to increase during 2010 even as overall unemployment has stabilised (Table 3.A). But it remains markedly lower than in the mid-1980s and early 1990s. Moreover, the share of the long-term unemployed finding work has risen since the end of the recession and is now above its pre-recession average (Chart 3.12).

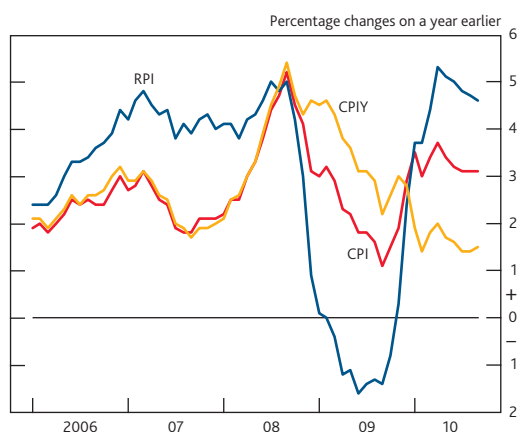
### Labour market tightness

A large amount of slack opened up in the labour market during the recession: the LFS unemployment rate rose by around 2.5 percentage points. The unemployment rate is still elevated at close to 8%, and the vacancy to unemployment ratio also continues to signal a significant degree of slack (Table 3.A). And although some survey measures suggest that there has been an increase in recruitment difficulties in recent quarters, most continue to suggest that companies perceive that the labour market remains loose.

## 4 Costs and prices

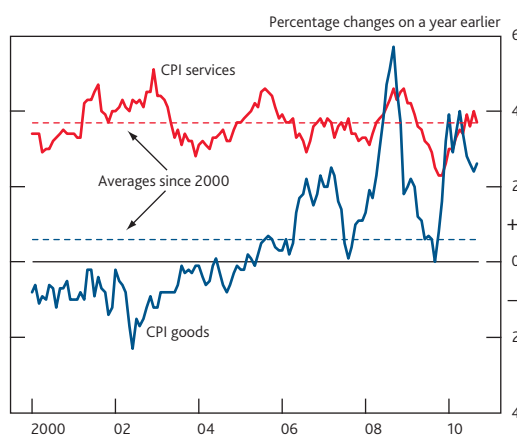
CPI inflation was 3.1% in 2010 Q3. In part, the current elevated rate of inflation reflects past strength in import prices and the VAT rise in January 2010. While the impact of import prices has probably begun to wane, the increase in VAT to 20% in January 2011 is likely to mean that CPI inflation will remain above the target throughout 2011. Labour cost growth has picked up somewhat but remains subdued. Spare capacity, both in the labour market and within companies, is likely to be bearing down on costs and prices. Measures of inflation expectations still appear broadly consistent with CPI inflation being around the target in the medium term.

**Chart 4.1** Measures of inflation<sup>(a)</sup>



(a) Data are non seasonally adjusted.

**Chart 4.2** CPI goods and services<sup>(a)</sup>



(a) Data are non seasonally adjusted.

CPI inflation remains above the 2% inflation target. The current elevated rate of inflation reflects a number of temporary influences (Section 4.1). For example, the restoration of the standard rate of VAT to 17.5% in January 2010 continues to affect the twelve-month inflation rate. And it is likely that companies have continued to pass through increases in import costs resulting from the depreciation of sterling between mid-2007 and the end of 2008 (Section 4.1).

The increase in the standard rate of VAT in January 2011 means that CPI inflation is likely to remain above target throughout 2011. And near-term inflationary pressures — including higher commodity and other world export prices, and a lower sterling exchange rate — appear somewhat stronger than at the time of the *August Report* (Section 4.1). But it is likely that spare capacity will continue to exert downward pressure on pay growth and price inflation (Section 4.2) and, as the impact of temporary influences wanes, inflation is likely to fall. The medium-term outlook will also depend on inflation expectations (Section 4.3).

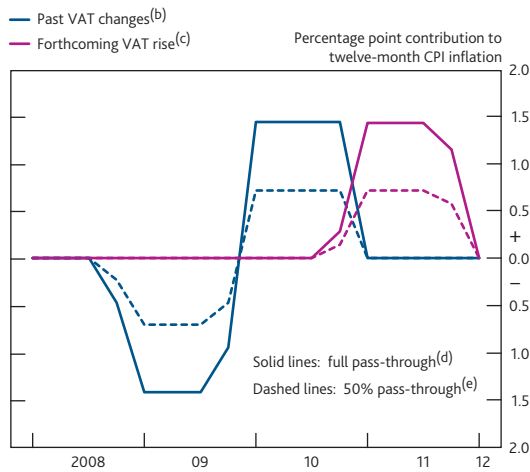
### 4.1 Consumer prices

#### Developments in CPI inflation

CPI inflation was 3.1% in September, unchanged from August and July (**Chart 4.1**). Much of the strength in CPI inflation reflects elevated goods price inflation, which remains well above its average since 2000 (**Chart 4.2**). In contrast, services price inflation is currently around its average since 2000. With July's CPI outturn of 3.1% lying more than 1 percentage point away from target, the Governor, on behalf of the Committee, wrote an open letter to the Chancellor.<sup>(1)</sup> There remains a high probability that the Governor will need to write further open letters to the Chancellor in the coming months.

(1) The letter is available at [www.bankofengland.co.uk/monetarypolicy/pdf/cpiletter100817.pdf](http://www.bankofengland.co.uk/monetarypolicy/pdf/cpiletter100817.pdf).

**Chart 4.3** Stylised illustration of the contribution of changes in VAT to twelve-month CPI inflation<sup>(a)</sup>



Sources: ONS and Bank calculations.

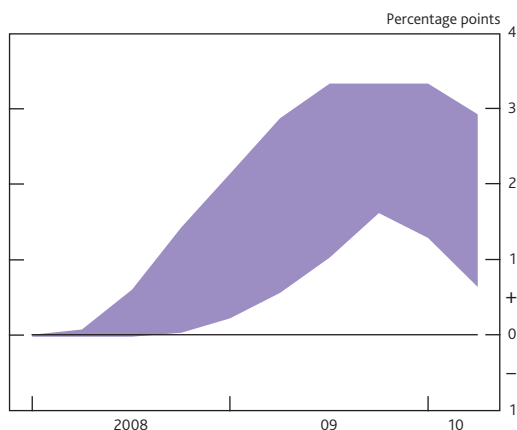
- (a) Data are shown at a quarterly frequency.  
 (b) Past changes in VAT are as follows: cut from 17.5% to 15% in December 2008; and rise from 15% to 17.5% in January 2010. The share of prices subject to VAT is based on the 2009 basket. The examples make the simplifying assumption that businesses only adjust their prices in the months in which VAT was changed.  
 (c) Forthcoming VAT rise is from 17.5% to 20% in January 2011. The share of prices subject to VAT is based on the 2010 basket. The examples make the assumption that one third of affected businesses raise their prices pre-emptively by the end of 2010.  
 (d) All prices subject to the standard rate of VAT vary in response to the changes in VAT.  
 (e) The prices of half of the CPI basket subject to the standard rate of VAT vary in response to the changes in VAT.

As this subsection discusses, much of the recent strength in inflation reflects developments in non-wage costs such as import prices and VAT. But it is likely that weak demand is pulling down inflation (Section 4.2). There is considerable uncertainty, however, about the precise impact of those opposing influences.

The restoration of the standard rate of VAT to 17.5% in January 2010 is boosting both goods and services price inflation. There is considerable uncertainty about the precise impact of VAT on CPI inflation, but evidence from the ONS appears broadly consistent with around half of the cut and subsequent reversal in VAT having been passed through into consumer prices. The blue lines in **Chart 4.3** show how different assumptions about pass-through of the temporary cut, and its subsequent reversal, could be affecting the path of inflation.

In addition to VAT, it is likely that CPI inflation, and particularly goods price inflation, is currently being boosted by import prices. Import prices rose sharply following the depreciation of sterling between mid-2007 and the end of 2008: by the end of 2009, non-energy import prices were around 15% above their mid-2007 level. But the precise impact of that rise on CPI inflation is difficult to judge. It will depend, in part, on companies' ability to offset rising import costs by reducing other costs. Moreover, to the extent that companies do pass through rising import prices, the timing and speed at which they do so is uncertain. For example, some companies may pass through cost increases only gradually, if they are unsure whether the lower level of the exchange rate will persist.

**Chart 4.4** Stylised illustration of the contribution of import prices excluding fuels to CPI inflation<sup>(a)</sup>



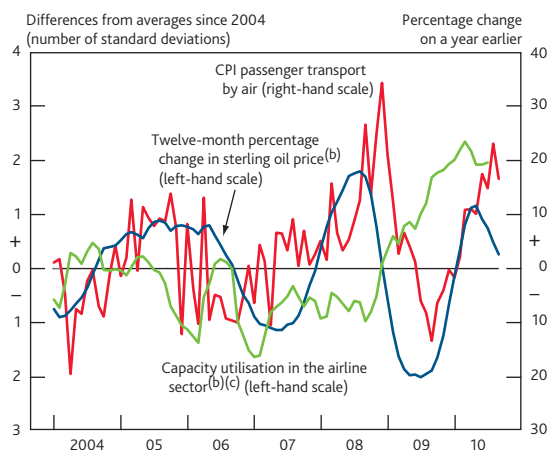
Sources: ONS and Bank calculations.

- (a) Goods and services import prices excluding fuels and the estimated impact of MTIC fraud are assumed to account for 25% of the CPI basket. The illustration is based on changes in non-energy import prices between 2007 Q2 and 2009 Q4, relative to their level in 2007 Q2. The swathe is produced by constructing a number of stylised profiles for import price pass-through based on different assumptions about the point at which pass-through begins, the time it takes for pass-through to complete and the extent of pass-through into consumer prices. The start point for pass-through is varied between two and four quarters after the change in import prices, the time taken for pass-through to complete is varied between two and four quarters and the extent of pass-through is varied between 75% and 100%. The illustration ends in 2010 Q2.

Notwithstanding those uncertainties, it is likely that import price pass-through following the depreciation continues to have a substantial effect on CPI inflation. **Chart 4.4** provides a stylised illustration of how rising import prices might have affected CPI inflation. The swathe, based on a range of assumptions about the timing, speed and extent of import price pass-through into consumer prices, suggests that the peak impact may have occurred around the end of 2009, but that the effect remained substantial into 2010.

Previous *Reports* have discussed the impact of weak demand on costs and prices, and suggested that weak services price inflation throughout 2009 was likely to be a consequence of the substantial degree of spare capacity. But services price inflation has picked up since the end of 2009. That is partly accounted for by the rise in VAT. In addition, higher air fares, despite having a weight of only 2% in the CPI services basket, account for half of the pickup in services price inflation since the end of 2009. In part, higher air fares reflect higher oil prices (**Chart 4.5**), which take time to pass through into air fares because some airlines are likely to buy fuel in advance at a fixed price. But higher air fares may also reflect above-normal capacity utilisation in the airline industry in late

**Chart 4.5** CPI passenger transport by air, oil prices and capacity utilisation in the airline sector<sup>(a)</sup>



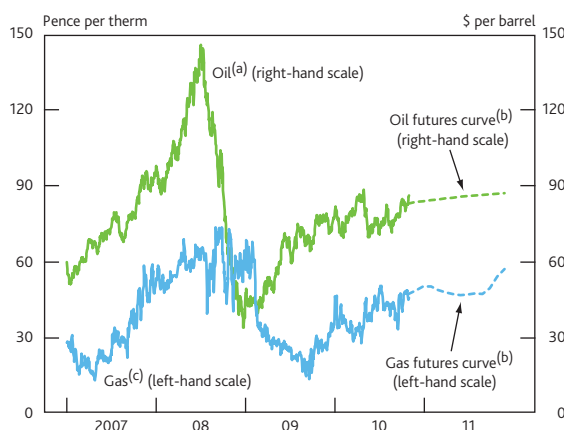
Sources: Bloomberg, CAA UK Airline Statistics, ONS and Bank calculations.

(a) Data for CPI passenger transport by air and the sterling oil price are to September 2010. Data for capacity utilisation in the airline sector are to July 2010.

(b) Six-month moving averages.

(c) CAA data on used and available seat kilometres have been seasonally adjusted by Bank staff. Capacity utilisation is then constructed as the difference between used seat kilometres and available seat kilometres as a proportion of available seat kilometres.

**Chart 4.6** Energy prices



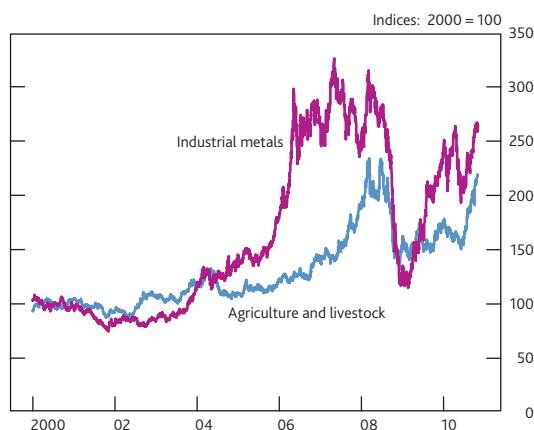
Sources: Bloomberg, Thomson Reuters Datastream and Bank calculations.

(a) Brent forward prices for delivery in 10–21 days' time.

(b) Futures prices are averages during the fifteen working days to 3 November.

(c) One-day forward price of UK natural gas.

**Chart 4.7** Commodity prices<sup>(a)</sup>



Sources: Standard & Poor's and Thomson Reuters Datastream.

(a) The agriculture and livestock, and industrial metals series are calculated using S&P (dollar) commodity price indices.

2009, in contrast to that in the service sector as a whole (Section 3). That may be because some airlines withdrew aircraft from service in response to weak demand, increasing the pressure on capacity as demand recovered. Over time, companies are likely to restore that capacity as it becomes economical to do so.

### The outlook for CPI inflation

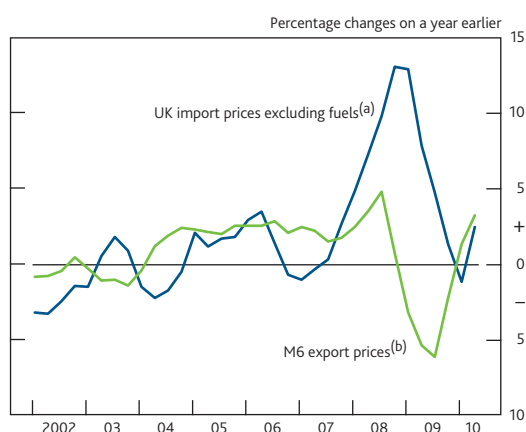
The impact of some of the factors boosting CPI inflation, such as the depreciation of sterling that occurred between the middle of 2007 and the end of 2008, is likely to wane in coming quarters. But recent increases in commodity and other world export prices could lead to renewed upward pressure on inflation. That upward pressure could be heightened if some companies need to rebuild their profit margins, which were compressed during the recession. And the increase in VAT to 20% in January 2011 is likely to mean that CPI inflation will remain elevated for some time.

Energy price movements have been a key influence on CPI inflation in recent years. Since the beginning of 2010, oil prices have been relatively stable and futures prices are only 4% higher than at the time of the *August Report* (Chart 4.6). Spot wholesale gas prices have risen during 2010 (Chart 4.6), and one gas supplier has announced that their retail prices will rise by just under 10% with effect from December. The MPC's latest projections are conditioned on the assumption that domestic gas prices rise by around 10% in coming months — that would boost CPI inflation by around 0.2 percentage points.

Recent rises in non-energy commodity prices are also likely to increase pricing pressures for some companies in coming quarters. Agricultural commodity prices have risen by around 35% since the middle of 2010 (Chart 4.7). In part, that is likely to reflect temporary supply weakness: for example, bad weather has pushed up wheat prices. But other commodity prices have also risen. For example, metals prices have increased by around 25% since mid-2010. Past strength in commodity prices was associated with robust global growth, particularly in emerging economies, and it is likely that the recent recovery in global activity has increased demand for a range of commodities.

Export prices in some advanced economies have increased in recent quarters (Chart 4.8), having fallen sharply in 2009. In part, that pickup is likely to reflect rising commodity prices. But in addition, reports from the Bank's Agents suggest that capacity constraints may have led to heightened cost pressures in some emerging economies.

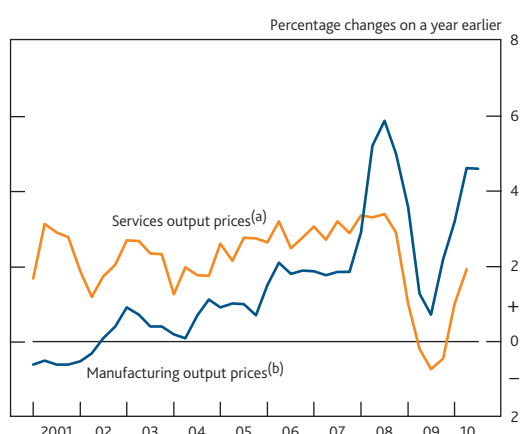
The recent rise in world export prices has been associated with a renewed pickup in UK import prices (Chart 4.8). And the 3% depreciation in the sterling exchange rate since the *August Report* could boost import prices further in

**Chart 4.8** 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 in Canada, France, Germany, Italy, Japan and the United States, weighted according to their share in UK imports in 2009.

**Chart 4.9** Indicators of output prices

(a) Based on the Services Producer Price Index. Data are non seasonally adjusted. Data are to 2010 Q2.

(b) Excludes food, beverages, tobacco and petrol. Data are non seasonally adjusted. Data are to 2010 Q3. Data are consistent with the *Producer Prices Statistical Bulletin*, September 2010.

coming quarters. To a modest degree that will act against the waning impact on CPI inflation from the depreciation of sterling that occurred between the middle of 2007 and the end of 2008.

Output prices provide one indication of future developments in consumer prices, although judging how quickly supply chain developments will affect CPI is not straightforward.

Manufacturing output price inflation remains elevated (**Chart 4.9**) and output price inflation in the service sector has picked up in recent quarters.

In addition to those supply chain pressures, the rise in VAT to 20% in January 2011 is likely to mean that CPI inflation will remain elevated for some time. Reports from the Bank's Agents suggest that pass-through is likely to be close to full, and that some companies may increase prices a little ahead of the rise in the tax rate. Full pass-through would boost the level of consumer prices by around 1.5%. But the impact of the VAT rise on CPI inflation will be offset somewhat as the effect of the restoration of VAT to 17.5% in January 2010 drops out of the twelve-month comparison. If, however, as evidence from the ONS suggests, pass-through from the temporary cut in VAT and subsequent reversal was partial, then the contribution of VAT to CPI inflation would pick up around the turn of the year. **Chart 4.3** shows the impact of different pass-through assumptions on CPI inflation.

## 4.2 Spare capacity and labour costs

The degree of spare capacity in the economy will be a key determinant of inflation in the medium term, affecting companies' pricing decisions and also labour costs.

### The impact of spare capacity on prices

The recession is likely to have left some margin of spare capacity within companies, although its precise degree is difficult to judge (Section 3). That spare capacity reduces the cost of expanding output, and so puts downward pressure on prices. But the downward pressure may be moderated to the extent that some companies temporarily suspended some capacity, for example by mothballing plant and equipment, and that it is costly to reinstate that capacity.

More generally, it is difficult to judge the degree to which spare capacity is currently pulling down inflation, and therefore its likely future impact. It is possible that spare capacity is pulling down very sharply on inflation, but that effect is being masked by upward contributions from import prices and VAT (Section 4.1). But it is also possible that the contributions from import prices and VAT are somewhat smaller, and that spare capacity is having a correspondingly more moderate impact on inflation. A smaller effect from slack may, for example, reflect concerns over cash flow: reports from the Bank's Agents suggest that some companies

## New survey evidence on prices and wages

Companies' inflation expectations are an important influence on their pricing decisions and so on inflation. Since 2008 Q2, the CBI has asked companies a series of questions aimed at improving the available information in this area.<sup>(1)</sup> This box describes recent movements, although the short backrun makes it difficult to draw firm conclusions.

Companies report that their own prices have fallen, on average, during 2009 and 2010 (**Table 1**). In the coming twelve months, companies expect prices to increase only a little (**Table 1**). It is too early to judge how accurate such expectations are, but prices in 2009 and 2010 were generally reported to have turned out somewhat weaker than companies had predicted twelve months previously. Companies' responses on the general level of prices in the markets they compete in have been broadly consistent with the responses on their own prices.

Respondents report that wage cost growth was relatively subdued in 2009 and the first three quarters of 2010. Wage cost growth is expected to pick up a little in the coming twelve months.

**Table 1** Companies' reported and expected changes to prices and wage costs<sup>(a)</sup>

| Percentage changes on a year earlier   | 2008 <sup>(a)</sup> | 2009 <sup>(a)</sup> | 2010 |      |      |
|----------------------------------------|---------------------|---------------------|------|------|------|
|                                        |                     |                     | Q1   | Q2   | Q3   |
| Own prices <sup>(b)</sup>              |                     |                     |      |      |      |
| Past twelve months                     | 1.7                 | -0.3                | -0.6 | 0.0  | -0.3 |
| Next twelve months                     | 1.1                 | 0.0                 | 0.7  | 0.5  | 0.3  |
| General level of prices <sup>(c)</sup> |                     |                     |      |      |      |
| Past twelve months                     | 1.6                 | -0.6                | -0.7 | -0.3 | -0.3 |
| Next twelve months                     | 1.0                 | 0.0                 | 0.6  | 0.1  | 0.4  |
| Wage costs <sup>(d)</sup>              |                     |                     |      |      |      |
| Past twelve months                     | 3.1                 | 0.9                 | 0.5  | 0.9  | 1.0  |
| Next twelve months                     | 2.4                 | 0.8                 | 1.3  | 1.6  | 1.5  |

Sources: CBI, ONS and Bank calculations.

- (a) Data for the manufacturing, business/consumer services and distribution sectors are weighted together by Bank staff using their shares in value added. Annual figures are averages of four-quarter growth rates, apart from the 2008 figure, which is the average of 2008 Q2–2008 Q4.
- (b) Companies are asked: 'What has been the percentage change over the past twelve months in your own average output price for goods sold into UK markets and what is expected to occur over the coming twelve months?'
- (c) Companies are asked: 'What has been the percentage change over the past twelve months in the general level of prices in the markets that you compete in and what is expected to occur over the coming twelve months?'
- (d) Companies are asked: 'What has been the percentage change over the past twelve months in your wage/salary cost per person (including overtime and bonuses) and what is expected to occur over the coming twelve months?'

- (1) The questions, developed in consultation with the Bank of England, ask companies about price and wage developments over the past and also the coming twelve months.

**Table 4.A** Private sector earnings<sup>(a)</sup>

| Percentage changes on a year earlier      | Averages since |      | 2010 |      |                     |
|-------------------------------------------|----------------|------|------|------|---------------------|
|                                           | March 2001     | 2009 | Q1   | Q2   | Aug. <sup>(b)</sup> |
| (1) AWE regular pay                       | 3.4            | 1.2  | 0.9  | 0.6  | 2.2                 |
| (2) Pay settlements <sup>(c)</sup>        | 3.2            | 2.5  | 1.7  | 1.7  | 1.8                 |
| (1)–(2) Regular pay drift <sup>(d)</sup>  | 0.3            | -1.4 | -0.8 | -1.1 | 0.4                 |
| (3) Total AWE                             | 3.5            | -1.0 | 4.1  | 0.2  | 1.8                 |
| (3)–(1) Bonus contribution <sup>(d)</sup> | 0.1            | -2.1 | 3.2  | -0.4 | -0.5                |

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

- (a) Based on quarterly data, unless otherwise stated.
- (b) Data in the two months to August.
- (c) Average over the past twelve months, based on monthly data.
- (d) Percentage points.

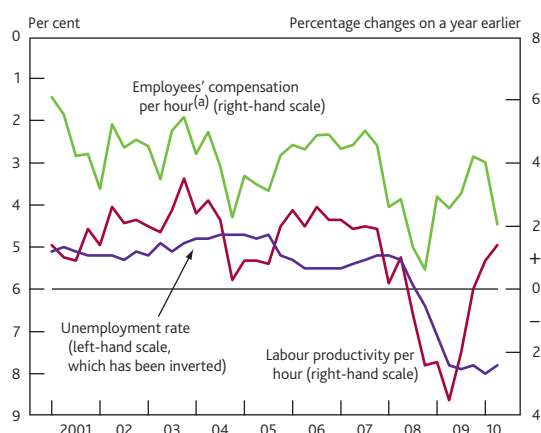
have kept prices up in order to maintain cash flow in the face of difficulties in obtaining bank finance.

## Labour costs

Nominal pay growth has picked up since 2009, but it remains weak relative to its historical average (**Table 4.A**). Within overall pay growth, pay settlements have remained muted. After strength in 2010 Q1, the contribution from bonuses has fallen back markedly. Data for the first two months of Q3 suggest that regular pay drift has picked up. The recent subdued rate of overall wage growth is likely to reflect two key influences: the substantial degree of slack in the labour market and low productivity growth.

Labour market slack is likely to be putting downward pressure on pay growth. The unemployment rate is currently around 2.5 percentage points higher than before the recession (**Chart 4.10**). That is likely to have been associated with a moderation in pay growth.

But wage growth is also likely to have moderated in response to weak productivity. Employment fell by much less than output during the recession (Section 3). One way in which companies were able to maintain employment, relative to output, was to reduce pay growth, so partially offsetting the effect of falls in productivity on their costs. But productivity growth has recovered somewhat since then, and that is likely

**Chart 4.10** Employees' compensation, labour productivity and the unemployment rate

Sources: ONS (including the Labour Force Survey) and Bank calculations.

(a) Employees' compensation at current prices divided by LFS total hours worked.

**Table 4.B** Survey measures of households' inflation expectations<sup>(a)</sup>

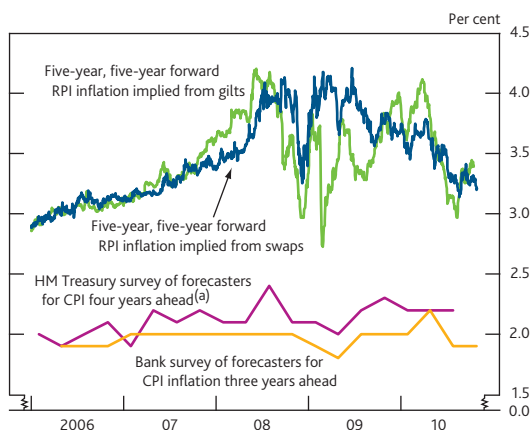
| Per cent                                    | Averages since 2000 | 2008 | 2009 |     | 2010 |     |     |      |
|---------------------------------------------|---------------------|------|------|-----|------|-----|-----|------|
|                                             |                     |      | H1   | H2  | Q1   | Q2  | Q3  | Oct. |
| <b>Expectations (number of years ahead)</b> |                     |      |      |     |      |     |     |      |
| YouGov/Citigroup <sup>(b)</sup> (1)         | 2.5                 | 3.3  | 1.6  | 1.9 | 2.3  | 2.7 | 2.8 | 3.0  |
| Barclays Basix (1)                          | 2.9                 | 4.0  | 2.3  | 2.4 | 2.8  | 3.4 | 2.5 | n.a. |
| Bank/NOP (1)                                | 2.5                 | 3.7  | 2.3  | 2.4 | 2.5  | 3.3 | 3.4 | n.a. |
| Barclays Basix (2)                          | 3.2                 | 3.7  | 2.9  | 3.0 | 3.2  | 3.8 | 2.8 | n.a. |
| Barclays Basix <sup>(c)</sup> (5)           | 3.8                 | n.a. | 3.8  | 3.8 | 3.8  | 4.1 | 3.1 | n.a. |
| YouGov/Citigroup <sup>(b)</sup> (5–10)      | 3.4                 | 3.5  | 3.0  | 3.1 | 3.2  | 3.1 | 3.3 | 3.4  |
| <b>Memo:</b>                                |                     |      |      |     |      |     |     |      |
| CPI inflation                               | 2.0                 | 3.6  | 2.6  | 1.8 | 3.3  | 3.5 | 3.1 | n.a. |

Sources: Bank of England, Barclays Capital, Citigroup, GfK NOP, ONS and YouGov.

(a) The questions ask about expected changes in prices, but do not reference a specific price index. All measures are based on the median estimated price change. Averages are based on quarterly data unless otherwise specified.

(b) Averages since November 2005. Based on monthly data.

(c) Average since 2008 Q3.

**Chart 4.11** Market-based indicators of inflation expectations and selected forecasters' inflation expectations

Sources: Bank of England, Bloomberg, HM Treasury and Bank calculations.

(a) Taken from *Forecast for the UK economy: a comparison of independent forecasts*. Based on the average of medium-term projections published in February, May, August and November.

to have contributed to the modest pickup in pay growth (Chart 4.10).

The recent elevated rate of inflation could put upward pressure on pay if employees seek compensation for the higher cost of living. According to the 2010 *XperthHR Pay Prospects Survey*, around 60% of businesses take account of some measure of inflation during pay negotiations. But the survey also suggests that affordability matters, making it less likely that companies will award pay increases that are not linked to improvements in productivity and profitability. Private sector respondents to the survey expect the median pay settlement in 2010/11 to be 2%, the same as their expectation in 2009/10.

Judging the relative importance of these factors is not straightforward. A continued recovery in productivity could lead to further increases in earnings growth, but it is likely that slack in the labour market will continue to keep pay growth relatively subdued (Section 5). Companies' expectations of wage costs are discussed further in the box on page 36.

### 4.3 Inflation expectations

Inflation in the medium term will be determined, in part, by households' and companies' expectations of inflation. And, if they place some weight on current and recent inflation when forming their expectations, then recent high outturns might cause their inflation expectations to increase.

Since the *August Report*, developments in measures of households' inflation expectations have been mixed. The Barclays Basix measures fell by around 1 percentage point at the one, two and five-year horizons (Table 4.B). These are unusually large changes, and contrast with small rises in other measures of households' inflation expectations. Measures of households' inflation expectations beyond one year ahead are at or below their historical averages.

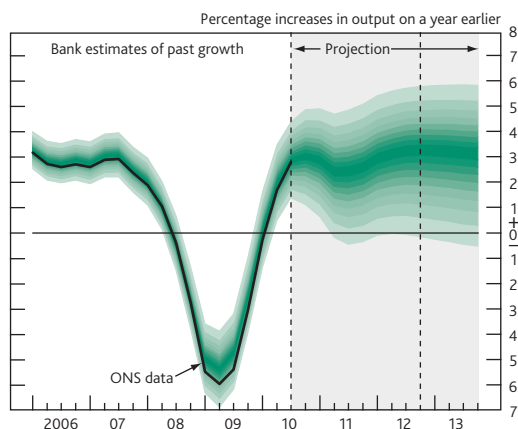
As the box on page 36 discusses, companies expect only moderate price increases in the coming twelve months. Other indicators of inflation expectations include measures derived from financial market instruments and professional forecasters' expectations (Chart 4.11). Financial market measures of inflation expectations have changed little since the *August Report*, although they were weaker than at the beginning of 2010. The HM Treasury and Bank surveys of external forecasters' expectations were also little changed.

Overall, inflation expectations remain at levels that appear broadly consistent with inflation being around the target in the medium term. But the MPC will continue to monitor developments in inflation expectations closely.

## 5 Prospects for inflation

Output has continued to recover but remains below its pre-crisis peak. The strength of the recovery will depend on the extent to which household and corporate sector savings fall as the fiscal consolidation proceeds, and on the support to net trade from the recovery in global demand and the past depreciation of sterling. CPI inflation is likely to remain above the target throughout 2011, reflecting the forthcoming increase in VAT and elevated import price inflation. Further ahead, inflation is likely to fall back. But the timing and extent of that decline in inflation are uncertain. Under the assumptions that Bank Rate moves in line with market interest rates and the stock of assets purchased through the issuance of central bank reserves remains at £200 billion, the chances of inflation being either above or below the target by the end of the forecast period 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 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 5.1, the ratios of the probabilities in the lower bands to those in the upper bands are approximately 6:4 at Years 2 and 3; the downward skew is somewhat smaller at Year 1. 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.

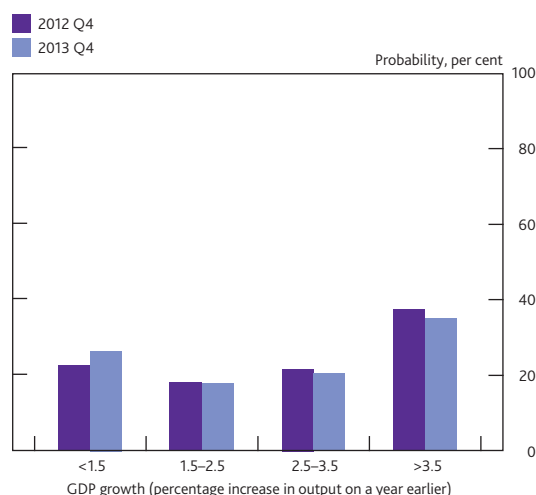
### 5.1 The projections for demand and inflation

The outlook for inflation remains highly uncertain. CPI inflation has been volatile over the past three years, in part reflecting substantial movements in factors such as global commodity prices and exchange rates: further such shocks may well occur over the forecast period. But the forthcoming rise in VAT will put upward pressure on inflation throughout 2011. To the extent that people extrapolate from past inflation rates when setting wages and prices, a further period of above-target inflation could put upward pressure on inflation throughout the forecast period. In the opposite direction, however, significant spare capacity resulting from the deep recession should continue to weigh on inflation, and may well cause it to stay below the target later in the period, once the effects of higher VAT and import prices have diminished. The MPC needs to set policy to balance those opposing risks to inflation 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. That chart, along with all the others describing the MPC's projections shown in this section, is 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.

Despite the substantial fiscal consolidation that is now under way, the recovery in output is likely to be maintained. That reflects both the stimulus to private demand from monetary policy, and a rebalancing of the economy towards net trade, driven by the strengthening in the global economy and the lower level of sterling.

**Chart 5.2** Frequency distribution of GDP growth based on market interest rate expectations and £200 billion asset purchases<sup>(a)</sup>

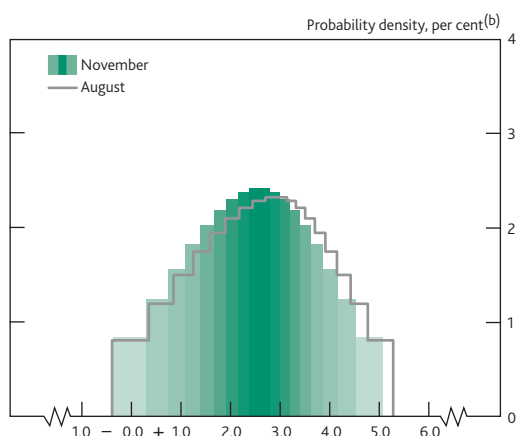


(a) These figures are derived from the same distribution as **Chart 5.1**. They represent the probabilities that the MPC assigns to GDP growth lying within a particular range at a specified time in the future.

But the strength of the recovery remains highly uncertain. The contribution of net trade to growth has so far been weaker than the Committee had expected, and it is unclear how persistent that weakness will prove to be. Private domestic demand could grow rapidly if confidence recovers, and if businesses reinstate investment projects that were previously put on hold. But there are also significant downside risks to the path of private demand, especially associated with the outlook for household spending. Some households may wish to adjust further to reductions in their future incomes associated with the fiscal consolidation. That, in addition to weak confidence, the high levels of debt owed by some households, and the possibility that households may take steps to improve the adequacy of their retirement provision, may exert a greater drag on consumption. There is a wider than usual range of views among Committee members over the likely effects on growth of these various factors. Relative to the most likely path for growth — shown by the darkest central band in **Chart 5.1** — the risks are judged to be skewed to the downside. Taking into account that skew, the Committee's best collective judgement is that four-quarter GDP growth is a little more likely to be above 2.5% — around its historical average rate — than below it for much of the forecast period (**Chart 5.2**). Overall, the outlook for growth is broadly similar to that in the *August Report* (**Charts 5.3 and 5.4**).

Given the substantial falls in output during the recession, GDP is likely to remain significantly below the level implied by a continuation of its pre-recession trend (**Chart 5.5**). Although

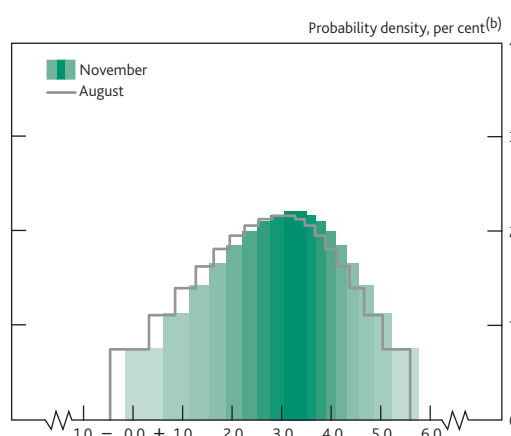
**Chart 5.3** Projected probabilities of GDP growth in 2011 Q4 (central 90% of the distribution)<sup>(a)</sup>



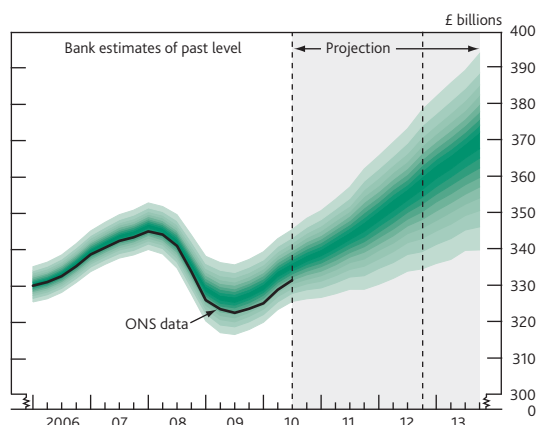
(a) **Charts 5.3 and 5.4** represent cross-sections of the GDP growth fan chart in 2011 Q4 and 2012 Q4 for the market interest rate projection. They have been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion throughout the forecast period. The coloured bands in **Charts 5.3 and 5.4** have a similar interpretation to those on 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 2011 Q4 and 2012 Q4 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 August 2010 *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  $\pm 0.05$  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 2012 Q4 (central 90% of the distribution)<sup>(a)</sup>



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



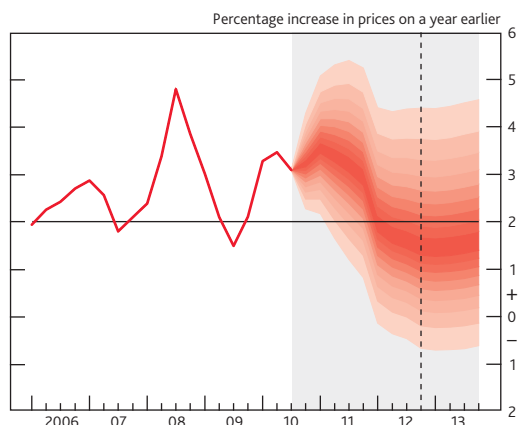
Chained-volume measure (reference year 2006). See the footnote to Chart 5.1 for details of the assumptions underlying the projection for GDP growth. The width of this fan over the past has been calibrated to be consistent with the four-quarter growth fan chart, under the assumption that revisions to 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 Committee judges that the supply capacity of the economy also lies below that same trend, there is nonetheless likely to be some margin of spare capacity throughout the forecast period.

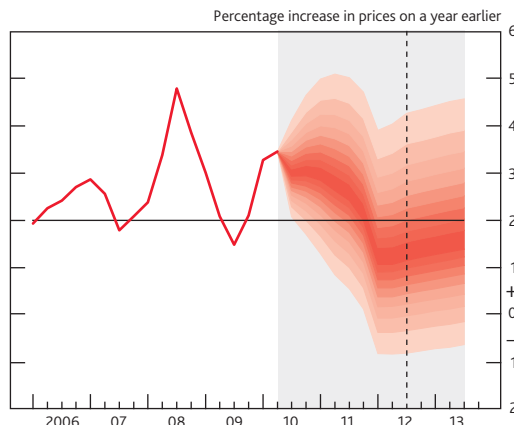
Chart 5.6 shows the outlook for CPI inflation, on the assumption that Bank Rate follows a path implied by market interest rates. Inflation is likely to remain above the 2% target throughout 2011, boosted by the increase in VAT effective in January, elevated import price inflation, and by some businesses continuing to rebuild profit margins, which were compressed during the recession. The projection is higher in the first half of the forecast period than in August (Chart 5.7), in part reflecting higher import price inflation stemming from the recent depreciation of sterling and increases in a range of commodity prices, and also the likelihood of somewhat larger increases in domestic gas prices than assumed in August (see the box on page 43). Further ahead, CPI inflation is likely to fall back to around the target, as the effects of higher import prices and VAT diminish, and persistent economic slack, particularly in the labour market, continues to restrain the growth of wages and prices.

There are significant uncertainties around the outlook for inflation. The near-term overshoot of the target may be more pronounced, particularly if there is continued strength in commodity price inflation, perhaps linked to robust growth in emerging economies. And the recent sustained period of above-target inflation might cause inflation expectations to rise, putting further upward pressure on inflation itself: that risk would be heightened if commodity prices continued to increase. But a greater degree of downward pressure on inflation from persistent spare capacity might cause inflation

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

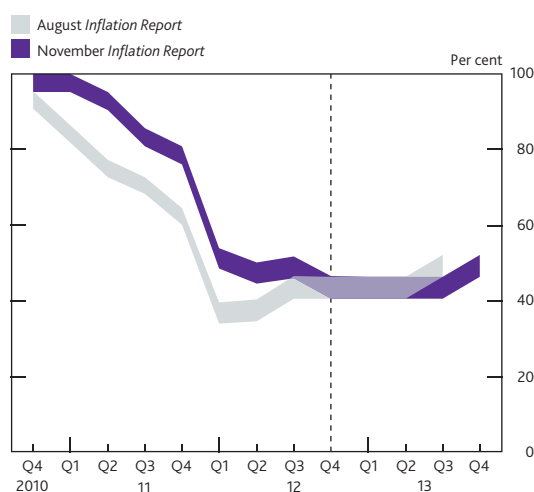


**Chart 5.7** CPI inflation projection in August based on market interest rate expectations and £200 billion asset purchases



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 Chart 5.6, the ratios of the probabilities in the lower bands to those in the upper bands are approximately 4.6 at Years 2 and 3. The upward skew at Year 1 is smaller, and is also slightly smaller than the Year 1 skew in Chart 5.7. 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** Assessed probability inflation will be above target



The November and August 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 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 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 November projection. The two-year point of the August projection was one quarter earlier.

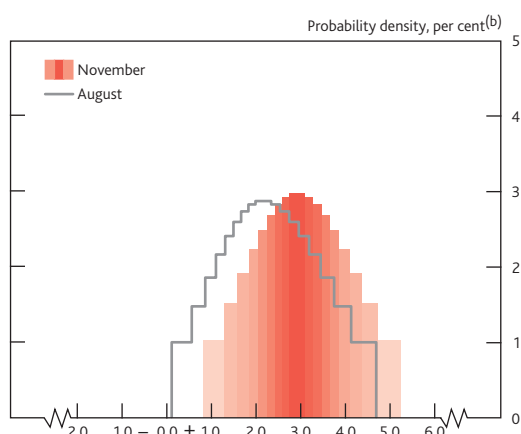
to fall significantly below the target in the medium term. There is a wider than usual range of views among Committee members about the likely strength of these various influences on inflation, and the associated overall balance of risks. Chart 5.8 shows the Committee's best collective judgement of the probability of inflation being above the 2% target, and the probability implied by the August Report projection. On balance, the Committee judges that, conditioned on the monetary policy assumptions described above, the chances of inflation being either above or below the target by the end of the forecast period are roughly equal. The most likely outcome is for inflation to be slightly below target by 2013, but relative to that most likely path, the risks are judged to be skewed to the upside.

Charts 5.9 and 5.10 show the spread of outcomes for CPI inflation at the one and two-year points, and the equivalent spreads at the time of the August Report. The overall distribution for inflation is higher than in August in the first half of the forecast period, but by the year-two point, the distribution is broadly similar. Chart 5.11 shows frequency distributions for inflation. Given the scale of the risks in both directions, the Committee judges that at both the two and three-year points there is only a one-in-four chance that inflation will be within 0.5 percentage points of the 2% target.

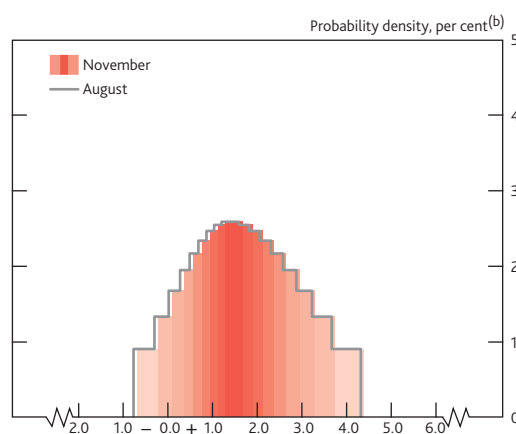
## 5.2 Key judgements and risks

There are substantial uncertainties around the outlook for growth and inflation. The strength of growth will depend on how much net trade supports demand, and on the extent to which private sector net saving falls back following its sharp rise during the crisis. The path of demand will be one key

**Chart 5.9** Projected probabilities of CPI inflation outturns in 2011 Q4 (central 90% of the distribution)<sup>(a)</sup>



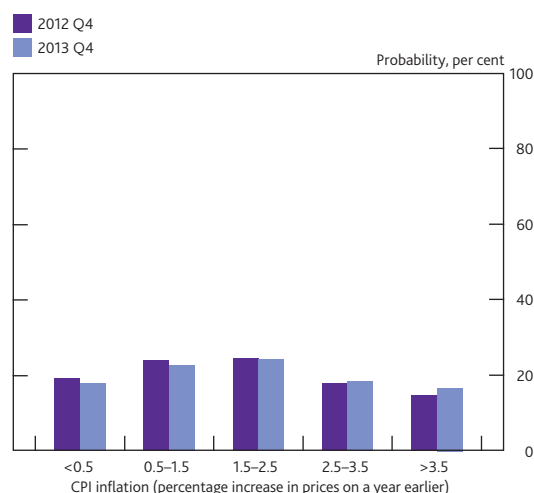
**Chart 5.10** Projected probabilities of CPI inflation outturns in 2012 Q4 (central 90% of the distribution)<sup>(a)</sup>



(a) Charts 5.9 and 5.10 represent cross-sections of the CPI inflation fan chart in 2011 Q4 and 2012 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 2011 Q4 and 2012 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 August 2010 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  $\pm 0.05$  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 5.11** Frequency distribution of CPI inflation based on market interest rate expectations and £200 billion asset purchases<sup>(a)</sup>



(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.

factor determining the margin of spare capacity in the economy, and therefore the downward pressure that exerts on inflation. But the outlook for inflation will also depend on the degree to which productivity recovers, on the sensitivity of wages and prices to the slack in the economy, and on the extent to which inflation expectations remain anchored, despite a prolonged period of above-target inflation.

### By how much will net trade support growth?

The depreciation of sterling since mid-2007, together with a continued global recovery, should provide a boost to exports throughout the forecast period. The level of sterling should also encourage some substitution away from imports towards domestically produced goods and services. Together, those effects should support some rebalancing of the UK economy away from public and private consumption and towards net trade.

So far, however, the support to growth from net trade has been smaller than expected, reflecting both weakness in the United Kingdom's share of world exports, and also resilience in import growth. The lower exchange rate does seem to have boosted UK goods exports (Section 2), but the share of world services exports appears to have declined. Exports of services are more difficult to measure than those of goods, and so these data need to be interpreted with care. But it is possible that they reflect a shift in global demand away from some types of services — for example the provision of financial services — in which the United Kingdom has tended to specialise. In that case, the unexpected weakness of services exports may prove persistent.

The magnitude of the boost from net trade will also depend on the strength of the global recovery. World demand has continued to recover, with robust growth in China and many other emerging economies, and a healthy rate of expansion in Germany and some of its neighbouring countries. But risks around the strength of global growth remain, including the fragility of the recovery in the United States, and concerns over fiscal sustainability in some European countries.

Overall, the Committee judges that although some of the recent surprising weakness in net trade is likely to persist, net trade should provide support to growth throughout the forecast period, moving the current account towards balance.

### To what extent will a fall back in private sector saving offset the fiscal tightening?

The recession was associated with a large rise in private sector financial saving. That reflected both a significant increase in the household saving rate, and also substantial corporate sector surpluses, as businesses cut back their spending on investment and inventories. Total private sector saving has fallen back somewhat during the early part of the recovery, as some of the increase in household saving has been reversed.

## 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 November decision, the path implied by forward market interest rates was for Bank Rate to remain at 0.5% until 2011 Q2. Bank Rate was assumed to rise thereafter, with the path 0.5 percentage points lower, on average, over the remainder of the forecast period than assumed in the *August Report*.

**Table 1** Conditioning path for Bank Rate implied by forward market interest rates<sup>(a)</sup>

| Per cent | 2010              | 2011 |     |     |     | 2012 |     |     |     | 2013 |     |     |     |
|----------|-------------------|------|-----|-----|-----|------|-----|-----|-----|------|-----|-----|-----|
|          | Q4 <sup>(b)</sup> | Q1   | Q2  | Q3  | Q4  | Q1   | Q2  | Q3  | Q4  | Q1   | Q2  | Q3  | Q4  |
| Nov.     | 0.5               | 0.5  | 0.5 | 0.6 | 0.7 | 0.8  | 0.9 | 1.1 | 1.2 | 1.4  | 1.6 | 1.7 | 1.9 |
| Aug.     | 0.5               | 0.6  | 0.7 | 0.8 | 1.0 | 1.2  | 1.4 | 1.6 | 1.9 | 2.1  | 2.2 | 2.4 |     |

(a) The data are fifteen working day averages of one-day forward rates to 3 November and 4 August 2010 respectively. The curves are based on overnight index swap (OIS) rates.

(b) November figure for 2010 Q4 is an average of realised spot rates to 3 November, and forward rates thereafter.

The November 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 August projections.

The starting point for sterling's effective exchange rate index (ERI) in the MPC's projections was 79.5, the average for the fifteen working days to 3 November. That was 2.7% below the

starting point for the August projections. Under the MPC's usual convention,<sup>(1)</sup> the exchange rate is assumed to be broadly unchanged in 2012 Q4, and is lower throughout the forecast period than assumed in August.

The starting point for UK equity prices in the MPC's projections was 2956 — the average of the FTSE All-Share for the fifteen working days to 3 November. That was 8.4% above the starting point for the August 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 around 4% higher (in US dollar terms) than at the time of the *August Report*. Wholesale gas futures prices were around 1% higher over the forecast period. There is considerable uncertainty about the scale and pace of the pass-through of changes in wholesale energy prices to the prices of gas and electricity faced by households and companies. But following the rise in domestic gas prices already announced by one major supplier, together with an assumption that other suppliers will announce price increases in due course, the November projections are conditioned on a benchmark assumption of around a 10% rise in domestic gas prices in the coming months. In contrast, the August projections were conditioned on a 5% rise in gas prices, although they incorporated a risk of a somewhat larger rise.

(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.

But the strength of domestic demand growth over the forecast period will depend on the extent to which a further decline in private sector saving offsets the reduction in demand associated with the fiscal consolidation.

The Committee's central judgement is that private sector financial saving is likely to fall further over the forecast period, enabling continued growth in final domestic demand even as fiscal policy tightens. The corporate sector financial surplus may fall back somewhat, as improving business confidence and a gradual improvement in credit conditions fuel a recovery in business investment. And the household saving rate is likely to remain below its peak reached during the recession, in part due to the substantial stimulus from monetary policy. Together with an increase in real income growth as the recovery continues, that is likely to mean that consumption continues to recover gradually, with growth picking up to around its historical average rate by the latter part of the forecast period.

There are some upside risks to the path of private domestic demand. It is likely that some of the rise in household saving during the recession reflected increased uncertainty about future incomes. Much of that uncertainty may dissipate as the recovery continues, so that consumption grows more rapidly. And it is possible that business investment could also recover more strongly, for example as companies reinstate projects that were put on hold during the downturn.

Overall, however, the Committee judges that the risks around the most likely path of private domestic demand are skewed significantly to the downside. Continued balance sheet strengthening in the financial sector may mean that credit conditions are slower to improve, restraining borrowing and slowing the recoveries in investment and consumption. Household spending may weaken as some households adjust to the implications for their future incomes of the fiscal consolidation. And there may be greater downward pressure on consumption over the coming years if households revise more sharply upward the amount they wish to save, for example because of concerns about levels of debt, future credit availability, or future pension provision.

### **How much downward pressure will the low level of demand exert on inflation?**

Output is likely to remain some way below a continuation of its pre-recession trend throughout the forecast period. How much downward pressure that exerts on inflation will depend on the evolution of spare capacity, both within companies and in the labour market, and on the sensitivity of costs and prices to any persistent margin of economic slack.

### **How much spare capacity is there within companies?**

Employment fell during the recession, but by much less than output. That has left productivity far below a continuation of its pre-recession trajectory, and suggests that many companies are currently operating with significant spare capacity.

But some other indicators — for example, recent increases in employment and survey measures of spare capacity — point to a more limited degree of slack within companies. Those survey responses may reflect some companies only reporting their spare capacity that is immediately operable: during the recession, they may have temporarily suspended some capacity, for example through the mothballing of some plant and equipment, or by cutting the number of hours worked by some staff, in order to reduce overall costs. But it is also possible that the recession was associated with a period of slower growth in underlying productivity, and so weaker growth in the overall potential supply capacity of the economy (Section 3).

The Committee's central judgement is that some of the reduction in the supply capacity of the economy, relative to its pre-recession trend, is likely to prove persistent. Nonetheless,

the Committee judges that substantial spare capacity within companies remains, including some capacity that has been temporarily suspended, but which could be brought back into use as demand strengthens. That would mean increased demand and output could be met through a recovery in productivity, with only limited growth in employment, and without significant upward pressure on prices.

There are significant uncertainties around the supply capacity of the economy, however, and so around the degree of spare capacity available to businesses. And if demand remains weak, there is a risk that there could be a larger reduction in the economy's supply capacity, relative to its pre-recession trend. That could occur if businesses eventually decide they need to reduce their scale of operations permanently, and scrap plant or capital equipment. Or they could cut employment significantly further. That could adversely affect future labour supply, if some people lose, or are unable to acquire, the skills sought by employers.

### How will wages evolve?

Wages have grown more weakly than prices over most of the past two years, as companies have adjusted to increases in other costs, such as higher costs of imports; as productivity has fallen; and as unemployment has risen. A key determinant of the outlook for inflation in the medium term will be the extent to which wage growth remains subdued as the recovery proceeds.

The Committee's central judgement is that earnings growth is likely to pick up gradually over the forecast period as demand recovers, some businesses bring capacity back into use and increase the hours worked by their staff, and productivity revives. But wage growth is nonetheless likely to remain below its pre-crisis average rate in view of the likelihood of persistent slack in the labour market.

There are, however, risks to inflation in both directions from the evolution of wage growth. To the downside, wages may prove much more sensitive to the degree of labour market slack. In that case, earnings growth may remain very weak even as productivity recovers, resulting in greater downward pressure on inflation in the medium term.

But the downside risks to inflation stemming from spare capacity in the labour market may be smaller if the recent subdued growth in earnings largely reflected temporary weakness in productivity growth, rather than higher unemployment. In that case, wage growth could recover more rapidly as productivity rebounds, even in the face of persistent labour market slack.

And there may also be upside risks to inflation associated with the future evolution of real wages. Companies' profit margins may still be below sustainable levels, following past increases

in non-wage costs and the period of low productivity. In that case, a further sustained period of elevated price inflation, relative to nominal wage growth, might be needed to restore those margins. And that adjustment would need to be all the greater if productivity remained weak.

### **Will commodity prices increase further, and will inflation expectations rise?**

Inflation has been highly volatile over the past three years, in part reflecting movements in energy prices, the sterling exchange rate and VAT, but has been above the 2% target for all but six months of that period. And it appears likely to remain above the target throughout 2011, as the forthcoming rise in VAT takes effect, and as businesses rebuild profit margins and pass on increases in import prices.

In addition to those factors adding to inflation in the near term, there is a risk that commodity prices will continue to rise. That would cause further increases in companies' costs, and lead to higher inflation over the forecast period. Commodity price rises might follow from a continued recovery in the global economy, and in particular from further robust expansion in emerging economies, where production tends to be relatively commodity-intensive.

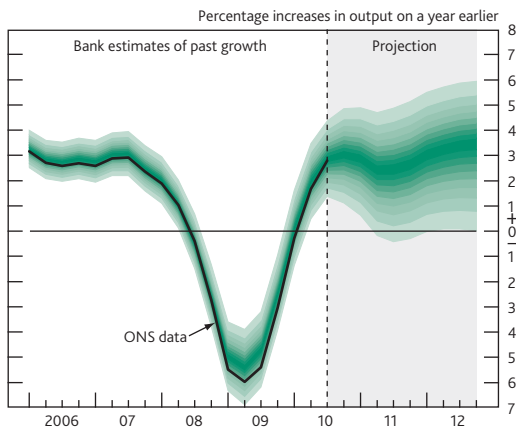
That would also exacerbate the risk that the prolonged period of above-target inflation might cause companies' and households' expectations of future inflation to increase. That could feed into price and wage-setting decisions, offsetting the downward pressure on prices from spare capacity.

## **5.3 Summary and the policy decision**

Output is continuing to recover from the deep recession of 2008–09 (see the box on page 48). But the strength of the recovery in the medium term will depend on the extent to which private sector net saving falls back as the fiscal consolidation proceeds, and on the boost to net trade from the global recovery and the past depreciation of sterling. The range of views among Committee members over how much those forces will support demand is wider than usual. The Committee's best collective judgement is that, conditioned on market interest rates, four-quarter growth is a little more likely to be above its historical average rate than below it for much of the forecast period. Even so, the large fall in output during the recession means that some spare capacity is likely to persist over the forecast period.

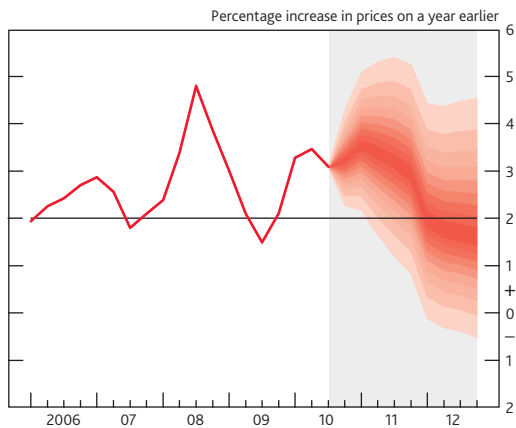
CPI inflation is likely to remain above the target for a further period, given the forthcoming rise in VAT and increases in import prices. Further ahead, inflation is likely to fall back. But the extent of that fall will depend on the evolution of productivity growth, on the sensitivity of wages to any persistent slack in the labour market, on the evolution of global commodity prices, and on the degree to which inflation

**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.

expectations remain anchored. There is a wider than usual range of views among Committee members about the influence of those forces, and therefore the outlook for inflation. The Committee's best collective judgement is that, conditioned on market interest rates, the chances of inflation being either above or below the target by the end of the forecast period are roughly equal.

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%. There is little difference between projections conditioned on constant rates or market interest rates, reflecting market participants' expectation that interest rates will remain low for some time.

In evaluating the outlook for growth, the Committee will focus on: the evolution of private sector and external financial balances, and the forces that are driving them; the impact of the fiscal consolidation on corporate and household spending; developments in financial markets and the banking sector, including the growth of money and credit; and the pace and composition of the global recovery.

In monitoring those factors likely to affect inflation, the Committee will, in addition, focus on: evidence regarding the evolution of productivity and supply, and the associated margin of spare capacity in the economy; the response of earnings and prices to that spare capacity; the path of commodity and energy prices; and measures of inflation expectations.

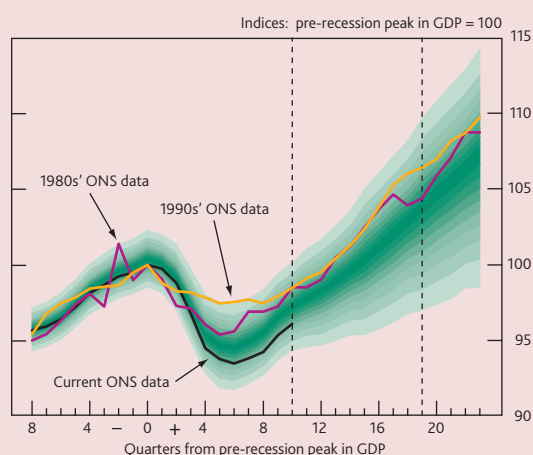
At its November meeting, the Committee judged that the recovery was likely to continue. The outlook for inflation in the near term was higher than previously expected, in part reflecting higher import prices. But inflation was still likely to fall back in the medium term, reflecting the continuing downward pressure from the persistent margin of spare capacity. In the light of that outlook, the Committee judged that maintaining Bank Rate at 0.5% and maintaining the stock of asset purchases financed by the issuance of central bank reserves at £200 billion was appropriate to meet the 2% CPI inflation target over the medium term. But the prospects for inflation remained highly uncertain and the Committee stood ready to respond in either direction as the balance of risks evolved.

## Output in previous recoveries

Following sharp falls in 2008 H2 and 2009 H1, 2010 Q3 saw the fourth consecutive quarter of positive output growth. This box compares the current recovery and the MPC's projection for GDP with the recoveries from the previous two recessions.

Output is estimated to have increased by 2.8% over the first year of the current recovery, which is somewhat faster growth than during the first year of both the 1980s' and 1990s' recoveries (Chart A). But the Committee judges that the pace of growth in the second and third years of this recovery is likely to be a little slower than in those previous recoveries.

**Chart A** Projection of the level of GDP based on market interest rate expectations and £200 billion asset purchases and comparison with previous recoveries(a)(b)(c)



- (a) Chained-volume measure at market prices.  
 (b) See footnote to Chart 5.5 for further details of what the fan chart represents.  
 (c) The pre-recession peak in GDP is defined as the final quarter before the start of the recession estimated using the latest ONS data. Recessions are defined as at least two consecutive quarters of falling output (at constant market prices). And the recoveries are assumed to begin in the quarter that follows the trough in output.

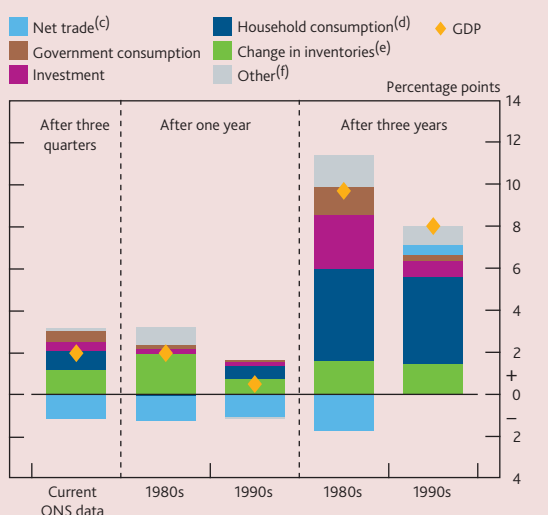
The fall in output in this recession was larger than those in previous recessions, and it is likely that output will take longer to return to its pre-recession level.<sup>(1)</sup> The current vintage of data show that output remained below its pre-recession level for around three years following the 1980s and 1990s recessions, although initial output estimates had suggested that those recessions had been deeper. The MPC judges that the probability of output being back to its pre-recession peak by the same stage in this cycle — that is, by mid-2011 — is around a third. Indeed, the Committee's fan chart implies that there is a small probability that output will not even have reached its pre-recession peak by the three-year forecast horizon. But the range of possible outcomes is large: there is a similar probability that output will have grown sufficiently strongly to return it to a level consistent with its pre-recession trend.

## The expenditure mix of past recoveries

There are some common trends in the expenditure components of demand in UK recoveries. Stockbuilding tends

to play an important role in the first year as the pace of de-stocking eases (Chart B). And inventories have accounted for around half of the increase in output in the first three quarters of this recovery.<sup>(2)</sup> But beyond the first year in the past two recoveries, once stocks had reached desired levels, stockbuilding added less to growth and it is unlikely to play a significant role later in this recovery.

**Chart B** Contributions of expenditure components to changes in GDP in recoveries(a)(b)



- (a) Chained-volume measures at market prices.  
 (b) Recessions and recoveries are defined as in Chart A.  
 (c) Goods and services, excluding the estimated impact of missing trader intra-community fraud.  
 (d) Includes non-profit institutions serving households.  
 (e) Excludes the alignment adjustment.  
 (f) 'Other' includes the alignment adjustment, the statistical discrepancy and chain-linking errors.

Consumption and investment accounted for the majority of growth in the second and third years of the 1980s' and 1990s' recoveries. Net trade contributed to the latter part of the 1990s' recovery, but it was a drag on growth in the 1980s' episode following the appreciation of sterling during that recession. Government spending provided some support to those recoveries, particularly in the 1980s.

The circumstances surrounding recessions and recoveries are often different, so it is difficult to draw direct comparisons from past experience for the current episode. For example, the Committee judges that, because of the depreciation of sterling prior to this recession, net trade is likely to make a larger contribution in the second and third years of this recovery than in past recoveries.

- (1) Comparisons to the pre-recession peak in output in the 1980s recession are sensitive to how that peak is defined. This box defines the pre-recession peak as 1979 Q4, the final quarter before the start of the recession. But the level of output was higher in 1979 Q2, and using that definition the fall in output in the current recession looks more similar to the 1980s.  
 (2) An expenditure breakdown is not yet available for 2010 Q3.

## 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 October. On average, CPI inflation was expected to be above the 2% target in 2011 Q4, but to fall back below the target over the following year (Table 1). Compared with three months ago, the distribution of central views about inflation at the one-year horizon has narrowed (Chart A), but more forecasters now expect inflation to be above the target.

**Table 1** Averages of other forecasters' central projections<sup>(a)</sup>

|                              | 2011 Q4 | 2012 Q4 | 2013 Q4 |
|------------------------------|---------|---------|---------|
| CPI inflation <sup>(b)</sup> | 2.5     | 1.8     | 1.9     |
| GDP growth <sup>(c)</sup>    | 1.8     | 2.3     | 2.5     |
| Bank Rate (per cent)         | 0.9     | 2.0     | 2.9     |
| Sterling ERI <sup>(d)</sup>  | 81.9    | 82.4    | 83.0    |

Source: Projections of outside forecasters as of 21 October 2010.

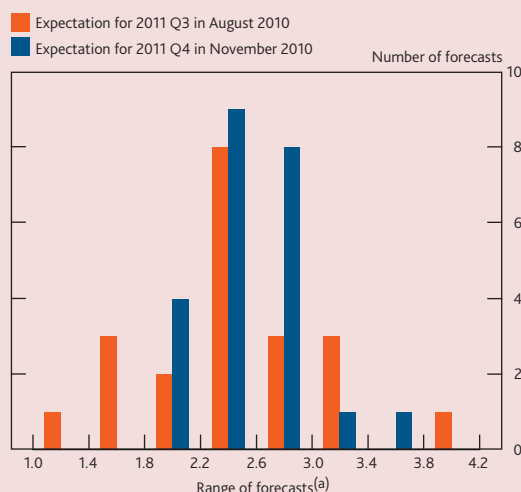
(a) For 2011 Q4, there were 23 forecasts for CPI inflation, GDP growth and Bank Rate and 17 for the sterling ERI. For 2012 Q4, there were 21 forecasts for CPI inflation, 20 for GDP growth and Bank Rate and 15 for the sterling ERI. For 2013 Q4, there were 19 forecasts for CPI inflation, 18 for GDP growth and Bank Rate and 15 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



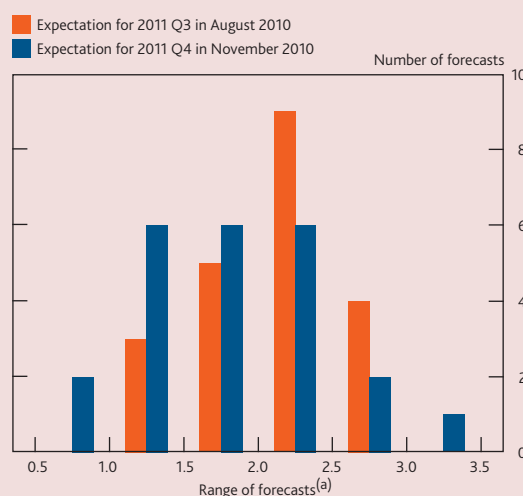
Sources: Projections of 21 outside forecasters as of 22 July 2010 and 23 outside forecasters as of 21 October 2010.

(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, external forecasters expected four-quarter GDP growth to be 1.8% in 2011 Q4. Compared with three months ago, the average expectation is 0.2 percentage points lower, and the distribution of central projections has broadened (Chart B). GDP growth was expected to be 2.5% at the three-year horizon, unchanged from three months ago.

A majority of forecasters expected Bank Rate to have risen by 2011 Q4 and to increase further by 2013 Q4. But the average

**Chart B** Distribution of GDP growth central projections one year ahead



Sources: Projections of 21 outside forecasters as of 22 July 2010 and 23 outside forecasters as of 21 October 2010.

(a) A projection that is on the boundary of these ranges is classified in the higher bucket. For example, a 2.0% projection is included within the 2.0% to 2.5% bucket.

expected level of Bank Rate was lower than three months ago. On average, the sterling ERI was projected to appreciate a little.

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 thought that there was around a 75% chance that inflation would be above the target at the one-year horizon, a higher probability than three months ago. Further out, forecasters thought there was a slightly greater probability that inflation would be below the target than above it. Consistent with the downward revision to their central projection, on average, forecasters attached a 40% chance to GDP growth being above 2% at the one-year horizon, compared with around 50% three months ago.

**Table 2** Other forecasters' probability distributions for CPI inflation and GDP growth<sup>(a)</sup>

|                       |        |      |        |        |        |        |     |
|-----------------------|--------|------|--------|--------|--------|--------|-----|
| <b>CPI inflation</b>  |        |      |        |        |        |        |     |
| Probability, per cent | Range: |      |        |        |        |        |     |
|                       | <0%    | 0–1% | 1–1.5% | 1.5–2% | 2–2.5% | 2.5–3% | >3% |
| 2011 Q4               | 1      | 3    | 7      | 15     | 25     | 31     | 19  |
| 2012 Q4               | 3      | 10   | 17     | 26     | 24     | 13     | 7   |
| 2013 Q4               | 3      | 9    | 15     | 26     | 25     | 13     | 8   |

|                       |        |       |      |      |      |     |  |
|-----------------------|--------|-------|------|------|------|-----|--|
| <b>GDP growth</b>     |        |       |      |      |      |     |  |
| Probability, per cent | Range: |       |      |      |      |     |  |
|                       | <-1%   | -1–0% | 0–1% | 1–2% | 2–3% | >3% |  |
| 2011 Q4               | 3      | 7     | 19   | 33   | 29   | 11  |  |
| 2012 Q4               | 3      | 6     | 14   | 27   | 30   | 19  |  |
| 2013 Q4               | 3      | 6     | 11   | 26   | 31   | 23  |  |

Source: Projections of outside forecasters as of 21 October 2010.

(a) For 2011 Q4, 23 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 2012 Q4, 21 forecasters provided assessments for CPI and 20 forecasters provided assessments for GDP; for 2013 Q4, 19 forecasters provided assessments for CPI and 18 forecasters provided assessments for GDP. The table shows the average probabilities across respondents. Rows may not sum to 100 due to rounding.

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**Text of Bank of England press notice of 9 September 2010****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 September.

**Text of Bank of England press notice of 7 October 2010****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 October.

**Text of Bank of England press notice of 4 November 2010****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 November.

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

# Glossary and other information

## Glossary of selected data and instruments

**AWE** – average weekly earnings.

**CDS** – credit default swap.

**CPI** – consumer prices index.

**CPI inflation** – inflation measured by the consumer prices index.

**CPIY** – consumer prices index excluding indirect taxes.

**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.

**RPI** – retail prices index.

**RPI inflation** – inflation measured by the retail prices index.

## Abbreviations

**BCC** – British Chambers of Commerce.

**BHPS** – British Household Panel Survey.

**CBI** – Confederation of British Industry.

**CFO** – chief financial officer.

**CIPS** – Chartered Institute of Purchasing and Supply.

**EU** – European Union.

**FISIM** – Financial Intermediation Services Indirectly Measured.

**FTSE** – Financial Times Stock Exchange.

**GfK** – Gesellschaft für Konsumforschung, Great Britain Ltd.

**HBF** – Home Builders Federation.

**IMF** – International Monetary Fund.

**LTV** – loan to value.

**M6** – Canada, France, Germany, Italy, Japan and the United States.

**MPC** – Monetary Policy Committee.

**MTIC** – missing trader intra-community.

**NBER** – National Bureau of Economic Research.

**OFCs** – other financial corporations.

**ONS** – Office for National Statistics.

**PNFCs** – private non-financial corporations.

**PwC** – PricewaterhouseCoopers.

**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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