

# Inflation Report

May 2010



BANK OF ENGLAND







BANK OF ENGLAND

# Inflation Report

May 2010

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.

## **The Monetary Policy Committee:**

Mervyn King, Governor

Charles Bean, Deputy Governor responsible for monetary policy

Paul Tucker, Deputy Governor responsible for financial stability

Kate Barker

Spencer Dale

Paul Fisher

David Miles

Adam Posen

Andrew Sentance

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).



## Contents

|  |           |
|--|-----------|
| <b>Overview</b>  | <b>5</b>  |
| <hr/>  |           |
| <b>1 Money and asset prices</b>                            | <b>9</b>  |
| 1.1 Financial markets                                      | 11        |
| 1.2 The banking sector                                     | 13        |
| 1.3 Corporate credit conditions                            | 15        |
| 1.4 Household credit conditions                            | 16        |
| 1.5 Money  | 17        |
| Box Monetary policy since the February Report              | 10        |
| Box The impact of asset purchases on the gilt market       | 12        |
| <hr/>  |           |
| <b>2 Demand</b>  | <b>19</b> |
| 2.1 Domestic demand  | 19        |
| 2.2 The international economy                              | 23        |
| Box Recent developments in UK imports                      | 25        |
| <hr/>  |           |
| <b>3 Output and supply</b>                                 | <b>26</b> |
| 3.1 Output   | 26        |
| 3.2 Labour demand  | 28        |
| 3.3 Supply   | 29        |
| 3.4 Balance between output and supply                      | 31        |
| Box Temporary factors affecting recent outturns for GDP    | 27        |
| <hr/>  |           |
| <b>4 Costs and prices</b>                                  | <b>32</b> |
| 4.1 Consumer prices  | 32        |
| 4.2 Energy and import prices                               | 33        |
| 4.3 Companies' pricing decisions                           | 34        |
| 4.4 Labour costs   | 35        |
| 4.5 Inflation expectations                                 | 36        |
| Box Recent movements in households' inflation expectations | 37        |
| <hr/>  |           |
| <b>5 Prospects for inflation</b>                           | <b>38</b> |
| 5.1 The projections for demand and inflation               | 38        |
| 5.2 Key uncertainties                                      | 41        |
| 5.3 Summary and the policy decision                        | 47        |
| Box Financial and energy market assumptions                | 43        |
| Box Other forecasters' expectations                        | 49        |
| <hr/>  |           |
| Index of charts and tables                                 | 50        |
| Press Notices  | 52        |
| Glossary and other information                             | 53        |



# Overview

---

The United Kingdom continued to emerge from recession. World demand picked up further, although the pattern of recovery was uneven. The level of activity, both at home and in most other advanced economies, remained well below pre-crisis levels. And heightened concerns about the fiscal position in some countries led to renewed fragility in financial markets. A pickup in UK GDP growth is likely, underpinned by the considerable monetary stimulus, a projected global recovery and the past depreciation of sterling. But the pace of expansion is likely to be tempered by the need for fiscal consolidation and for further balance sheet repair by financial institutions. Both the strength of the recovery and the impact of the financial crisis on the supply potential of the economy remain highly uncertain. Even with relatively robust growth, a degree of spare capacity would be likely to persist over the forecast period.

CPI inflation remained well above the 2% target, raised by the restoration of the standard rate of VAT to 17.5%, higher oil prices and the past depreciation of sterling. As these temporary effects on inflation wane, downward pressure from the persistent margin of spare capacity is likely to cause inflation to fall below the target for much of the forecast period. But the pace and extent of that moderation in inflation are highly uncertain. Under the assumptions that Bank Rate moves in line with market interest rates and the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion, inflation is somewhat more likely to be below target than above it for much of the forecast period, although those risks are broadly balanced by the end.

## Financial and credit markets

Since the February Report, the MPC has held Bank Rate at 0.5% and maintained the size of the asset purchase programme at £200 billion. Market participants revised down their expectations of the near-term path of Bank Rate. UK bond yields and equity prices were volatile but little changed over the period as a whole, while sterling depreciated. Government bond yields in a number of countries rose sharply amid heightened concerns about the sustainability of fiscal positions, but fell back following the announcement of the EU/IMF/ECB support package on 10 May. Broad money growth picked up.

UK banks continued to repair their balance sheets, although significant challenges remain in raising capital and funding. Credit conditions eased a little, but remained tight. The stock of bank lending to companies contracted further, only partially offset by increased funds raised in capital markets. Residential and commercial property prices rose.

## Demand

The global economic recovery continued and world trade rebounded further. Even so, activity in most advanced

economies remained well below pre-crisis levels, and the pattern of recovery was uneven; output growth in the euro area, the United Kingdom's most important trading partner, was lower than in the United States and much of Asia. Financial market concerns about the prospects for the fiscal consolidations required in a number of countries intensified, increasing the risk of renewed financial market instability and a further drag on demand.

Data in the second half of 2009 pointed to a widening in the United Kingdom's trade deficit, driven by rapid growth of imports. Exports also grew robustly over that period. The substantial past depreciation of sterling should encourage some switching of demand towards UK-produced goods and services, although the pace and extent of that expenditure switching is uncertain.

Households cut their spending substantially during the downturn as prospects for future take-home pay deteriorated and the desire to strengthen their balance sheets increased. In contrast, consumption spending grew in 2009 Q4. That may partly have been in anticipation of the VAT reversal and so may be followed by weaker spending in subsequent quarters. But it is also possible that the adjustment in households' spending may be nearing an end, heralding stronger consumption growth in the future.

Businesses continued to rein back spending in the face of weak demand, uncertain growth prospects and constraints on working capital. Capital spending was cut back further in 2009 Q4 and inventories were run down. To the extent that businesses have postponed investment decisions until the outlook for demand becomes clearer, then investment could recover strongly as uncertainty recedes. But survey indicators suggest that investment is likely to remain subdued in the near term.

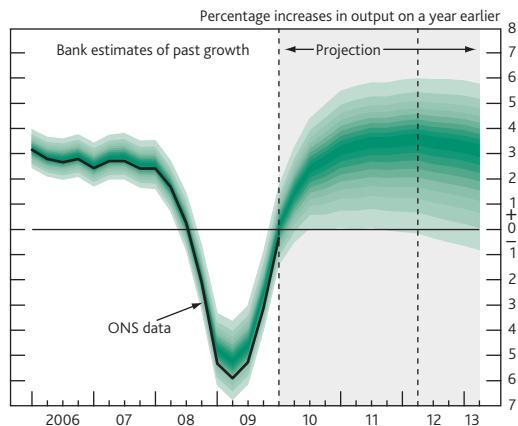
A significant fiscal consolidation is necessary in the medium term. The Committee's projections are conditioned on the plans set out in the March 2010 *Budget*. Nevertheless the eventual nature and pace of the consolidation are uncertain and will need to be sensitive to sustaining financial market confidence. A more detailed and demanding path of fiscal consolidation than set out in the March 2010 *Budget* may therefore be needed in order to avoid unnecessary increases in the cost of issuing public debt.

## The outlook for GDP growth

GDP was provisionally estimated to have risen by 0.2% in 2010 Q1. The slowing in growth in the first quarter probably reflected temporary factors. Business surveys pointed to faster output growth in 2010 Q2.

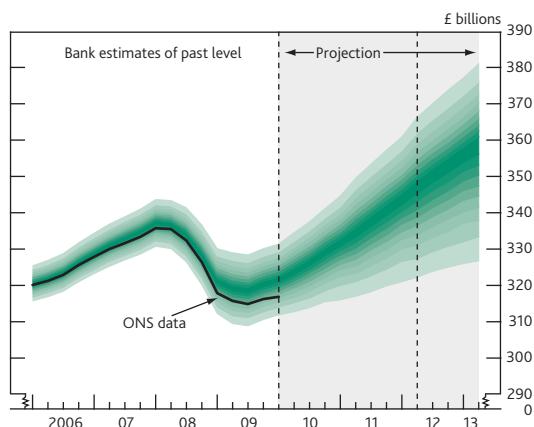
**Chart 1** shows the Committee's best collective judgement for four-quarter GDP growth, assuming that Bank Rate follows a path implied by market interest rates and the stock of purchased assets financed by the issuance of central bank reserves remains at £200 billion throughout the forecast period. The considerable stimulus stemming from the highly accommodative monetary

### 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 the identically coloured bands sums to 10%. The distribution of that 10% between the bands above and below 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 1, 2 and 3. The bands widen as the time horizon is extended, indicating the increasing uncertainty about outcomes. 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.

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



Chained-volume measure. 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.

stance, together with a continued expansion of world demand and the past depreciation of sterling should underpin the emerging recovery in economic activity. But the pace of that recovery will be dampened by several factors: the need for a substantial fiscal tightening; further strengthening in the balance sheet of the UK banking sector; and the private sector's desire for higher savings in an environment of increased uncertainty.

The strength of the recovery remains uncertain. It is difficult to assess with precision the impact of the unprecedented loosening in monetary policy. The scale of the improvement in net trade will depend on the pace of expansion in global demand, especially in the euro area, and on the extent of expenditure switching prompted by sterling's past depreciation. There are also substantial uncertainties about the force of the factors likely to restrain growth. They include the nature and pace of the prospective fiscal consolidation, the degree to which constraints on bank lending will suppress spending and the persistence of higher levels of private sector saving.

As in their February projections, the Committee judges that the recovery in economic activity is likely to gather strength over the next year or so. But the downside risks to growth in the near term have increased somewhat, reflecting in particular heightened market concerns about the prospects for fiscal consolidation in a range of countries. The substantial falls in demand and output following the financial crisis means that the level of economic activity is very unlikely to return to its pre-crisis trend for a considerable period. Chart 2 shows the Committee's best collective judgement for the level of GDP corresponding to the distribution of GDP growth shown in Chart 1. The persistent weakness in the level of output reflects both the substantial impact of the financial crisis on the supply capacity of the economy and the sustained weakness of demand relative to that capacity.

### Costs and prices

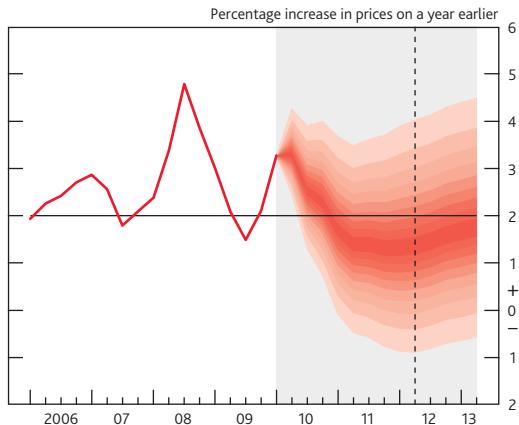
CPI inflation was 3.4% in March, well above the 2% inflation target. Inflation was raised by the temporary effects stemming from the restoration of the standard rate of VAT to 17.5%, higher oil prices and the past depreciation of sterling. Measures of households' medium-term inflation expectations were consistent with inflation being around the target.

Surveys continued to suggest a significant margin of spare capacity within companies. Earnings growth remained low, contributing to the resilience of employment relative to the falls in output. Despite that resilience, the substantial increase in unemployment during the downturn pointed to a sizable degree of slack in the labour market.

### The outlook for inflation

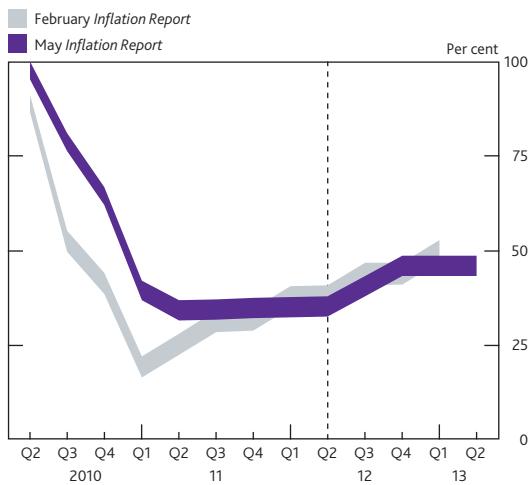
Chart 3 shows the Committee's best collective judgement of the outlook for CPI inflation, based on the same assumptions as

### 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 the identically coloured bands sums to 10%. The distribution of that 10% between the bands above and below the central projection varies according to the skew at each quarter, with the distribution given by the ratio of the width of the bands below the central projection to the bands above it. In Chart 3, the probabilities in the lower bands are very slightly smaller than those in the upper bands at Years 1, 2 and 3 reflecting an upward skew. The bands widen as the time horizon is extended, indicating the increasing uncertainty about outcomes. See the box on pages 48–49 of the May 2002 *Inflation Report* for a fuller description of the fan chart and what it represents. The dashed line is drawn at the two-year point.

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



The May and February swatches 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, with the width of the swathe at each point in time corresponding to the width of the band of the fan chart in which the target falls in that quarter. The bands in the fan chart illustrate the MPC's best collective judgement that inflation will fall within a given range. The swatches in Chart 4 show the probability within the entire band of the corresponding fan chart of inflation being close to target; the swatches should not therefore be interpreted as a confidence interval.

**Chart 1.** The near-term outlook is somewhat higher than in February and suggests that inflation is likely to remain above target for the rest of this year. As the temporary effects raising inflation wane, downward pressure from the persistent margin of spare capacity is likely to drag inflation below the target for much of the forecast period. Further out, this downward pressure is likely to fade as the recovery gradually takes hold.

The extent to which inflation will moderate is highly uncertain. Business costs and prices depend on the degree of spare capacity in the economy. That in turn will depend on the strength of the recovery and on the extent to which the downturn has impaired the supply potential of the economy. The profile for inflation will also depend on how sensitive prices are to a given degree of economic slack. In the near term, prices may be less sensitive if restrictions on the availability of working capital mean that companies focus on preserving short-term cash flows rather than gaining market share, or if changes companies have made to their operating processes in response to the fall in demand are not easily reversed. Further out, inflation may remain higher than otherwise if the current period of above-target inflation causes expectations of medium-term inflation to rise. The profile for inflation will also depend on the extent to which businesses need to adjust further to sterling's depreciation and on whether there are additional substantial movements in commodity prices.

There is a range of views among Committee members regarding the relative strength of these factors. **Chart 4** shows the probability of inflation being above the 2% target together with the corresponding probability implied by the February Report projections. On balance, the Committee judges that, conditioned on the monetary policy assumptions described above, inflation is somewhat more likely to be below target than above it for much of the forecast period, although those risks are broadly balanced by the end.

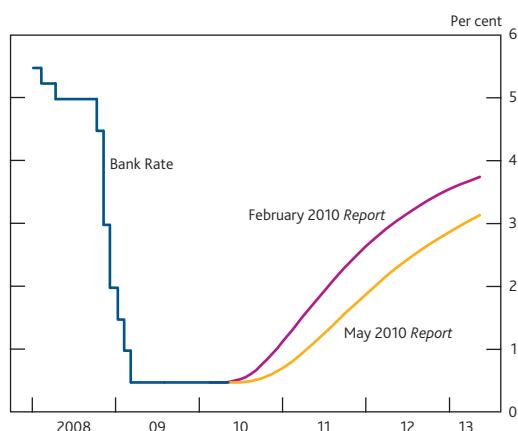
### The policy decision

At its May meeting, the Committee noted that the economic recovery was likely to gather pace, but heightened concerns about fiscal sustainability in some countries posed a risk. CPI inflation was likely to remain above target for the rest of this year. The downward pressure from the persistent margin of spare capacity was then likely to cause inflation to fall back to below the target, before gradually returning to around the target as the recovery proceeded. In the light of that outlook, the Committee judged that maintaining Bank Rate at 0.5% and maintaining the size of the programme 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.

# 1 Money and asset prices

Since the February Report, heightened concerns about the sustainability of fiscal positions in some countries have led to renewed fragility in financial markets. Government bond yields in a number of countries rose sharply, and there were marked movements in other international asset prices. Ten-year gilt yields were similar to their levels in February. The sterling exchange rate has depreciated slightly. Over the past year, UK banks have made some progress in strengthening their balance sheets, but considerable challenges remain. There have been further signs of a slight loosening in corporate credit conditions. Household credit conditions remained tight. Broad money growth has picked up from its trough, but remained weak.

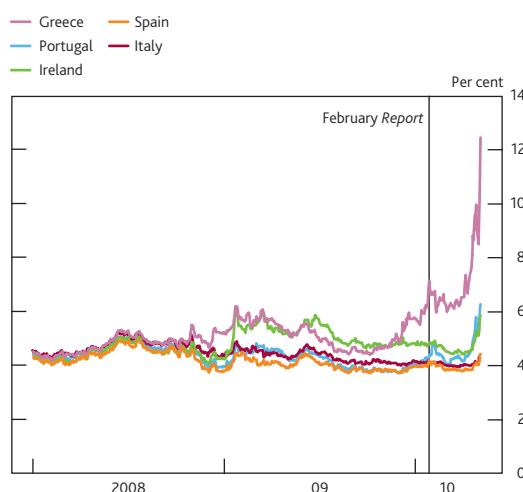
**Chart 1.1** Bank Rate and forward market interest rates<sup>(a)</sup>



Sources: Bank of England and Bloomberg.

(a) The February and May curves are estimated using overnight index swap (OIS) rates in the fifteen working days to 3 February 2010 and 7 May 2010 respectively.

**Chart 1.2** Selected euro-area ten-year government bond yields<sup>(a)</sup>



Source: Bloomberg.

(a) Yields to maturity on ten-year benchmark government bonds.

Since the February Report, the MPC has maintained Bank Rate at 0.5% and maintained the stock of asset purchases financed by the issuance of central bank reserves at £200 billion.<sup>(1)</sup> But market participants' short-term interest rate expectations, estimated by overnight index swap (OIS) rates, have fallen over the past three months (Chart 1.1).

Heightened concerns about the sustainability of fiscal positions in some countries led to renewed fragility in financial markets. The IMF and euro-area authorities agreed to provide financial support to Greece, after market participants' doubts about the viability of its fiscal plans resulted in a prohibitive increase in the cost of issuing public debt (Chart 1.2). A further package was agreed by the European Council and Member States in conjunction with the IMF and ECB, to stem the risk of contagion to other euro-area countries. Developments in a range of asset prices are examined in Section 1.1.

The extent to which a recovery in corporate and household spending will be constrained by the supply of bank lending continues to be a key uncertainty for the MPC (Section 5). Despite some progress in strengthening balance sheets, the banking sector remains fragile and vulnerable to further shocks (Section 1.2). There have been further signs of a slight loosening in corporate credit conditions (Section 1.3). Household credit conditions remained tight (Section 1.4). Section 1.5 discusses how banks' decisions have affected broad money growth.

(1) The reasons behind the MPC's decisions in March and April are discussed in the box on page 10.

## Monetary policy since the February Report

The MPC's projection for GDP growth in the *February 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 a gradual recovery in the level of economic activity. Under the same assumptions, the MPC judged that it was more likely than not that inflation would be below the target for much of the forecast period, but that the risks were broadly balanced around the target by the end.

There had been sizable changes in a range of financial asset prices over the course of the month preceding the MPC's meeting on 3–4 March. Yields on UK government bonds had risen and the sterling effective exchange rate had fallen by nearly 5%. Against the backdrop of market concerns about the UK fiscal position and of more generalised uncertainty among investors, that weakness might have reflected an increase in the risk premium attached to sterling-denominated assets.

The ONS had revised its estimates of the pattern of GDP growth over 2009, but had not materially changed its view of the level of activity at year end. The expenditure breakdown had suggested that a continuing turnaround in the stock cycle, together with public and private consumption, were the main factors supporting growth.

CPI inflation had increased to 3.5% in January, requiring the Governor to write an open letter to the Chancellor. That letter had identified three factors driving up the CPI measure of inflation temporarily. First, the restoration of the standard rate of VAT to 17.5% had raised prices relative to a year earlier. Second, over the past year, oil prices had increased by around 70%, pushing up petrol price inflation. And third, the effects of the sharp depreciation of sterling in 2007 and 2008 were continuing to feed through into consumer prices.

It was increasingly likely that CPI inflation would remain well above the target over the months ahead. Against that background, there was a risk that the public's expectations of inflation over the medium term might begin to rise. The Committee would keep under close review the extent to which these shocks to the price level were feeding through into inflation expectations.

Although different inferences could be drawn from recent data, all MPC members agreed that the monetary stance should be left unchanged. That would allow the MPC to continue to assess the effects of the cumulative loosening of monetary policy since September 2008, alongside emerging evidence on the upside and downside risks to inflation.

Data over the month running up to the MPC's meeting on 7–8 April showed that the global economic recovery had

continued, though it had remained geographically uneven. Activity had been most vigorous in emerging Asia and there had been robust near-term indicators of growth in the United States as well. The recovery appeared most fragile in the euro area. And there was a risk that the fiscal and competitiveness problems in Greece and some other countries would adversely affect overall euro-area activity, either as a consequence of trade or financial linkages. There was little evidence of a sustained pickup in domestic demand in other countries that might compensate for such weakness.

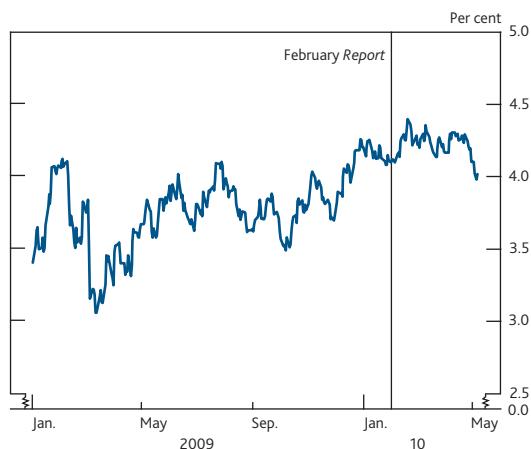
Looking through temporary factors, domestic activity data implied an underlying path for the level of output roughly in the centre of the *February Report* forecast distribution. But there remained areas of weakness. The level of business investment had dropped dramatically since the middle of 2008. And net trade had been puzzlingly weak.

All members agreed that events over the month had not been sufficiently significant to alter materially their views of the medium-term outlook for inflation and activity. For many members, the developments at home and abroad since February had helped to ease concerns about some of the downside risks to the near-term outlook. But some risks had been brought into sharper focus. For example, there were continuing financial market concerns over sovereign creditworthiness across a number of countries, which highlighted the potential for new shocks to set back the recovery.

There were also some upside risks to inflation. Oil and some other commodity prices had risen substantially since the *February Report*. And some measures of financial market participants' inflation expectations had drifted up. Given that a period of above-target inflation was in prospect at a time of exceptionally accommodative monetary policy, this was a source of concern to some members.

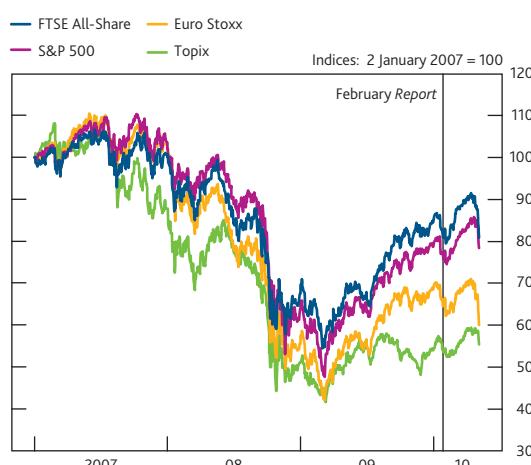
Looking ahead, there remained a number of factors restraining activity and inflation. These included the impairment of the banking sector, the need for fiscal consolidation in the United Kingdom and elsewhere and, despite some recovery in activity, the continuing degree of spare capacity in the economy. Offsetting these downside factors were the past depreciation of sterling and the exceptional degree of monetary stimulus. Overall, the Committee agreed that it was appropriate to maintain the current stimulatory stance of monetary policy.

At its meeting on 7 and 10 May, 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 1.3** Ten-year nominal spot gilt yield<sup>(a)</sup>

Sources: Bloomberg and Bank calculations.

(a) Zero-coupon yield.

**Chart 1.4** Sterling exchange rates**Chart 1.5** International equity prices<sup>(a)</sup>

Source: Thomson Reuters Datastream.

(a) In local currency terms.

## 1.1 Financial markets

### Gilts

On average, in the fifteen working days to 7 May, ten-year gilt yields were at a broadly similar level to the average in the fifteen working days in the run-up to the February Report (Chart 1.3). That was in contrast to developments in Greece and some euro-area countries, where government bond yields rose significantly (Chart 1.2). Indeed, gilt yields at most maturities fell in the run-up to 7 May, as financial market concerns over the sustainability of sovereign fiscal positions across a number of countries intensified. The recent decline in gilt yields may, in part, have been associated with lower expectations of the path of monetary policy.

The Bank's asset purchases are likely to have placed downward pressure on gilt yields since early 2009: evidence presented in the box on pages 12–13 suggests that yields are around 1 percentage point lower than if the Bank had not made those purchases of gilts. But other factors may be offsetting the downward pressure from the Bank's asset purchases. For example, market participants may have become more concerned over the past six months about the likely pace of fiscal consolidation in the United Kingdom, and hence the future supply of gilts (Section 2).

### Sterling

In the fifteen working days running up to the May Report, the sterling effective exchange rate index (ERI) was 2% lower than at the time of the February Report, reflecting a 6% depreciation against the dollar but a 1% appreciation against the euro. Sterling has been volatile in recent weeks, but, overall, the sterling ERI remains around 25% lower than in mid-2007 (Chart 1.4).

### Equities and corporate bonds

There have been significant movements in international equity and corporate bond prices since the February Report. Over much of the past three months, prices continued to rise, boosted by improved economic prospects and by the substantial degree of monetary stimulus, both in the United Kingdom and abroad. But prices fell more recently as concerns about sovereign fiscal positions have spilled over into those markets. The FTSE All-Share fell by 12% during the fifteen working days to 7 May, but was still 5% higher on average during that period than in the fifteen days prior to the February Report (Chart 1.5). Spreads on sterling-denominated investment-grade corporate bonds have risen by 0.3 percentage points over the fifteen working days to 7 May, but remained far below their early-2009 peaks (Chart 1.6).

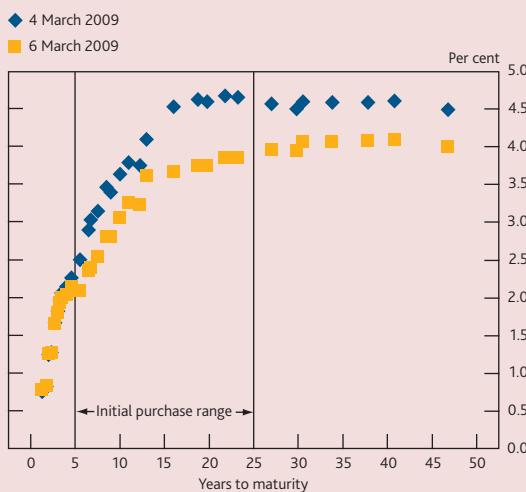
Liquidity in the sterling corporate bond market has improved over the past 18 months; the difference between corporate bond spreads and credit default swap (CDS) premia — an indicator of illiquidity premia — has fallen back significantly

## The impact of asset purchases on the gilt market

The Bank's asset purchases have been aimed at boosting nominal demand in order to keep inflation on track to meet the 2% target in the medium term. As discussed in the box on pages 16–17 of the May 2009 Report, such asset purchases should influence nominal spending through a number of channels. This box assesses their effectiveness at an early point in the transmission mechanism, by examining the impact on gilt yields.

Following the March 2009 MPC meeting, the Bank, through the Asset Purchase Facility, began to purchase assets financed by the issuance of central bank reserves. The majority of those purchases were of gilts, to a total of £198 billion by the end of January 2010.<sup>(1)</sup> One metric of the initial impact of that policy is the extent to which gilt yields reacted to news about asset purchases. For example, yields fell significantly after the March 2009 MPC decision, particularly at those maturities included in the Bank's initial purchase range of 5 to 25 years (**Chart A**).

**Chart A** Nominal gilt yields<sup>(a)</sup>



Source: Bloomberg.

(a) Yields to maturities shown are at the close of business the day before and the day after the decision at the 5 March 2009 MPC meeting to use the Asset Purchase Facility as a monetary policy tool for initial asset purchases of £75 billion.

### Factors affecting gilt yields

The Bank's asset purchases are likely to have affected gilt yields through a number of channels. First, the purchases could have led market participants to expect a lower or higher average path for Bank Rate over the life of a particular gilt. And that effect is likely to have varied between gilts at different points on the yield curve. The extent to which that channel has affected gilt yields can be estimated by changes in overnight index swap (OIS) rates.

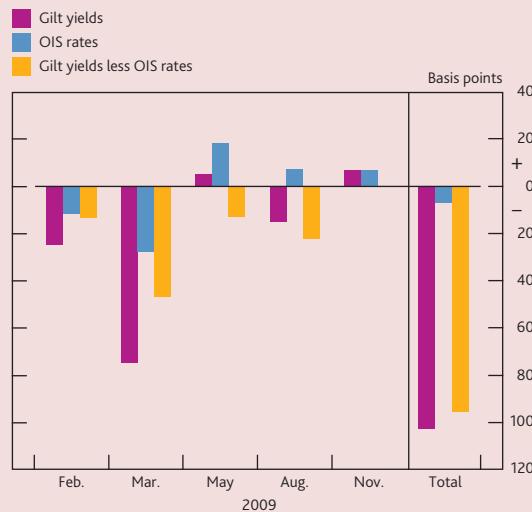
Second, to the extent that gilts and the money deposits created by the Bank's asset purchases are imperfect substitutes for each other, financial institutions that sold their gilts to the Bank will need then to rebalance their portfolios by using these money balances to buy financial assets, including other gilts. That process, and expectations thereof, could bear down on gilt yields. Movements in the spread between gilt yields and OIS rates may in part reflect this portfolio rebalancing channel.

Finally, regular gilt purchases by the Bank could have reduced the risk of investors being unable to sell on unwanted holdings of those particular gilts. It is difficult to measure that effect, but movements in bid-offer spreads — one indicator of any illiquidity premia in the gilt market — did not suggest that this channel played a significant role in reducing yields during the period that the Bank was making regular purchases.

### Assessing the impact on gilt yields

A range of additional factors are likely to have affected OIS rates and gilt-OIS spreads over the period since the Bank began to buy gilts. For example, on average, external forecasters surveyed by HM Treasury revised up their medium-term projections for public sector net borrowing, and hence the supply of gilts, between February and May 2009. That may have put upward pressure on gilt-OIS spreads.

**Chart B** Impact of asset purchase announcements on gilt yields and equivalent-maturity OIS rates<sup>(a)</sup>



Sources: Bloomberg and Bank calculations.

(a) The impact is measured by the change over two days in the average 5 to 25-year (zero coupon) spot rate. The event dates are the publication of the *Inflation Report* and the associated press conference on 11 February 2009, which was taken to suggest a policy of quantitative easing was imminent; the decision at the 5 March 2009 MPC meeting to use the Asset Purchase Facility as a monetary policy tool for initial asset purchases of £75 billion; and the subsequent announcements of extensions of planned purchases to £125 billion on 7 May, to £175 billion on 6 August and to £200 billion on 5 November 2009.

One way of isolating the impact of asset purchases is to focus on yield movements in those gilts included in the Bank's initial purchase range in the period immediately following asset

purchase announcements. The initial reaction on the day of the policy announcement and any follow-up reaction during the course of the next day are likely to mainly reflect that announcement effect. In total, that approach suggests that yields are around 1 percentage point lower than would otherwise have been the case, with the largest fall in yields occurring after the March MPC meeting (**Chart B**).<sup>(2)</sup> And, as almost all of the impact of asset purchases occurred via lower gilt-OIS spreads, most of the impact is likely to have reflected the portfolio rebalancing channel.<sup>(3)</sup>

These findings are broadly corroborated by other evidence. For example, the largest impact on gilt yields occurred after the March MPC statement, when market participants were less likely to have anticipated the scale of purchases announced at that meeting. And an IMF study gave a tentative assessment of a direct impact on longer-term gilt yields of the order of 40–100 basis points following that March decision.<sup>(4)</sup>

## Conclusion

In summary, asset purchases appear to be having a sizable downward effect on gilt yields. But gilts make up a relatively

small proportion of total assets held by the private sector. So, when assessing the overall impact of asset purchases, it is important to consider movements in other asset prices as well. Equity and corporate bond prices have increased significantly since early 2009. That is likely, in part, to reflect the exceptional monetary stimulus. It is difficult, however, to distinguish the role of asset purchases in driving these improvements from other factors, such as the general improvement in economic conditions. And the additional lags in the monetary transmission mechanism mean that it remains difficult to judge with any precision the ultimate impact of asset purchases on nominal demand, and therefore inflation.

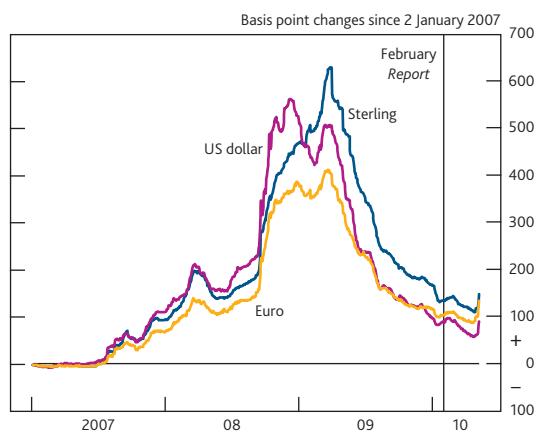
(1) For further details of the Bank's asset purchases, including those of corporate bonds and commercial paper, see [www.bankofengland.co.uk/publications/other/markets/apf/quarterlyreport.htm](http://www.bankofengland.co.uk/publications/other/markets/apf/quarterlyreport.htm).

(2) See also Dale, S (2010), 'QE — one year on', and Bean, C (2010), 'The UK economy after the crisis: monetary policy when it is not so NICE', both available at [www.bankofengland.co.uk/publications/speeches/2010/index.htm](http://www.bankofengland.co.uk/publications/speeches/2010/index.htm).

(3) These results are obtained by summing the changes in yields two days after the five announcements. Summing the changes one day after the announcements gives a somewhat smaller estimate of the impact on gilt yields and gilt-OIS spreads, but using a three-day window gives broadly similar results for gilt yields, albeit with a slightly smaller contribution from gilt-OIS spreads.

(4) Meier, A (2009), 'Panacea, curse, or nonevent? Unconventional monetary policy in the United Kingdom', *IMF Working Paper no. 09/163*.

**Chart 1.6** Investment-grade corporate bond spreads<sup>(a)</sup>



Source: Bank of America/Merrill Lynch.

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

since the worst of the financial crisis, although it remained higher than its mid-2008 level. The Bank's readiness to act as a backstop buyer of high-quality corporate bonds through the Asset Purchase Facility may in part have contributed to the fall in illiquidity premia since early 2009. In January 2010, the Bank began to sell, as well as buy, corporate bonds in order to improve secondary market functioning further. The Bank has continued both to buy and sell bonds since the February Report on behalf of the Treasury and financed by the issuance of Treasury bills.

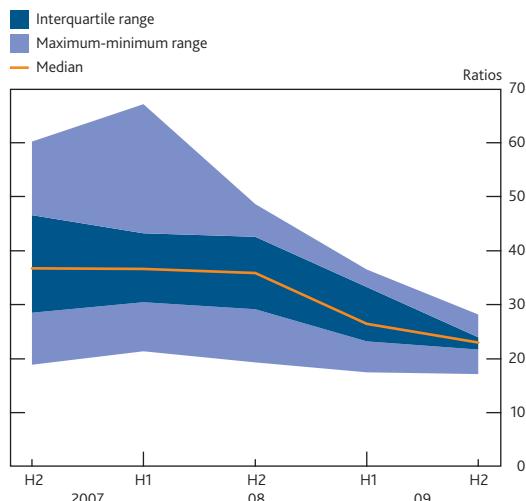
## 1.2 The banking sector

UK banks continue to face major challenges. Despite some progress in strengthening balance sheets, the banking sector remains fragile and vulnerable to further shocks. Banks will need to reduce their reliance on short-term debt financing and replace a large amount of wholesale funding maturing over the next two years, including that supported by the official sector. That could put upward pressure on banks' funding costs, as could the intensification of market concerns over fiscal sustainability in a number of countries.

### Capital

Full-year results from major UK banks confirmed that core capital ratios increased markedly during the course of 2009. Those increases reflected a number of factors, including significant private and public sector equity injections, asset disposals and earnings retention.

### Chart 1.7 Major UK banks' leverage ratios<sup>(a)</sup>



Sources: Published accounts and Bank calculations.

(a) Leverage ratios are calculated as adjusted assets over adjusted capital. Assets are adjusted by netting derivatives and adjusting for cash items, tax and intangible assets. Capital excludes Tier 2 instruments, preference shares, hybrids and intangibles. Chart includes Banco Santander, Bank of Ireland, Barclays, Co-operative Bank, HSBC and Royal Bank of Scotland for the entire sample, and Alliance & Leicester, Bradford & Bingley, Britannia, HBOS, Lloyds Banking Group and Lloyds TSB for part of the sample, as appropriate.

Higher capital ratios at major UK banks have gone hand in hand with lower leverage ratios. **Chart 1.7** shows the fall in the median leverage ratio, as well as the significant narrowing in the range of leverage ratios across banks. Lower average leverage was chiefly driven by large-scale capital raising during 2009 H2. But it also reflected reductions in assets, including a fall in the stock of loans to customers in 2009 H1 — that, in large part, reflected reductions in loans to non-UK residents, although lending to UK businesses and households has also been weak (Sections 1.3 and 1.4).

The improvement in capital and leverage ratios to date, together with any further capital raising that is necessary to meet regulatory requirements and to satisfy investors, should make it easier for banks to absorb any unexpected losses, including those that occur on loans to businesses and households.

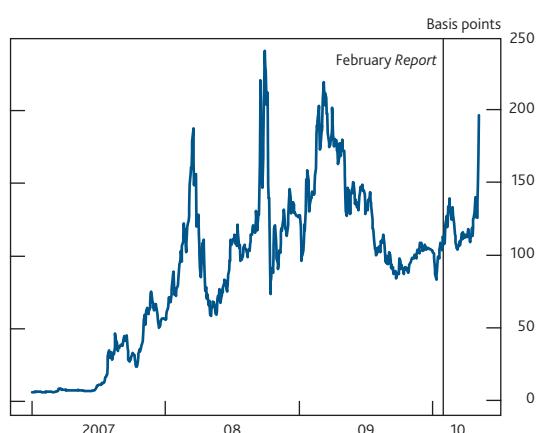
Banks' losses on loans to companies and households have continued to rise. For example, write-off rates on lending to private non-financial corporations (PNFCs) increased during 2009, while losses on consumer credit rose from an already high level. But banks will already have made some provisions for those losses. Moreover, lenders responding to the 2010 Q1 *Credit Conditions Survey* reported, on average, greater-than-expected falls in default rates on loans to households, and medium and large PNFCs.

The real estate sector — which accounts for almost half of the stock of all loans by UK-resident lenders to UK PNFCs — remains a key risk for the banking sector. Commercial property prices rose further in 2010 Q1, but the level of prices remained about 35% below the peak recorded in mid-2007. And the past falls in commercial property prices are likely to take time to feed through to losses for banks. For example, there continue to be reports of major lenders showing forbearance when loan to value covenants have been breached, but rental payments on the secured property are sufficient to cover payments of debt interest. In addition, as a large proportion of commercial property loans are due to be refinanced in the next few years, defaults could increase if borrowers are unable to provide the significant additional equity that may be needed then.

### Funding

Wholesale funding conditions for the major UK banks have improved compared with the worst of the financial crisis, and remained fairly stable for much of the period following the February Report. But conditions have deteriorated during the recent period of financial market volatility. For example, three-month Libor-OIS spreads picked up slightly and there were renewed tensions in US dollar short-term funding markets. In response to the re-emergence of those strains, the Bank, in parallel with other central banks, announced the

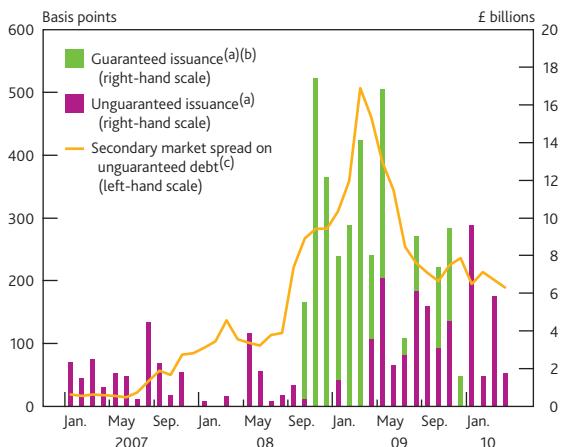
### Chart 1.8 Major UK banks' CDS premia<sup>(a)</sup>



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 Banco Santander, Barclays, HSBC, Lloyds Banking Group and Royal Bank of Scotland, weighted by each bank's share in total assets.

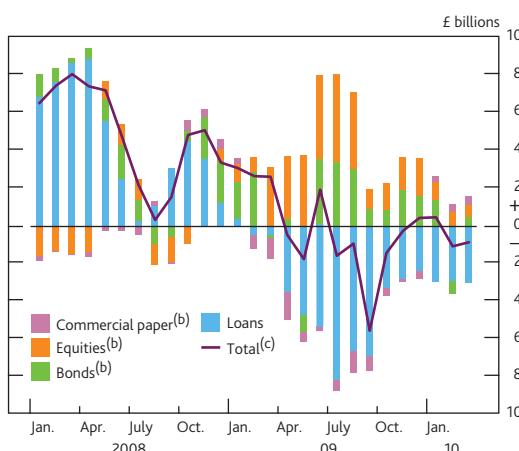
**Chart 1.9** UK bank senior debt issuance and secondary market spreads



Sources: Bank of England, Dealogic, JPMorgan Chase & Co. 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.
- (b) Senior debt issued under HM Treasury's Credit Guarantee Scheme.
- (c) Averages of end-month sterling and euro-denominated secondary market spreads for Barclays, HSBC, Lloyds Banking Group and Royal Bank of Scotland.

**Chart 1.10** PNFCs' net finance raised<sup>(a)</sup>

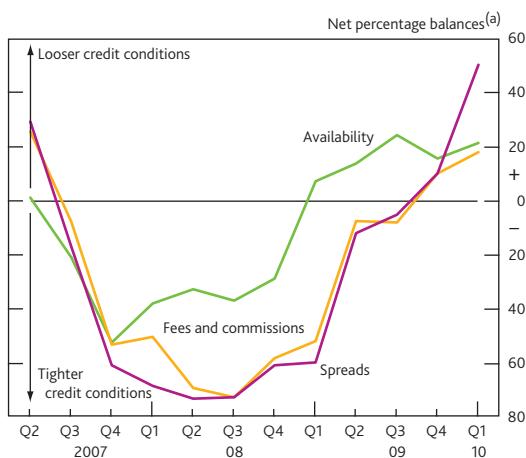


(a) Three-month moving averages. Includes sterling and foreign currency funds.

(b) Non seasonally adjusted.

(c) The total may not equal the sum of its components.

**Chart 1.11** Credit Conditions Survey: terms on loans to large PNFCs and overall corporate credit availability



(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.

re-establishment of temporary US dollar liquidity swap facilities. Major UK banks' CDS premia have also risen sharply recently, suggesting that the risks associated with exposure to those banks have increased (Chart 1.8). CDS premia on major euro-area banks have tended to rise by more than those on UK banks during the recent period of market volatility.

To the extent that current conditions in financial markets persist, it may be difficult for some banks to issue unguaranteed senior debt. And such issuance had already fallen back from the record levels seen at the start of 2010 before the most recent period of fragility (Chart 1.9).

Some major UK banks have managed to reduce their reliance on wholesale funding by attracting higher retail deposits over the past year. That increase in competition for retail funding may have contributed to the rise in the cost of attracting deposits from households. For example, spreads on one-year fixed-rate savings bonds relative to Bank Rate are significantly higher than prior to the financial crisis, although they have narrowed slightly recently.

Given the scale of funding that will need to be replaced in the next few years, including that supported by the official sector, funding costs for some banks may rise in the future. And if higher prospective funding costs have not been fully factored into the rates at which banks are willing to lend, that could have implications for the interest rates charged to businesses and households (Section 5).

### 1.3 Corporate credit conditions

In total, PNFCs repaid more finance than they raised in 2010 Q1 (Chart 1.10). That reflected continued reductions in net bank debt only partially offset by positive net capital market issuance. The weakness of bank lending to businesses over the past year has probably reflected both a restricted supply of credit and weak demand. Looking ahead, and particularly given banks' funding challenges, there is uncertainty about the future supply and price of credit to businesses (Section 5).

The 2010 Q1 *Credit Conditions Survey* of lenders reported a further increase in the availability of corporate credit following the large declines in credit availability reported during 2007 H2 and 2008, although conditions remain tight relative to their pre-crisis level (Chart 1.11). That is corroborated by evidence from companies. The majority of respondents to the 2010 Q1 *Deloitte CFO Survey* continued to report that corporate credit was 'hard to get', although that proportion was the smallest since 2008 Q1. The *Credit Conditions Survey* and reports from the Bank's Agents suggest that access to credit has loosened more for larger than for smaller businesses,

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

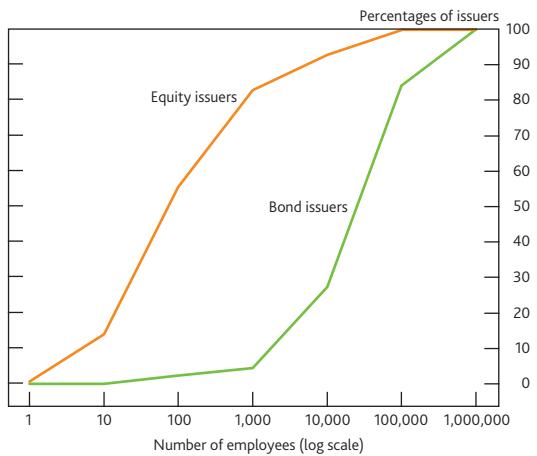
|                                      | Averages |      | 2009 |      |      | 2010 |
|--------------------------------------|----------|------|------|------|------|------|
|                                      | 2003–08  | 2009 | Q2   | Q3   | Q4   | Q1   |
| <b>Equities</b>                      |          |      |      |      |      |      |
| Net issuance                         | -0.7     | 2.6  | 4.4  | 1.0  | 2.0  | 0.6  |
| Gross issuance                       | 0.8      | 2.7  | 4.5  | 1.0  | 2.0  | 0.8  |
| Repayments                           | 1.5      | 0.0  | 0.0  | 0.0  | 0.0  | 0.2  |
| <b>Corporate bonds<sup>(b)</sup></b> |          |      |      |      |      |      |
| Net issuance                         | 1.1      | 1.5  | 3.5  | 0.9  | 1.6  | 0.5  |
| Gross issuance                       | 2.6      | 4.3  | 6.0  | 2.8  | 3.5  | 2.4  |
| Repayments                           | 1.5      | 2.8  | 2.5  | 1.9  | 2.0  | 2.0  |
| <b>Commercial paper</b>              |          |      |      |      |      |      |
| Net issuance                         | 0.0      | -0.6 | -0.2 | -0.8 | -0.4 | 0.5  |
| Gross issuance                       | 4.4      | 3.3  | 3.8  | 2.1  | 1.1  | 3.0  |
| Repayments                           | 4.4      | 3.9  | 4.0  | 2.8  | 1.5  | 2.6  |

(a) Averages of monthly flows of sterling and foreign currency funds. Data are non seasonally adjusted.

(b) Includes stand alone and program bonds.

who are likely to be relatively more dependent on bank finance.<sup>(1)</sup>

The extent to which greater availability of credit leads to a recovery in lending will also depend on companies' demand for bank loans. Evidence provided by the lenders in the 2010 Q1 *Credit Conditions Survey* suggests that demand from larger businesses has, so far, remained subdued, particularly to finance capital expenditure, which itself has fallen sharply (Section 2). Stability of loan demand combined with some improvement in credit availability is consistent with the fall in spreads on loans to large PNFCs indicated in recent *Credit Conditions Surveys* (**Chart 1.11**). And the available data suggest that spreads on new investment-grade syndicated lending fell in 2010 Q1, after rising since the onset of the financial crisis. In contrast, for small businesses, the 2010 Q1 *Credit Conditions Survey* suggested that demand for lending had increased and that spreads on loans had widened.

**Chart 1.12** Cumulative distribution functions of bond and equity issuers in 2009<sup>(a)</sup>

Sources: Bank of England, Bloomberg, Dealogic and Bank calculations.

(a) The chart is based on a sample of UK PNFCs that issued equities or bonds in 2009 and for which data on employee numbers are available. Companies that had multiple issues of equities or bonds during the year are counted once. Employee data are estimates from company accounts provided by Bloomberg.

Given the constraints on the supply of bank lending since the start of the financial crisis, some businesses are likely to have accessed alternative sources of external finance in order to fund investment or their day-to-day operations, while others may have paid down bank debt with the proceeds of capital raising (Section 1.5). In aggregate, companies raised a significant amount of finance from the capital markets during 2009, but net issuance has been somewhat weaker so far in 2010 (**Table 1.A**). Market contacts suggest that issuance may have been unusually high in early 2009 partly as a consequence of the temporary closure of capital markets in late 2008. Respondents to the 2010 Q1 *Deloitte CFO Survey* continued to rank corporate debt as the most attractive source of finance, although a net balance of respondents rated bank borrowing as attractive for the first time since 2008 Q2.

Only a minority of companies are large enough to issue corporate bonds. An indicative ranking of a sample of bond issuers by the number of employees at each business suggests that issuance was highly skewed towards large companies in 2009 (**Chart 1.12**). A wider range of businesses can access equity markets, and an equivalent sample of data suggests that equity issuance was much more skewed towards smaller companies last year (**Chart 1.12**).

## 1.4 Household credit conditions

Despite a slight pickup in consumer credit, growth in the stock of loans to individuals remained weak relative to its pre-2008 average in 2010 Q1 (**Table 1.B**).

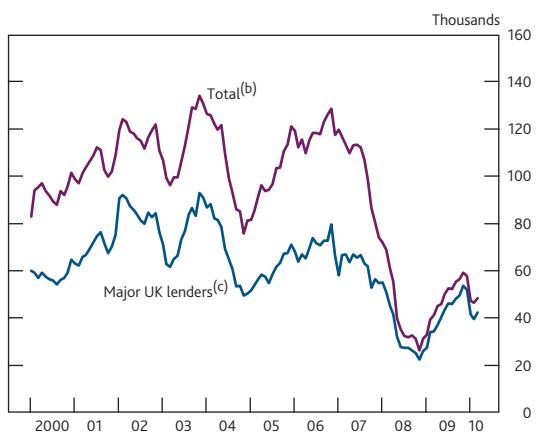
**Table 1.B** Loans to individuals

|  | Averages <sup>(a)</sup><br>1997–2008 | 2009 |      |      | 2010 |      |      |
|--|--------------------------------------|------|------|------|------|------|------|
|  |                                      | Q2   | Q3   | Q4   | Jan. | Feb. | Mar. |
| <b>Net monthly flow<sup>(b)</sup> (£ billions)</b>   |                                      |      |      |      |      |      |      |
| Total lending  | 7.1                                  | 0.8  | 0.5  | 1.4  | 1.9  | 2.4  | 0.6  |
| Secured on dwellings                                 | 5.6                                  | 0.6  | 0.8  | 1.5  | 1.5  | 1.8  | 0.3  |
| Consumer credit                                      | 1.5                                  | 0.2  | -0.2 | -0.1 | 0.4  | 0.6  | 0.3  |
| <b>Three-month annualised growth rate (per cent)</b> |                                      |      |      |      |      |      |      |
| Total lending  | 10.1                                 | 0.6  | 0.4  | 1.1  | 1.4  | 1.7  | 1.4  |
| Secured on dwellings                                 | 9.6                                  | 0.6  | 0.8  | 1.4  | 1.5  | 1.5  | 1.2  |
| Consumer credit                                      | 12.4                                 | 0.9  | -1.3 | -0.4 | 0.9  | 2.3  | 2.3  |

(a) Averages of three-month annualised growth rates are calculated from end-quarter observations.

(b) Quarterly data are averages of monthly data.

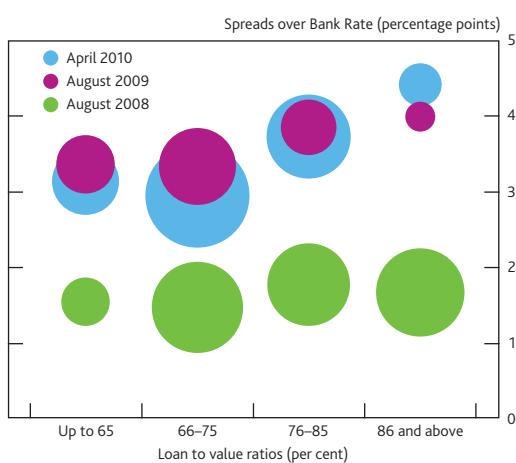
(1) The box on pages 7–8 of the March 2010 edition of *Trends in Lending* discussed recent developments in lending to small and medium-sized enterprises. The box on pages 30–31 of the February 2010 *Inflation Report* discussed how small and medium-sized enterprises have been affected by the recession.

**Chart 1.13** Mortgage approvals for house purchase<sup>(a)</sup>

(a) Data are net of cancellations.

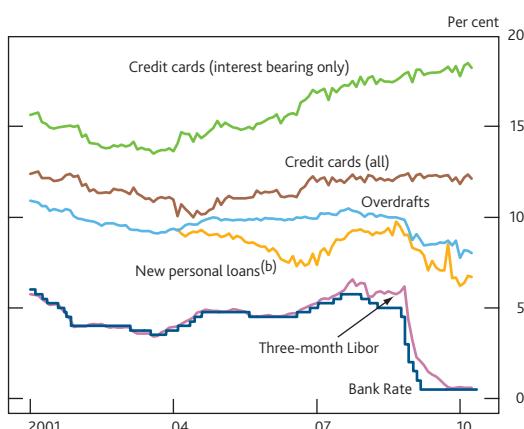
(b) Includes banks, building societies and other specialist lenders.

(c) Includes Banco Santander, Barclays, HSBC, Lloyds Banking Group, Nationwide and Royal Bank of Scotland. Some data prior to 2008 have been estimated.

**Chart 1.14** Floating-rate mortgage spreads and product availability across loan to value ratios<sup>(a)</sup>

Sources: Moneyfacts Group and Bank calculations.

(a) End-month advertised rates for products with different loan to value (LTV) ratios. Size of bubble reflects product availability. The spread is calculated over Bank Rate at the end-month for the relevant period. The first observation on the left is for products up to a 65% LTV ratio, the second is for products in the 66%–75% range, the third in the 76%–85% range, and the final observation on the right is for products above 86%.

**Chart 1.15** Effective interest rates<sup>(a)</sup>

(a) The Bank's effective interest rates series comprise data from 30 UK monetary financial institutions. The rate for personal loans is for new business. For the other series, the rates shown are for the stock of lending, as comparable data for new lending are not available.

(b) Data are available from January 2004.

Residential property prices have continued to pick up from their April 2009 trough. Averaging the Nationwide and Halifax indices, prices in April 2010 were 10% higher than a year earlier, but remained some way below their October 2007 peak. The number of mortgage approvals for house purchase — a leading indicator of secured lending — fell to its lowest level since May 2009 in February, but increased slightly in March (Chart 1.13). The weakness of approvals at the start of 2010 may in part have reflected the withdrawal of the stamp duty exemption for properties valued between £125,000 and £175,000 at the year end, which may have encouraged some homebuyers to bring forward purchases. Reports from some UK lenders suggested that severe winter weather at the beginning of 2010 may also have reduced housing market activity. The 2010 Q1 *Credit Conditions Survey* reported a fall in demand for secured lending over the previous three months, but expectations of an increase over the next three months, consistent with some of the weakness being temporary.

In contrast to the partial loosening of corporate credit conditions, respondents to the 2010 Q1 *Credit Conditions Survey* have not reported a material increase in the overall availability of secured household lending. And the major UK lenders have continued to dominate the mortgage market, reflecting the loss of credit supply capacity caused by the withdrawal of some small building societies and specialist lenders (Chart 1.13). Nevertheless, a greater range of borrowers may have been able to access mortgage finance recently: lenders responding to the *Credit Conditions Survey* reported the second consecutive increase in maximum loan to value (LTV) ratios. That is corroborated by a slight increase in the number of floating-rate products available at higher LTV ratios (Chart 1.14). But the spreads over Bank Rate on those products, and to a lesser degree mortgages at lower LTV ratios, remain much higher than prior to the worst of the financial crisis in August 2008 (Chart 1.14).

Mirroring developments in secured lending, the supply of unsecured household credit has remained much tighter than before the financial crisis. Evidence from the 2010 Q1 *Credit Conditions Survey* suggested that unsecured credit availability could increase over the following three months, driven by an increase in risk appetite among lenders as the economic outlook improved. But unsecured loan interest rates relative to Bank Rate have so far remained elevated, most notably for credit card rates (Chart 1.15).

## 1.5 Money

Money holdings increased in 2010 Q1 at the fastest pace since 2008 Q2. But the four-quarter growth rate of broad money remained well below its recent average (Table 1.C). That trend reflects, in part, the severe monetary squeeze precipitated by the financial crisis, as banks attempted to repair their balance sheets and credit conditions tightened.

**Table 1.C Broad money<sup>(a)</sup>**

|  | Averages <sup>(b)</sup><br>1997–2008 | 2009 |    |    | 2010 |
|--|--------------------------------------|------|----|----|------|
|  |                                      | Q2   | Q3 | Q4 | Q1   |

Percentage changes:

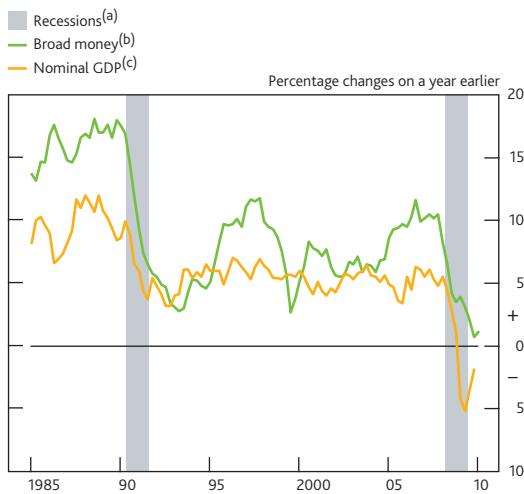
On a quarter earlier (annualised) 7.8 3.2 -1.5 -2.5 5.9

On a year earlier 8.0 3.2 2.2 0.8 1.2

(a) The series are constructed using headline M4 growth prior to 1998 Q1 (for growth on a quarter earlier) and 1998 Q4 (for growth on a year earlier), and M4 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) Averages of quarterly data.

In response to that monetary contraction, the MPC cut Bank Rate sharply, and subsequently purchased assets with newly created central bank reserves in order to inject money into the economy and, ultimately, support nominal spending. It is likely that broad money growth would have turned out to be even weaker in the absence of the Bank's asset purchases. Indeed, broad money growth has fallen by less than in the early 1990s recession, despite a much larger contraction in nominal spending (**Chart 1.16**). The MPC has maintained the stock of asset purchases financed by the issuance of reserves at £200 billion since its February 2010 meeting, but the stock of deposits created by prior asset purchases should still be imparting a substantial boost to broad money.

**Chart 1.16 Broad money and nominal GDP**

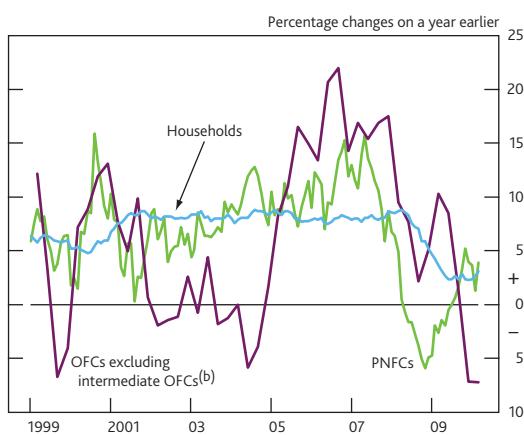
(a) Recessions are defined as at least two consecutive quarters of falling output (at constant market prices) estimated using the latest data. Recessions are assumed to end once output began to rise.

(b) The series is constructed using M4 growth prior to 1998 Q4, and growth in M4 excluding intermediate OFCs thereafter. For the definition of intermediate OFCs, see footnote (a) in Table 1.C.

(c) At current market prices. The latest observation is 2009 Q4.

The increase in UK banks' issuance of net long-term debt and equity since the start of the financial crisis (Section 1.2) will have borne down on money growth. When non-bank investors buy those instruments using deposits, their money holdings fall. But banks' balance sheets are strengthened through such issuance, and that may, over time, alleviate credit constraints and support nominal demand. Monetary policy may have helped that process to the extent that the Bank's asset purchases boosted the monetary deposits of non-bank investors, and encouraged a rebalancing towards higher-yielding assets, including banking sector capital instruments.

The Bank's asset purchases may also have encouraged sellers of gilts — largely non-bank financial institutions — to pass on their additional monetary deposits to PNFCs in exchange for their capital instruments. PNFCs increased their issuance of equities and bonds during 2009 (Section 1.3) and growth in PNFCs' deposits increased significantly over that period (**Chart 1.17**). But reports from the Bank's Agents suggest that some PNFCs have used part of the proceeds of capital market issuance to repay bank debt. Although debt repayments push down money growth, they could also allow businesses to reduce their cost of finance and strengthen their balance sheets, which should also boost nominal demand over time.

**Chart 1.17 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 Table 1.C.

# 2 Demand

UK GDP grew by 0.4% in 2009 Q4. Consumer spending rose modestly, but business investment declined. Net trade reduced UK growth. The ONS provisionally estimated that UK GDP grew by 0.2% in 2010 Q1. The global economic recovery continued but was geographically uneven. And the downside risks to the global recovery increased, as financial market concerns about the sustainability of fiscal positions in a number of countries intensified. That poses a risk to the outlook for UK demand.

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

Percentage changes on a quarter earlier

|   | Averages<br>1997–2008 | 2009 |       |      |      |
|---|-----------------------|------|-------|------|------|
|   |                       | Q1   | Q2    | Q3   | Q4   |
| Household consumption <sup>(b)</sup>          | 0.7                   | -1.6 | -0.9  | 0.0  | 0.3  |
| Government consumption                        | 0.6                   | -0.4 | 0.9   | 0.6  | 1.0  |
| Investment                                    | 1.0                   | -7.3 | -7.2  | 2.8  | -2.7 |
| of which, business investment                 | 1.2                   | -8.9 | -11.5 | -0.8 | -4.3 |
| of which, dwellings investment <sup>(c)</sup> | 0.3                   | -6.7 | -4.3  | 3.3  | -6.4 |
| Final domestic demand                         | 0.7                   | -2.2 | -1.5  | 0.5  | 0.1  |
| Change in inventories <sup>(d)(e)</sup>       | 0.0                   | -0.7 | 1.0   | 0.0  | 0.2  |
| Alignment adjustment <sup>(e)</sup>           | 0.0                   | 0.6  | -0.4  | -0.6 | 0.6  |
| Domestic demand                               | 0.7                   | -2.4 | -1.0  | -0.1 | 0.8  |
| 'Economic' exports <sup>(f)</sup>             | 0.9                   | -7.2 | -1.9  | 0.6  | 3.8  |
| 'Economic' imports <sup>(f)</sup>             | 1.2                   | -6.5 | -3.0  | 1.2  | 4.7  |
| Net trade <sup>(e)(f)</sup>                   | -0.1                  | 0.0  | 0.4   | -0.2 | -0.3 |
| Real GDP at market prices                     | 0.6                   | -2.6 | -0.7  | -0.3 | 0.4  |

(a) Chained-volume measures.

(b) Includes non-profit institutions serving households.

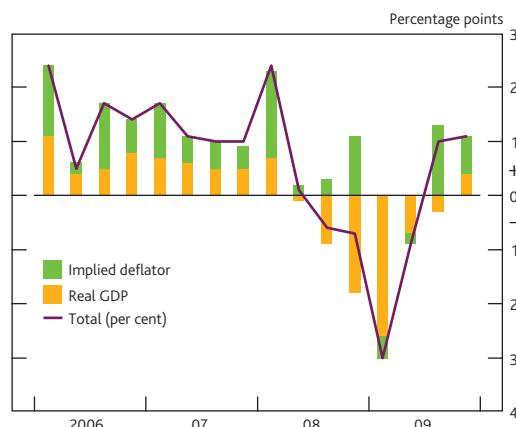
(c) Whole-economy dwellings investment.

(d) Excludes the alignment adjustment.

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

(f) Goods and services, excluding the estimated impact of missing trader intra-community (MTIC) fraud.

**Chart 2.1** Contributions to quarterly growth in nominal GDP<sup>(a)</sup>



(a) At market prices. Contributions may not sum to total due to rounding.

Real GDP grew by 0.4% in Q4 (Table 2.A). Domestic demand picked up (Section 2.1). But net trade reduced growth, as imports (see the box on page 25) grew more strongly than exports.

The prospects for UK activity depend, in part, on the outlook for the global economy (Section 2.2). Since the February Report, the downside risks to the global recovery have increased. In particular, financial market concerns about the sustainability of fiscal positions in a number of countries have intensified. And the possibility of faster fiscal consolidation in some euro-area countries, without countervailing increases in demand in others, poses a downside risk to the recovery in euro-area activity.

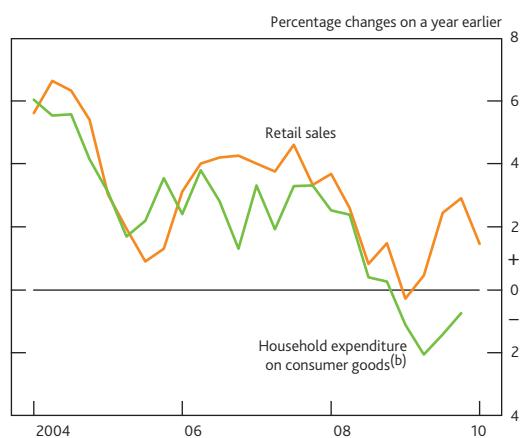
## 2.1 Domestic demand

### Nominal demand

The present accommodative stance of monetary policy seeks to increase nominal demand. Having fallen substantially during the recession, nominal demand rose at close to its ten-year average rate in 2009 H2 (Chart 2.1). But that reflected above-average increases in the GDP deflator, accompanied by below-average growth in real activity. Some of that strength in the GDP deflator reflected above-average increases in the household consumption deflator which, like CPI inflation, reflected temporary influences (Section 4).

It is uncertain how nominal spending will evolve as any temporary effects on inflation wane. The nominal demand data may suggest there is increasing demand for UK products, but that price increases have reduced the volume of goods and services that people can buy with a given amount of money. In that case, as the impact of the factors temporarily raising inflation wanes, the strength in nominal spending growth should be reflected in stronger real growth. But, alternatively, nominal spending growth may have been boosted by higher prices, if households and companies took time to reduce their

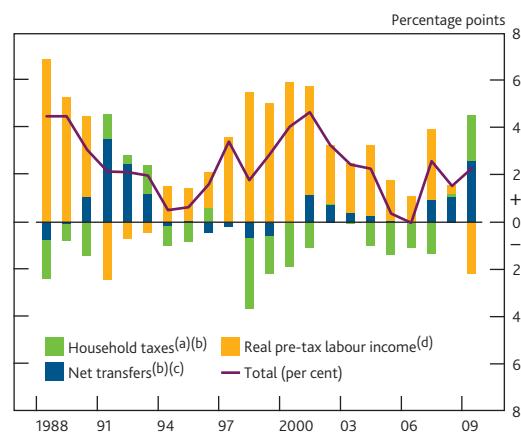
### Chart 2.2 Indicators of household spending on goods<sup>(a)</sup>



(a) Chained-volume measures.

(b) Excluding spending on purchases of vehicles and electricity, gas and other fuels. Data are only available to 2009 Q4.

### Chart 2.3 Contributions to annual growth in real post-tax labour income



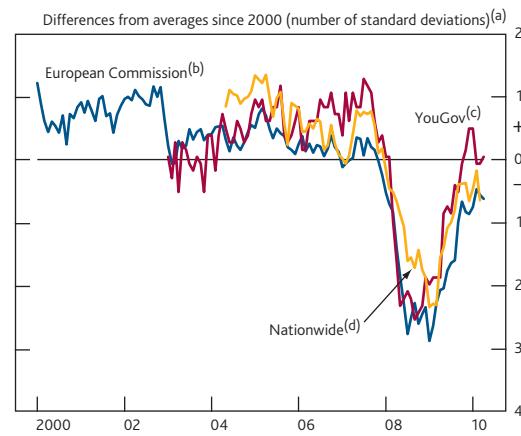
(a) Household taxes are income tax and Council Tax.

(b) Divided by the household expenditure deflator.

(c) General government benefits minus employees' National Insurance contributions.

(d) Calculated as wages and salaries plus mixed income, divided by the household expenditure deflator.

### Chart 2.4 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.

purchases of goods and services as inflation rose. In that case, as inflation wanes it is possible that nominal demand growth will fall back. Section 5 considers the medium-term outlook for both inflation and real activity. The remainder of this section examines recent developments in real spending.

### Recent household spending data

Real household consumption increased by 0.3% in 2009 Q4, having been flat in Q3. But it remained almost 4% below its pre-recession peak. Expenditure on vehicle purchases was strong in Q4. But spending on other consumer goods was broadly flat, and spending on services fell modestly. As discussed in the box on page 27 of Section 3, temporary factors may have boosted expenditure in Q4 and depressed it in Q1. Consistent with that, retail sales volumes fell by 1.7% in Q1.

There is particular uncertainty about the true path of consumer spending over the past year because retail sales data point to a more buoyant picture for growth through 2009 than the data used to construct households' consumption of goods in the National Accounts (Chart 2.2). It is possible that consumer goods spending may eventually be revised up. If consumer goods spending had grown in line with retail sales through 2009, the level of overall consumption would have been around 1.5% higher in 2009 Q4 than currently estimated. But nevertheless it seems clear that consumption fell markedly in early 2009, before stabilising around the end of last year.

### Factors influencing household spending

A key determinant of households' spending is income. Real pre-tax income from employment fell in 2009, but real post-tax labour income remained resilient (Chart 2.3).

Income has been supported by increases in benefit payments and by a fall in the proportion of income paid in tax, in part reflecting a decline in the proportion of income taxed at the 40% rate for some individuals. Given resilient income, the fall in consumption has been accompanied by a rise in the saving ratio.

Households may expect income growth to be weaker in the future, and may, therefore, have cut spending and increased saving sharply in response. For example, they could expect the recession to have a persistent effect on the outlook for pay and jobs. Or they may have increased saving in anticipation of the significant fiscal consolidation that is in prospect.

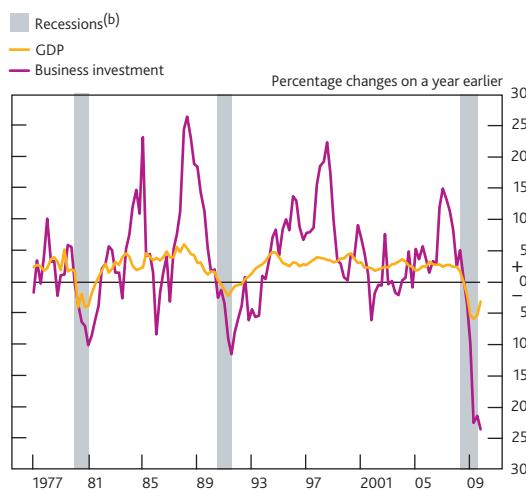
Following the onset of the financial crisis, households may now expect more frequent or severe hits to their income and assets. That could have encouraged them to increase their savings as a precaution against such future instability. In addition, an increase in uncertainty may have led households to postpone spending, particularly for big-ticket items. Measures of consumer confidence, which may provide some information

**Table 2.B** Mortgage arrears and repossession

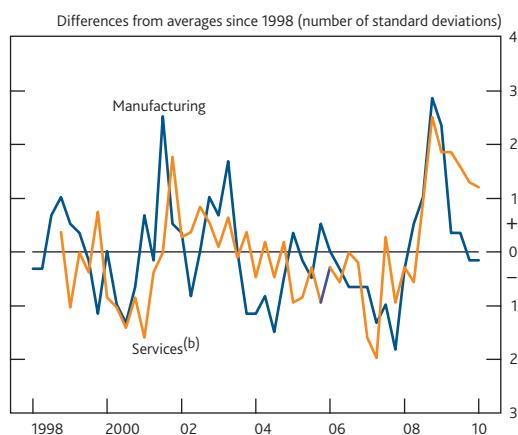
|  | Series high                   | 2008 |      | 2009 |      |      |
|--|-------------------------------|------|------|------|------|------|
|  |                               | H1   | H2   | H1   | Q3   | Q4   |
| Mortgage arrears <sup>(a)</sup>          |                               |      |      |      |      |      |
| Three to six months                      | 1.82 (1994 H1) <sup>(b)</sup> | 0.73 | 1.01 | 1.07 | 1.00 | 0.97 |
| Six to twelve months                     | 2.07 (1992 H2)                | 0.41 | 0.62 | 0.86 | 0.85 | 0.81 |
| More than twelve months                  | 1.58 (1993 H1)                | 0.15 | 0.25 | 0.55 | 0.56 | 0.60 |
| By more than 2.5% of outstanding balance | 4.12 (1995 H1)                | 1.19 | 1.57 | 1.86 | 1.77 | 1.72 |
| Repossessions <sup>(c)</sup>             | 0.40 (1991 H2)                | 0.16 | 0.18 | 0.22 | 0.21 | 0.20 |

Source: Council of Mortgage Lenders.

- (a) Mortgages in arrears as a percentage of outstanding mortgages, at the end of the specified period.  
 (b) Earliest observation.  
 (c) Flow of repossession during each period, as a percentage of outstanding mortgages. For each quarter, the observation is based on the flow of repossession over that quarter and the preceding one, and the stock of outstanding mortgages in that quarter.

**Chart 2.5** Business investment and GDP<sup>(a)</sup>

- (a) Chained-volume measures.  
 (b) 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.

**Chart 2.6** Factors limiting investment by sector: uncertainty about demand<sup>(a)</sup>

Source: CBI.

- (a) The question asks whether uncertainty about demand is likely to limit capital expenditure authorisations over the next twelve months.  
 (b) Covers the consumer, business and professional service sectors. The services balances are available from 1998 Q4.

about households' uncertainty, fell sharply in 2008 H1, although they have since recovered somewhat (**Chart 2.4**).

Moreover, the financial crisis may have made households more wary of carrying a lot of debt. To date, lower mortgage rates have made debt servicing more affordable for many households: that, along with the relative resilience of employment, may have helped to limit the pickup in mortgage arrears during the recession (**Table 2.B**). But borrowers may worry that in the medium term, debt-financing costs will be higher than before the financial crisis.

Household consumption appears to have stabilised in 2009 H2. But if the recent fragility in financial markets persists (Section 1), household confidence may be further dented. The outlook for consumption is discussed further in Section 5.

### Investment

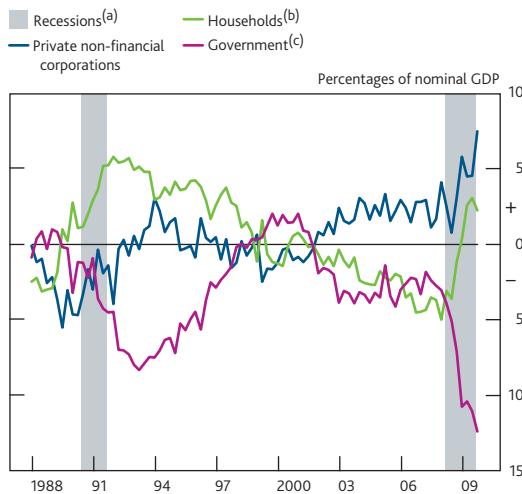
Total investment spending fell by around 3% in 2009 Q4 (**Table 2.A**). Since early 2008, investment has fallen by almost 20%, driven by sharp falls in business and dwellings investment — with the latter reflecting, in part, difficulties faced by developers in obtaining finance.

Business investment — around 60% of total investment — has declined for six consecutive quarters and in 2009 Q4 stood around a quarter below its pre-recession peak. That fall, which was quite broadly based across sectors, is likely, in part, to reflect weak demand conditions. Business investment typically falls by more than GDP during recessions (**Chart 2.5**). But as a share of GDP, investment has fallen by more than in previous recessions, suggesting that factors other than demand are also holding back investment.

It is likely that heightened uncertainty about demand has led companies to put investment spending on hold. If companies are unsure how demand will evolve they may delay spending decisions that are costly to reverse. CBI surveys suggest that uncertainty about demand remained elevated in the service sector in 2010 Q1, although uncertainty was reported to have returned to more normal levels in the manufacturing sector (**Chart 2.6**).

Companies may also have been deterred or prevented from investing by tight credit conditions. Although corporate credit conditions have eased somewhat (Section 1), respondents to CBI surveys, for example, report that the cost of finance continues to limit capital expenditure. And some companies may have been unable to access bank credit. It is likely that small and medium-sized companies have been affected more severely by this: large companies are more able to access finance by issuing bonds or equity.

As uncertainty dissipates and demand begins to recover, then investment might be expected to pick up. But the recent

**Chart 2.7** Financial balances by sector

(a) Recessions are defined as in Chart 2.5.

(b) Includes non-profit institutions serving households.

(c) Excludes public corporations.

volatility in financial markets may delay the fall back in uncertainty. Furthermore, the strength of any pickup in investment will depend on a number of other influences. It is likely that the downturn has left many companies with more capital than required to meet current demand; a recent survey by the Bank's network of Agents around the United Kingdom suggested that around half of respondents could increase output significantly without additional investment. So a marked recovery in demand may be required before many companies increase spending.

In addition, limited availability of credit could become a greater constraint on investment as demand begins to recover. But some companies use internal resources to fund investment, and, although profits are lower than before the recession began, spending on investment and inventories (see below) has fallen by more, raising PNFCs' aggregate financial surplus (Chart 2.7). That could mean some companies have resources available should they want to invest. If, however, some of the increase in the financial surplus reflected companies' desire to build up a buffer due to concerns about cash flow, they may not want to use those funds to invest.

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

|     | Net percentage balances |      |     |      |     |            |
|-----|-------------------------|------|-----|------|-----|------------|
|     | Averages<br>1999–2007   | 2008 |     | 2009 |     | 2010<br>Q1 |
|     |                         | H1   | H2  | H1   | H2  |            |
| BCC | 14                      | 7    | -14 | -23  | -7  | -5         |
| CBI | -7                      | -7   | -44 | -45  | -19 | -13        |

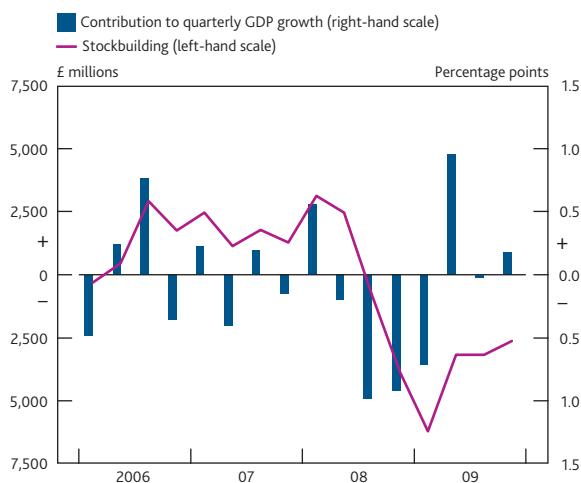
Sources: BCC, CBI, CBI/PwC and ONS.

(a) Net percentage balances of companies who 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). Measures weight together sectoral surveys using shares in real business investment. BCC data are not seasonally adjusted and cover the manufacturing and services sectors. CBI data cover the manufacturing, distribution, financial services and consumer/business and professional services sectors.

Survey indicators suggest that investment is likely to remain subdued in the near term. Although surveys of investment intentions for plant and machinery have picked up significantly since their troughs around the end of 2008, they remain below their average levels (Table 2.C).

### Inventories

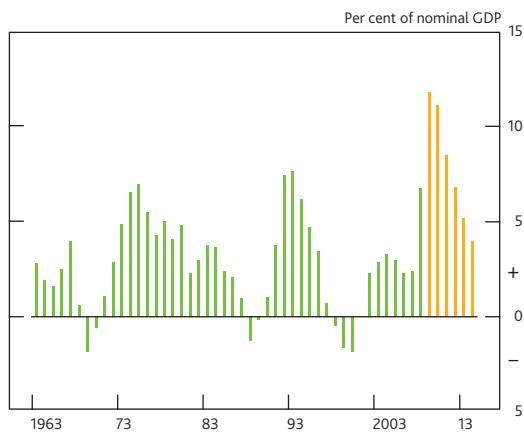
Many of the factors that have weighed on investment spending are also likely to have led companies to run down stocks. For example, difficulties accessing credit and a squeeze on internal finance may have led companies to reduce stocks to improve their cash-flow position. The pace of de-stocking eased somewhat in 2009 Q4, so that stockbuilding contributed positively to growth. Even so, companies still reduced stocks significantly (Chart 2.8). Any further reductions in the rate of de-stocking would support GDP growth.

**Chart 2.8** Stockbuilding<sup>(a)</sup>

(a) Chained-volume measures. Excluding the alignment adjustment.

### Government spending

The MPC's forecast is conditioned on the plans set out in the *Budget* published on 24 March 2010. There was little news in those plans for the UK macroeconomic outlook relative to the plans in the *Pre-Budget Report 2009*. The UK public sector deficit remains substantial and was projected to reach 11.8% of GDP in 2009/10 in the March *Budget*. In large part, the deterioration in the United Kingdom's public finances has reflected the impact of the sharp fall in activity on some elements of government spending and revenues. With the level of activity set to remain below its pre-recession trend for some time, a significant fiscal consolidation will be necessary over the medium term. In the March 2010 *Budget*, the deficit was projected to decline to 4% of GDP in 2014/15 (Chart 2.9). Section 5 discusses the impact of fiscal consolidation.

**Chart 2.9** Public sector net borrowing<sup>(a)</sup>

Sources: HM Treasury and ONS.

(a) The chart shows financial year net borrowing data. The orange bars show data consistent with the projections published in the *Budget* on 24 March 2010. The chart has not been updated to reflect the public sector finances data released on 22 April 2010.

**Table 2.D** General government deficits and gross debt in selected euro-area countries in 2009

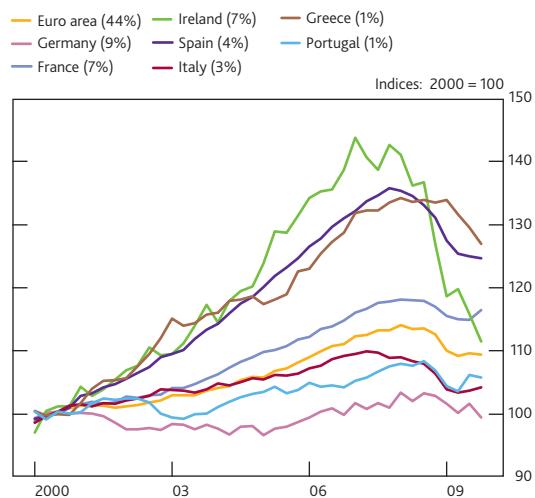
Percentages of nominal GDP at market prices

|          | General government deficit <sup>(a)</sup> | General government debt <sup>(b)</sup> |
|----------|---|--|
| Greece   | 14  | 115                                    |
| Ireland  | 14  | 64                                     |
| Italy    | 5   | 116                                    |
| Portugal | 9   | 77                                     |
| Spain    | 11  | 53                                     |

Source: Eurostat.

(a) Net borrowing is total general government expenditure minus total general government revenue.

(b) General government consolidated gross debt.

**Chart 2.10** Domestic demand in selected euro-area countries<sup>(a)</sup>

Sources: Eurostat and ONS.

(a) Chained-volume measures. The figures in parentheses show the shares of UK nominal exports accounted for by each country in 2008.

## 2.2 The international economy

Since the February Report, the downside risks to the global recovery have increased. In particular, financial market concerns about the sustainability of fiscal positions in a number of countries have intensified (Section 1). The possibility of significant fiscal consolidation in some euro-area countries, without countervailing increases in demand in others, poses a downside risk to the recovery in euro-area activity. Estimates of GDP growth around the turn of the year were reasonably robust in the United States and Asia, but these markets account for a smaller share of UK exports than the euro area.

### Euro area

Euro-area GDP was flat in 2009 Q4, lower than the 0.4% growth recorded in Q3. Indicators of growth for 2010 Q1 were mixed. The Markit survey of purchasing managers suggested that euro-area GDP increased in 2010 Q1, but other indicators pointed to a weaker picture: for example, retail sales were broadly flat in Q1. The outlook for the euro area will depend crucially on whether the necessary fiscal consolidations in some countries drag substantially on aggregate euro-area activity.

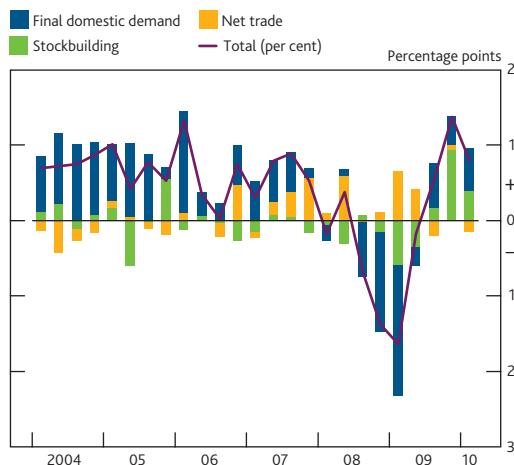
A number of euro-area countries face significant challenges in reducing fiscal deficits and debt levels. **Table 2.D** shows deficits and gross debt positions for some euro-area countries. Since the February Report, the IMF and euro-area authorities have agreed to provide Greece with financial support, after doubts in the financial markets about the viability of its fiscal plans led to a prohibitive increase in the cost of issuing public sector debt (Section 1). A further package was agreed by the European Council and Member States in conjunction with the IMF and ECB, to stem the risk of contagion to other euro-area countries.

These developments could weigh on the euro-area recovery and adversely affect UK export demand. Prior to the financial crisis, domestic demand grew most rapidly in many of the economies now faced with substantial fiscal deficits (**Chart 2.10**). Planned fiscal consolidations are likely to be associated with weaker demand growth in those economies and the euro area as a whole unless there is a compensating pickup in demand elsewhere. And any further intensification of financial market strains could necessitate an even faster fiscal consolidation, posing a further risk to the euro-area recovery. Moreover, fragility in financial markets could dent business and consumer confidence.

### United States

US GDP rose by 0.8% in 2010 Q1, following growth of 1.4% in 2009 Q4 (**Chart 2.11**). Growth slowed as the boost from stockbuilding fell back. But the contribution from final domestic demand increased a little, reflecting the strength of

**Chart 2.11 Contributions to quarterly growth in US GDP<sup>(a)</sup>**



Source: Bureau of Economic Analysis.

(a) Chained-volume measures.

consumer spending. Recent activity is likely to have been supported by the fiscal stimulus. But, over time, the boost to growth from that and stockbuilding will wane. The outlook for consumption further ahead remains uncertain: for example, although some indicators of the US labour market have improved recently, the unemployment rate remains elevated. Prospects for the housing market are also uncertain.

## Asia

Official estimates (Table 2.E) and surveys suggest that many Asian economies recorded strong growth around the turn of the year. The Japanese economy grew by 0.9% in 2009 Q4. And four-quarter Chinese GDP growth reached 11.9% in 2010 Q1. Asia accounts for a relatively small proportion of UK external demand, so growth in that region has only a limited direct impact on overall UK exports. Continued robust growth in emerging Asia could, however, further boost commodity prices, putting further upward pressure on UK inflation (Section 4).

## World imports and UK exports

World imports of goods increased sharply in the three months to February 2010 compared with the three months to November (Chart 2.12). World goods imports have increased by around 16% since their trough in early 2009, although they remain some 7% below their peak in early 2008. Asia has seen a rapid rebound in imports, but the recovery in imports in the advanced economies has been more modest.

UK goods exports increased by 1.7% in the three months to February (Chart 2.12), weaker than the growth rates seen toward the end of 2009. It is likely that some of the weakening in export growth was due to the snowfall in January (see the box on page 27 of Section 3). Surveys of export orders continue to suggest robust export growth.

The outlook for UK exports will in large part depend on the outlook for global activity, and in particular how euro-area demand evolves in coming quarters. But the depreciation of sterling since mid-2007 should also boost UK goods exports over time. The depreciation has improved the competitiveness of some UK companies, potentially increasing their share of global demand. And the higher margins currently being earned by some exporters should, over time, encourage an increase in export supply (see the box on page 24 of the February 2010 Report).

**Table 2.E GDP in selected Asian economies<sup>(a)</sup>**

|                                | Averages<br>1997–2008 | 2009  |      |      |      | 2010<br>Q1 |
|--------------------------------|-----------------------|-------|------|------|------|------------|
|                                |                       | Q1    | Q2   | Q3   | Q4   |            |
| Japan (2.1)                    | 0.2                   | -3.6  | 1.5  | -0.1 | 0.9  | n.a.       |
| China <sup>(c)</sup> (1.8)     | 9.6                   | 6.2   | 7.9  | 9.1  | 10.7 | 11.9       |
| Singapore <sup>(d)</sup> (1.5) | 1.2                   | -1.8  | 3.8  | 2.8  | -0.7 | 7.2        |
| India <sup>(e)</sup> (1.4)     | 2.7                   | 4.1   | -8.4 | 2.1  | 8.8  | n.a.       |
| Hong Kong (1.4)                | 1.0                   | -11.3 | 1.6  | 7.6  | 5.7  | n.a.       |
| South Korea (0.9)              | 1.0                   | 0.2   | 2.4  | 3.2  | 0.2  | 1.8        |

Sources: Ministry of Trade and Industry Singapore, ONS, Thomson Reuters Datastream and Bank calculations.

(a) Chained-volume measures. The figures in parentheses show shares in UK nominal exports in 2008. Data for China, Hong Kong and India are non seasonally adjusted.

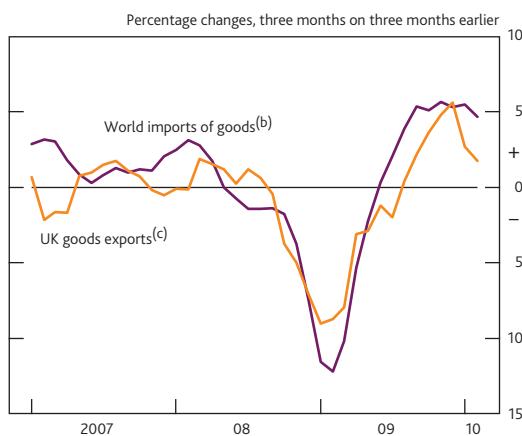
(b) Unless otherwise stated.

(c) Chinese data show annual GDP growth. Average is between 2000 Q1–2008 Q4.

(d) The 2010 Q1 observation is based on an advance estimate that has been de-annualised.

(e) Average is between 2004 Q3–2008 Q4.

**Chart 2.12 UK goods exports and world imports of goods<sup>(a)</sup>**



Sources: CPB Netherlands Bureau for Economic Policy Analysis and ONS.

(a) Volume measures.

(b) Data are weighted by shares in world imports.

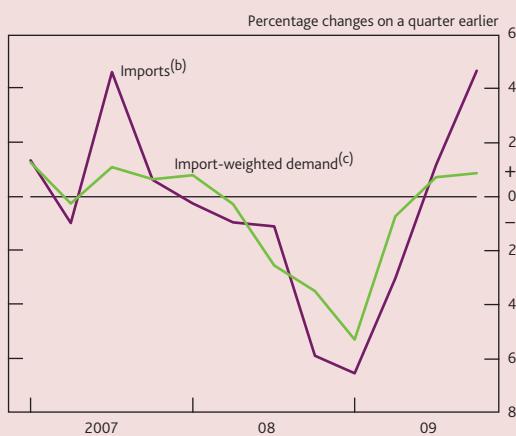
(c) Excluding the estimated impact of MTIC fraud.

## Recent developments in UK imports

UK spending on imports was around £420 billion in 2009, the equivalent of around 30% of nominal GDP. Import demand depends on the level and composition of demand in the economy, and also on the price of imports relative to the price of domestically produced goods and services.

Weak demand is likely to have reduced UK imports. Between 2008 Q1 and 2009 Q1 UK demand fell by 7%. Imports fell by around twice that amount. But import content varies across expenditure components: estimates from the *United Kingdom Input-Output Analytical Tables, 1995* suggest that there is considerable dispersion, with 46% of expenditure on inventories accounted for by imports, but only 12% of government spending. Taking into account these differences in import intensities, the fall in import-weighted demand over the same period was 11% (**Chart A**). Import intensities may, however, have changed since 1995: for example, the increasingly global nature of supply chains may mean that import demand is now more sensitive to movements in exports. And import intensities may also vary with the economic cycle. So the true fall in import-weighted demand is uncertain.

**Chart A** 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.

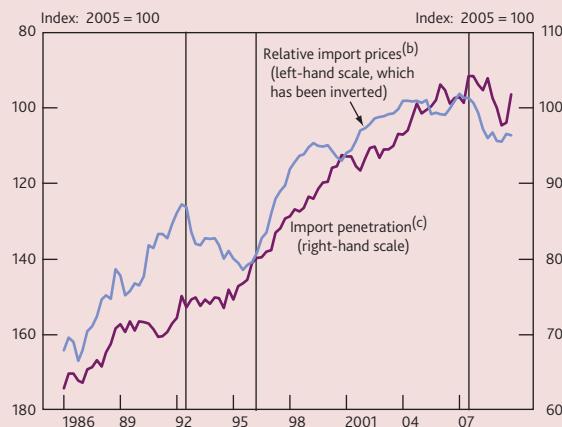
(c) Calculated by weighting household consumption (including non-profit institutions serving households), whole-economy investment (excluding valuables), government spending, stockbuilding (excluding the alignment adjustment) and exports (excluding the estimated impact of MTIC fraud) by their respective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

It is likely that the rise in import prices has pushed down UK import demand. Sterling has depreciated by around a quarter since mid-2007. Over the same period the average price of imports has increased by 16% while domestic prices have increased by far less. This shift in relative prices should have led to some substitution away from imports towards domestically produced products.

The share of imports in import-weighted demand has tended to rise over time, as the relative price of imports has fallen.

But it fell sharply in 2008 and 2009 H1 (**Chart B**). That fall may relate, in part, to difficulties in measuring true import-weighted demand. But it is also consistent with a rise in import prices encouraging substitution toward domestic products. Import penetration did appear to respond after past large exchange rate movements: the rate of increase slowed following sterling's exit from the ERM in 1992 and became more rapid following the appreciation that began in 1996.

**Chart B** UK import penetration and relative import prices<sup>(a)</sup>



Sources: ONS and Bank calculations.

(a) 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).

(b) Import prices divided by the GDP deflator.

(c) UK imports as a proportion of import-weighted demand. Import and export data exclude the estimated impact of MTIC fraud.

The overall extent of substitution away from imports will depend on how sensitive import demand is to changes in price — if imports are relatively insensitive to price changes, then the decline in import volumes would be significantly smaller than the increase in the relative price. Also, substitution may occur only gradually, especially if there are currently limited domestic substitutes for imported goods and services. Reports from the Bank's network of Agents around the United Kingdom suggest that, in some markets, import substitution may be limited because domestic companies do not presently produce products that are good substitutes. But, over time, UK companies may increase their supply of such products, as it will be profitable to do so.

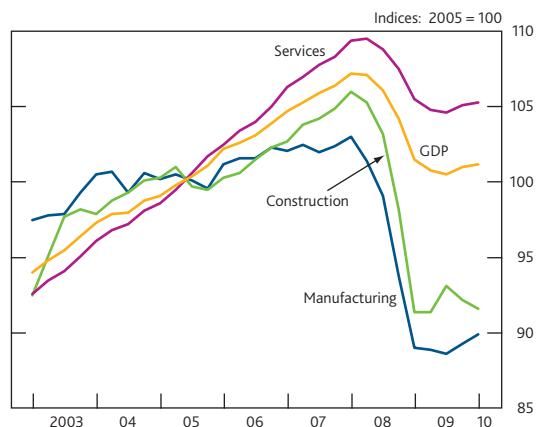
## Conclusion

The decline in imports through 2008 and early 2009 appears, in large part, to have been driven by the weakening in UK demand conditions. But it is possible that the depreciation of sterling has also had some, albeit smaller, impact by encouraging substitution away from imports and towards domestically produced products. Although imports recovered somewhat more than import-weighted demand over the second half of 2009, further substitution away from imports may occur over time as UK companies increase their presence in markets currently supplied primarily by foreign producers.

# 3 Output and supply

Output rose slightly in 2010 Q1, despite the downward influence of a number of temporary factors. Business surveys are consistent with faster output growth in Q2. Employment has fallen in recent months, but surveys indicate that the pace of decline is likely to moderate in the near term. The effective supply capacity of the economy is likely to have declined since the financial crisis began. The extent of that fall is uncertain, but survey indicators suggest that the margin of spare capacity remains substantial.

**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. The chart shows data consistent with the Q1 preliminary GDP release. Production data were subsequently revised.

Output increased slightly in 2010 Q1, despite the downward influence of a number of temporary factors (Section 3.1). Employment has continued to fall in recent months, but surveys suggest that the pace of decline will moderate in the near term (Section 3.2). The effective supply capacity of the economy is likely to have been impaired since the start of the financial crisis, in part reflecting credit constraints (Section 3.3). Despite that, most indicators suggest that there remains a large margin of spare capacity (Section 3.4).

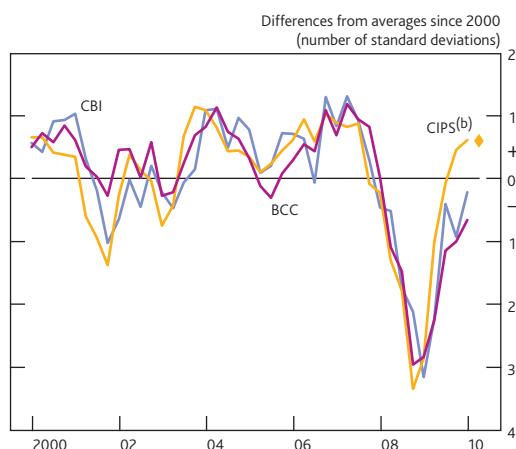
## 3.1 Output

According to the ONS preliminary estimate, output rose by 0.2% in 2010 Q1, following a 0.4% rise in 2009 Q4. That left the level of output in 2010 Q1 5.6% below its pre-recession peak (Chart 3.1). The most recent industrial production data, which had been compiled after the preliminary estimate of Q1 GDP, suggested that output growth in Q1 may be revised up slightly.

As discussed in the box on page 27, the restoration of the standard rate of VAT, heavy snowfall and car scrappage schemes are likely to have affected GDP growth since the latter part of 2009. These factors are likely to have boosted measured output growth a little in 2009 Q4, and reduced output growth in 2010 Q1. Stripping out these temporary factors, the activity data appear to be consistent with slightly faster underlying output growth in Q1 than Q4.

The business activity indices in the CIPS/Markit surveys suggest that output growth was above its ten-year average in April. Other surveys, however, such as those from the BCC and CBI, paint a more subdued picture of output growth in recent quarters (Chart 3.2). All of these survey balances are based on qualitative assessments of activity, so it is difficult to map them into precise estimates of output growth. But given the survey evidence, and the absence of some of those temporary factors that reduced activity in early 2010, the MPC's judgement is that measured output is likely to rise at a faster

**Chart 3.2** Survey 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 for 2010 Q2 shows April data.

## Temporary factors affecting recent outturns for GDP

The recent path of GDP growth has been affected by temporary factors, making it difficult to assess the extent to which underlying activity has picked up. In particular, the restoration of the standard rate of VAT, heavy snowfall and the waning impact of the UK and other European car scrappage schemes are likely to have affected GDP growth since the latter part of 2009.

According to data from the Met Office, January was the coldest month since 1987, and the associated snowfall is likely to have weighed on output and spending, for example by disrupting transport networks. Around 40% of respondents to a Lloyds TSB Commercial survey of small and medium-sized companies reported that they had been forced to close down for at least a day due to the weather. It seems likely that some of the decline in output in manufacturing and in services such as distribution and hotels and restaurants in January was related to the weather (**Table 1**). Output bounced back in February, with some sectors more than recovering the falls in January. But it is likely that the level of output in Q1 as a whole was reduced somewhat.

**Table 1** Services and manufacturing output<sup>(a)</sup>

|   | Percentage changes on a month earlier |      |      |      |      |      |
|---|---------------------------------------|------|------|------|------|------|
|   | Averages<br>since 2000                | 2009 |      |      | 2010 |      |
|   |                                       | Oct. | Nov. | Dec. | Jan. | Feb. |
| Total services (76%)                      | 0.2                                   | 0.0  | 0.3  | 0.6  | -0.7 | 0.6  |
| Distribution (11%)                        | 0.2                                   | -0.3 | 0.3  | 2.7  | -3.3 | 0.8  |
| Hotels and restaurants (3%)               | 0.1                                   | 0.7  | -0.8 | 0.8  | -4.4 | 6.2  |
| Transport, storage and communication (7%) | 0.2                                   | 0.1  | 0.4  | 0.5  | -1.2 | 1.1  |
| Business services and finance (32%)       | 0.3                                   | 0.1  | 0.4  | 0.1  | 0.3  | 0.1  |
| Government and other services (23%)       | 0.1                                   | -0.1 | 0.2  | 0.2  | -0.3 | 0.3  |
| Manufacturing (12%)                       | -0.1                                  | 0.0  | 0.1  | 0.9  | -0.9 | 1.3  |

(a) Chained-volume measures at basic prices. The figures in parentheses show shares in the level of nominal value added in 2007. The table shows data consistent with the Q1 preliminary release. Production data were subsequently revised.

The impact of the heavy snowfall is also apparent in monthly indicators of consumer spending and net trade. Retail sales fell sharply in January, before recovering in February (**Table 2**). And a similar pattern of monthly growth is evident in goods exports (**Table 2**).

**Table 2** Selected indicators of consumer spending and trade

Percentage changes on a month earlier<sup>(a)</sup>

|  | Averages<br>since 2000 | 2009 |      |      | 2010 |      |       |       |
|--|------------------------|------|------|------|------|------|-------|-------|
|  |                        | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.  | Apr.  |
| <b>Indicators of consumption</b>             |                        |      |      |      |      |      |       |       |
| Retail sales <sup>(b)</sup>                  |                        | 0.3  | 0.8  | 0.2  | 0.5  | -2.3 | 2.0   | 0.2   |
| Private new car registrations <sup>(c)</sup> | 1.2                    | 24.9 | 17.6 | 27.8 | 11.1 | 2.3  | -24.2 | -19.5 |
| <b>Indicators of trade</b>                   |                        |      |      |      |      |      |       |       |
| Exports of goods <sup>(d)</sup>              |                        | 0.2  | 2.8  | 0.4  | 3.2  | -7.7 | 8.3   | n.a.  |
| Imports of goods <sup>(d)</sup>              | 0.3                    | 3.0  | -1.6 | 4.6  | -1.2 | -0.7 | n.a.  | n.a.  |

Sources: ONS, Society of Motor Manufacturers and Traders and Bank calculations.

(a) Unless otherwise stated.

(b) All retailing excluding automotive fuel. Chained-volume measure.

(c) Percentage changes, three months on previous three months. Data have been seasonally adjusted by Bank staff.

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

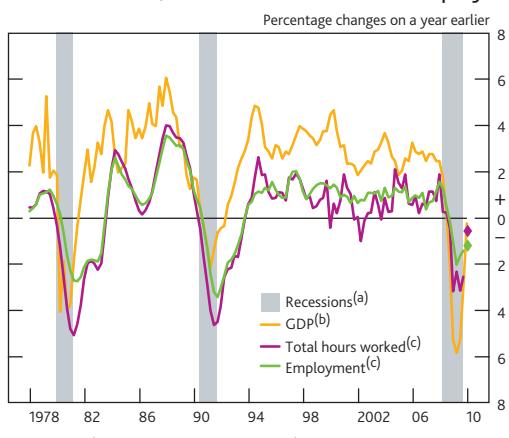
The restoration of the standard rate of VAT in January may also have temporarily depressed GDP in Q1, if some consumers brought forward spending to avoid paying the higher tax rate. That would have raised GDP in 2009 Q4. For expensive items such as cars, the incentives to bring forward expenditure will have been particularly strong. Indeed, private new car registrations rose sharply in Q4, and then fell back in early 2010 (**Table 2**), as did the output of companies that sell vehicles, which account for around one fifth of distribution output.

Moreover, spending and output in the motor vehicle industry may also have begun to wane in Q1 due to the declining impact of the car scrappage schemes both in the United Kingdom and abroad.<sup>(1)</sup> The UK scheme expired on 31 March, so that may have its largest downward effect on GDP in Q2. In addition, the eruption of the volcano in Iceland caused some disruption to air transport in Q2, though the impact on aggregate GDP is likely to have been small.

Together, these temporary factors are likely to have boosted measured output growth a little in 2009 Q4, and reduced output growth in 2010 Q1. Stripping out these temporary factors, the activity data appear to be consistent with slightly faster underlying output growth in Q1 than Q4. It is also likely that GDP growth in Q2 will be affected. Growth will be boosted in sectors where output was previously depressed by snow, but offsetting that, the ending of the United Kingdom's car scrappage scheme may reduce GDP.

(1) The economic impact of car scrappage schemes is discussed in more detail in the box on page 19 of the November 2009 Report.

### Chart 3.3 GDP, total hours worked and employment



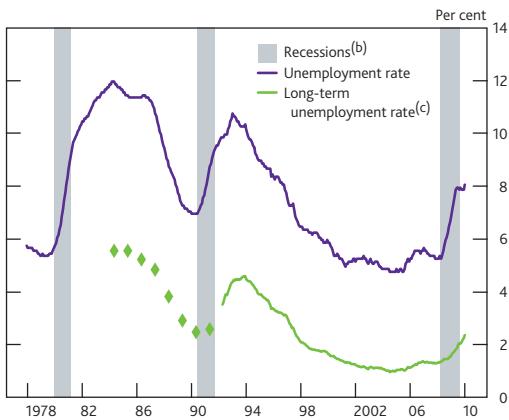
Source: ONS (including the Labour Force Survey).

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

(b) Chained-volume measure at market prices.

(c) The diamonds are estimates for 2010 Q1 based on employment and total hours worked for the three months to February.

### Chart 3.4 Unemployment rates<sup>(a)</sup>



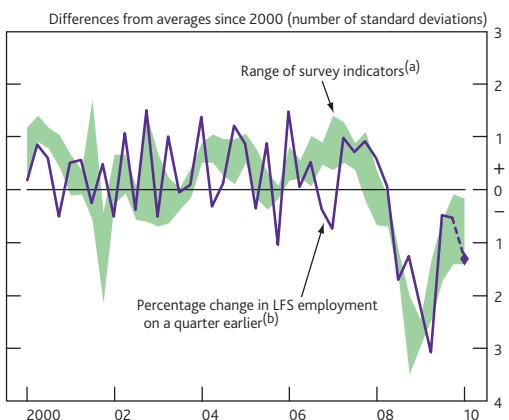
Source: ONS (including the Labour Force Survey).

(a) Rolling three-month measures, unless otherwise stated.

(b) Recessions are defined as in Chart 3.3.

(c) Defined as those people who have been unemployed for more than twelve months divided by the economically active population. Data prior to 1992 are based on non seasonally adjusted, annual LFS microdata. These annual observations correspond to the March-May quarter.

### Chart 3.5 Surveys of employment intentions and LFS 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 and business/consumer services) weighted by shares in employment. Manpower data are also included and cover the whole economy. The BCC data are non seasonally adjusted.

(b) The diamond is an estimate for 2010 Q1 based on employment for the three months to February.

rate in Q2 than in Q1. Prospects for output growth beyond Q2, where survey indicators provide little guidance, are discussed in Section 5.

## 3.2 Labour demand

### Labour market adjustment

Employment has fallen by 2.3% since 2008 Q1, leaving the level of employment around 670,000 lower. Although that decline is substantial, it is smaller than the decline in output. Some of that difference reflects companies cutting the hours worked by their employees; average hours have fallen by 1.6% since 2008 Q1. Nonetheless, total hours worked have fallen by less than in previous recessions, despite a larger decline in output (Chart 3.3). That difference may, in part, reflect the greater flexibility of real wages.<sup>(1)</sup> But other factors, such as the response of labour supply (Section 3.3), are also likely to have played a role.

Companies that are operating at a lower level of production following sharp falls in demand are likely to try to cut costs. Total labour costs have declined by less than the fall in the value of output in this recession. As a result, the share of national income accounted for by employee compensation — the labour share — has risen, as it did in the 1980s and 1990s recessions. The factors that underlie the recent rise in the labour share have been different to previous recessions, however. Labour productivity has declined more sharply, reflecting the resilience of employment relative to output. But that has been offset, in its effect on companies' costs, by weaker real wage growth.

In 2009 H2, the labour share declined, moving back towards its pre-recession level. That largely reflected continued weakness in real wage growth, while employment and output were little changed. It is likely that the labour share will need to fall back further, as it did following previous recessions. That could occur through continued weakness in real wage growth, or a pickup in productivity, either as output recovers or as companies reduce employment further.

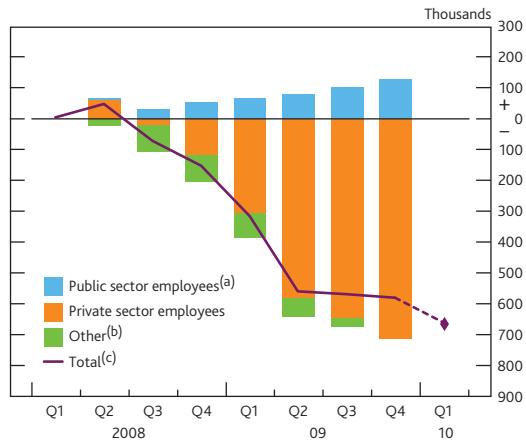
### Recent developments in employment

According to the Labour Force Survey (LFS), employment fell by 89,000 in the three months to February compared with the three months to November, while unemployment rose by 43,000. That difference in part reflected a rise in the number of people not participating in the labour market (Section 3.3). The unemployment rate has remained broadly flat since mid-2009 at around 8%, having risen sharply during 2008 and 2009 H1 (Chart 3.4).

The available evidence suggests that the pace of decline in employment is likely to moderate in the near term. Most

(1) For more details, see Faccini, R and Hackworth, C (2010), 'Changes in output, employment and wages during recessions in the United Kingdom', *Bank of England Quarterly Bulletin*, Vol. 50, No. 1, pages 43–50.

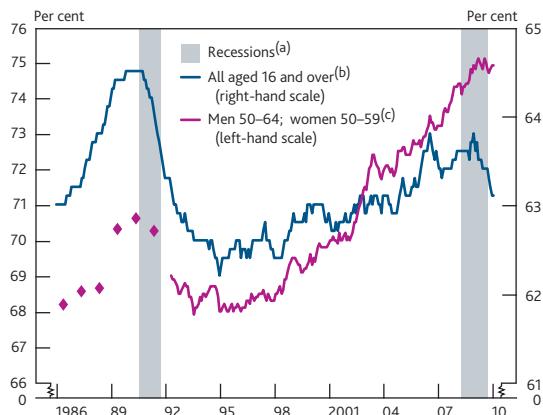
**Chart 3.6 Contributions to cumulative changes in the level of LFS employment since 2008 Q1**



Source: ONS (including the Labour Force Survey).

- (a) Total general government employees (excludes public corporations). Data have been adjusted to be on a calendar-quarter basis.
- (b) Includes the self-employed, unpaid family workers and government-supported trainees.
- (c) The diamond is an estimate for 2010 Q1 based on employment for the three months to February. Complete data on the composition of employment are not available for that period.

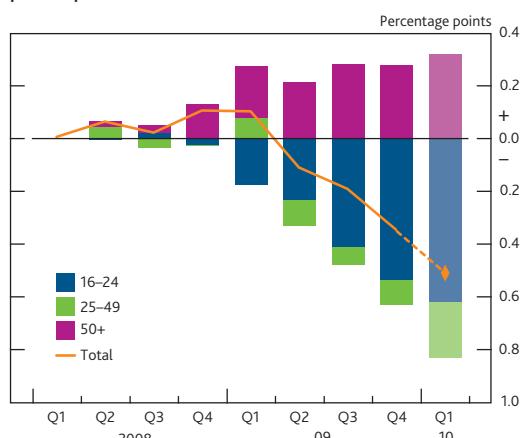
**Chart 3.7 Participation rates**



Source: ONS (including the Labour Force Survey).

- (a) Recessions are defined as in Chart 3.3.
- (b) Percentage of the 16+ population. Rolling three-month measure.
- (c) Percentage of the population aged 50–64 for men, and 50–59 for women. Rolling three-month measure. The observations before 1992 are based on non seasonally adjusted, annual LFS microdata. The annual observations correspond to the March–May quarter.

**Chart 3.8 Contributions to cumulative changes in the participation rate since 2008 Q1(a)**



Source: ONS (including the Labour Force Survey).

- (a) The diamond and the shaded bars are estimates for 2010 Q1 based on data for the three months to February.

contacts of the Bank's network of Agents around the United Kingdom reported that they expected employment to remain broadly stable over the next six months. Large-scale redundancy programmes were reported to have been largely completed, and many businesses expected to meet any increase in demand by reinstating 'normal' working hours. That message is broadly consistent with employment intentions survey balances, which have recovered from their troughs, but sit below their ten-year averages (Chart 3.5).

Given that some companies appear to have held on to labour as output fell sharply, there remains a risk that employment falls significantly further. Demand prospects remain uncertain, and if the recovery were weaker than companies currently expect then they might shed staff. Or employees may begin to resist further weakness in pay growth, causing companies to bear down on employment. The latest data on nominal wages show few signs of that occurring, however (Section 4).

Another factor that is likely to put downward pressure on employment over time is the prospective fiscal consolidation. Public sector employment has risen by over 100,000 since the start of the recession (Chart 3.6). Given the scale of the fiscal consolidation required (Section 2), it is likely that public sector employment will fall back.

### 3.3 Supply

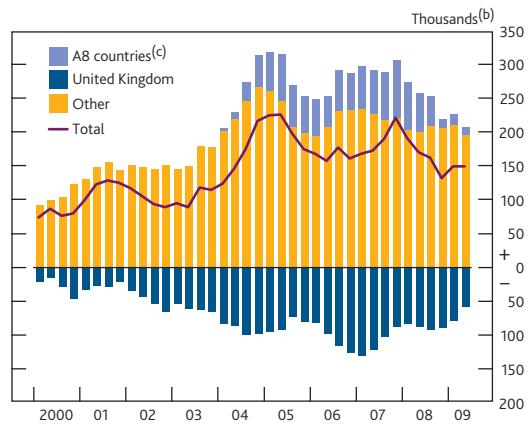
The overall supply potential of the economy will depend on growth in the labour supply, the capital stock and productivity. The supply potential of the economy may also be affected in the short run by other factors, including the cost and availability of working capital.

#### Labour supply

The participation rate — the number of people working or seeking work, as a percentage of the adult population — tends to fall in recessions, as some individuals may perceive their prospects of finding work to be low, and so stop searching. The participation rate has indeed fallen since this recession began, but the decline is markedly smaller than at the corresponding point of the 1990s slowdown (Chart 3.7). As discussed in previous Reports, some of that relative resilience reflects a rise in the participation rate of older people, which may in part reflect greater concerns about the adequacy of pension provision.

The fall in the participation rate since 2008 Q1 was more than accounted for by lower participation among those younger than 25 years old (Chart 3.8). That almost entirely reflected a rise in the number of young people in full-time education. As these students can be expected to enter the workforce at some point in the future, labour supply is unlikely to be permanently reduced. Moreover, a period of education is likely to equip young people with skills, which should enhance their productivity when they join the workforce. But there is a risk

**Chart 3.9** Estimates of net inward migration by citizenship<sup>(a)</sup>



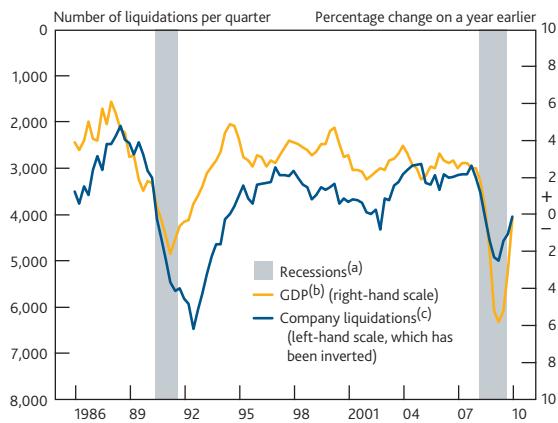
Source: ONS International Passenger Survey.

(a) Estimates of net long-term international migration by citizenship. Data are non seasonally adjusted. 2009 data are provisional, and are available to 2009 Q2.

(b) Rolling four-quarter sum.

(c) The A8 countries are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia. Prior to 2004, net inward migration from the A8 is included in the 'Other' bar, because the split between the A8 and other countries is not available.

**Chart 3.10** Company liquidations in England and Wales and GDP



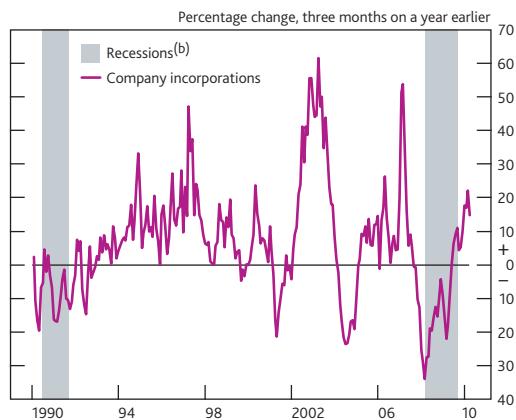
Sources: The Insolvency Service and ONS.

(a) Recessions are defined as in Chart 3.3.

(b) Chained-volume measure at market prices.

(c) Changes to legislation, data sources and methods of compilation mean the statistics should not be treated as a continuous and consistent time series. Since the Enterprise Act 2002, a number of administrations have subsequently converted to creditors' voluntary liquidations. These liquidations are excluded from the headline figures published by The Insolvency Service and excluded from the chart. Data are non seasonally adjusted.

**Chart 3.11** Company incorporations<sup>(a)</sup>



Source: Companies House.

(a) Data are for Great Britain and are non seasonally adjusted.

(b) Recessions are defined as in Chart 3.3.

that students will find it difficult to find jobs in the future if labour demand is weak at that time.

A development that could put downward pressure on the effective supply of labour is the rise in long-term unemployment. People who suffer an extended period of unemployment may be unable to retain or acquire the skills sought by employers. Although the long-term unemployment rate is currently much lower than in the mid-1980s and early 1990s, it has continued to rise in recent months, and was around 1 percentage point higher in the three months to February than at the start of the recession (Chart 3.4).

Labour supply also depends on migration. Data on migration are subject to significant uncertainty. But ONS estimates suggest that, although net inward migration has slowed, it remains positive (Chart 3.9). The ONS data indicate that the slowdown up to 2009 H1 was largely driven by lower net inward migration from the A8 Accession countries. More timely air passenger data suggest that net inflows from the A8 countries may have picked up in 2009 H2, however.

### Physical capital and productivity

Growth in the capital stock, which affects companies' supply capacity, has slowed since the recession began as a result of the sharp fall in investment spending (Section 2).

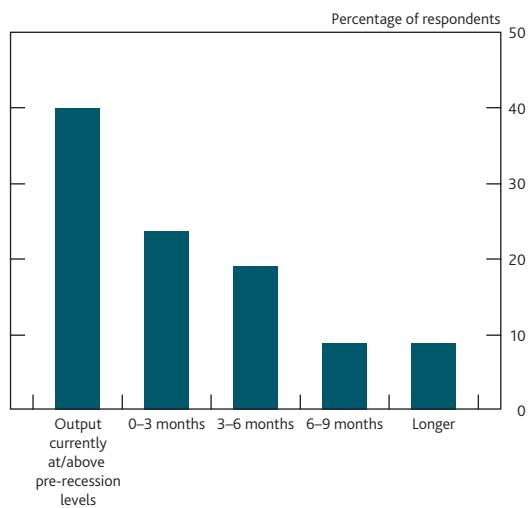
Another influence on growth in supply capacity is changes in the number of companies in the United Kingdom. For example, company liquidations may result in some capital being scrapped or re-employed less productively elsewhere. But so far, the rise in company liquidations appears to have been smaller than in the 1990s recession, despite the larger decline in output (Chart 3.10). And liquidations have fallen back since 2009 Q2. In addition, the number of company incorporations, which fell during the first year of the recession, has begun to rise again (Chart 3.11).

### Working capital and effective supply

Although growth in the labour supply and the capital stock have both slowed, they do not so far suggest that the large fall in demand has been matched by a similar fall in supply. That would imply a very large margin of spare capacity. But inflation has been resilient (Section 4), and some surveys of capacity utilisation (Section 3.4) do not seem to have fallen by as much as the fall in output might suggest. That suggests other factors may have reduced companies' effective supply capacity.

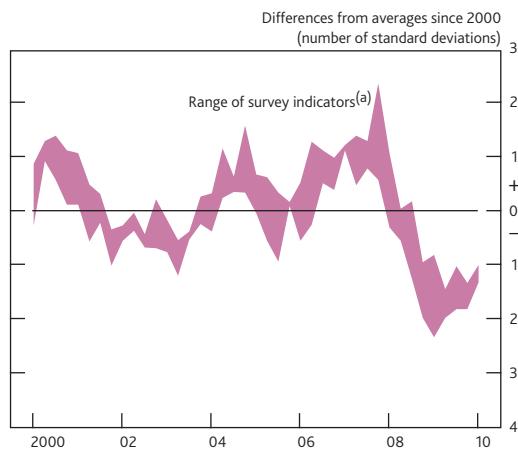
Effective supply capacity is likely to have been impaired by the impact of tight credit conditions. Restricted access to credit, and thus to the working capital necessary for day-to-day operation, may limit businesses' ability to meet demand. Consistent with that, the proportion of respondents to the latest CBI Service Sector Survey reporting that external finance

**Chart 3.12** Agents' survey: speed at which companies could return output to pre-recession levels<sup>(a)</sup>



(a) Companies were asked: 'If demand were forthcoming, how quickly could you return the volume of output to pre-recession levels?'. Based on around 350 responses to a survey of companies carried out by the Bank's Agents between February and March 2010. Responses have been weighted by employment.

**Chart 3.13** Survey measures of capacity utilisation



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

(a) Three measures are produced by weighting together surveys from the Bank's Agents (manufacturing and services), the BCC (manufacturing and services) and the CBI (manufacturing, financial services, business/consumer services, distributive trades) using shares in nominal value added. The BCC data are non seasonally adjusted.

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

|  | Averages since 2000 | 2009 |      |      |      | 2010 Q1 |
|--|---------------------|------|------|------|------|---------|
|  |                     | Q1   | Q2   | Q3   | Q4   |         |
| Vacancies/unemployed ratio <sup>(a)(b)</sup> | 0.37                | 0.21 | 0.18 | 0.18 | 0.19 | 0.19    |
| Temporary staff <sup>(b)(c)</sup>            | 27.0                | 29.3 | 29.8 | 32.8 | 34.6 | 34.7    |
| Part-time staff <sup>(b)(d)</sup>            | 9.2                 | 11.7 | 13.0 | 13.3 | 13.8 | 13.9    |
| Recruitment difficulties <sup>(e)</sup>      | 0.6                 | -3.5 | -3.7 | -3.8 | -3.3 | -2.8    |

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

(a) Number of vacancies divided by LFS unemployment. Vacancies exclude agriculture, forestry and fishing.

Average is since 2001 Q2.

(b) The Q1 observations are estimates based on data for the three months to February.

(c) Percentages of temporary staff who could not find a permanent job.

(d) Percentages of part-time staff who could not find a full-time job.

(e) Agents' scores for recruitment difficulties in the most recent three months compared with the situation a year earlier. End-quarter observations.

was likely to limit output remained at a historically high level. The proportion of respondents to the *CBI Industrial Trends Survey* reporting such concerns fell back in Q1, however.

In addition to restricted access to working capital, the sharp fall in output, and uncertainty about how quickly it is likely to recover, may have caused businesses to make temporary reductions to the scale of their operations. As one element of those changes, some companies have put employees on short hours. The number of people who reported that they were working shorter hours for economic reasons was around 150,000 in 2009 Q4, according to the LFS. That was lower than in early 2009, but still significantly higher than before the recession. And some businesses may have closed down some production lines. Some of these temporary reductions to capacity may be costly or take time to reverse. In that case, the downward pressure on prices from the fall in demand may have so far been tempered (Section 4).

A recent survey by the Bank's Agents suggests that most companies have not permanently reduced their supply capacity. For example, a majority of businesses reported that they could increase output by more than 5% without a material increase in recruitment or capital expenditure. And of the 60% of companies operating below pre-recession levels of production, nearly three quarters thought that they could recover the falls in output within six months, if demand were forthcoming (Chart 3.12).

The extent to which reductions in companies' effective supply capacity are subsequently made permanent is likely to be influenced by the strength of the recovery in demand. If the recovery in demand is robust, then companies are likely to bring some supply capacity back on line. But if demand growth proves anaemic, then current operating arrangements could be made permanent, and some capacity may be scrapped.

### 3.4 Balance between output and supply

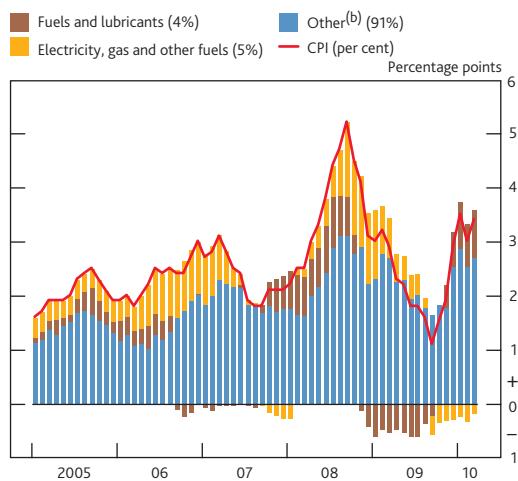
Overall, the extent of spare capacity in the economy is likely to be smaller than would be implied by the fall in output alone. Nonetheless, most indicators suggest that the margin of spare capacity remains substantial. Survey measures of capacity utilisation remain at below-average rates, although these indicators have been broadly flat in recent quarters (Chart 3.13). A roughly similar picture emerges from measures of slack within the labour market (Table 3.A), which suggest that the labour market remains loose.

Although there appears to be a substantial margin of spare capacity, the qualitative nature of many of these indicators means that there is necessarily considerable uncertainty about its precise size. Another uncertainty is the extent to which that margin of spare capacity will put downward pressure on inflation. These uncertainties are discussed in Section 5.

# 4 Costs and prices

CPI inflation was 3.4% in March. The restoration of the standard rate of VAT in January and rises in import prices, including oil, have raised inflation in recent months and are likely to keep it elevated in the near term. Inflation is then likely to fall back, but less quickly than anticipated at the time of the February *Report*. Earnings growth remained weak. Although measures of inflation expectations have picked up a little over the past year, they are at levels that appear consistent with inflation being around the target in the medium term.

**Chart 4.1 Contributions to CPI inflation<sup>(a)</sup>**



(a) Contributions to annual (non seasonally adjusted) CPI inflation. The figures in parentheses show shares in the CPI basket in 2010.  
(b) Includes a rounding residual.

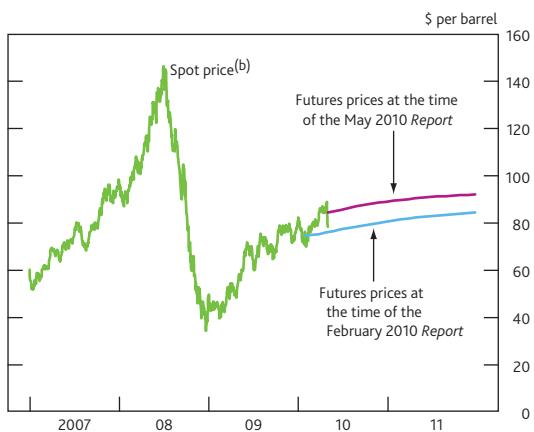
## 4.1 Consumer prices

CPI inflation was 3.4% in March (Chart 4.1), a little higher than three months earlier. CPI inflation in 2010 Q1 as a whole was broadly in line with the February *Report* projection. With CPI inflation lying more than 1 percentage point away from the 2% target in January, as was expected at the time of the February *Report*, the Governor, on behalf of the Committee, wrote an open letter to the Chancellor. That letter discussed a number of factors that have pushed up inflation temporarily.<sup>(1)</sup>

The restoration of the standard rate of VAT to 17.5% in January 2010 has raised inflation temporarily. It is difficult to judge precisely the extent to which businesses passed on that VAT increase into prices.<sup>(2)</sup> But the ONS estimates that the rise in VAT boosted CPI inflation by 0.4 percentage points in January, which should remain in the twelve-month growth rate for the rest of the year. Reports from the Bank's network of Agents around the United Kingdom suggested that the VAT increase may have put further upward pressure on prices in February.

Inflation has also been pushed up by imported goods prices, including oil (the brown bars in Chart 4.1 show the contribution of fuels and lubricants to CPI inflation). Oil prices have picked up further since the February *Report*, and the small depreciation in the sterling ERI over the same period is likely to put further upward pressure on import prices more generally (Section 4.2). Largely reflecting these developments, the MPC has revised up its near-term projection for inflation since the February *Report*. The Committee judges it likely that CPI inflation remained above 3% in April, which would trigger another open letter to the Chancellor.

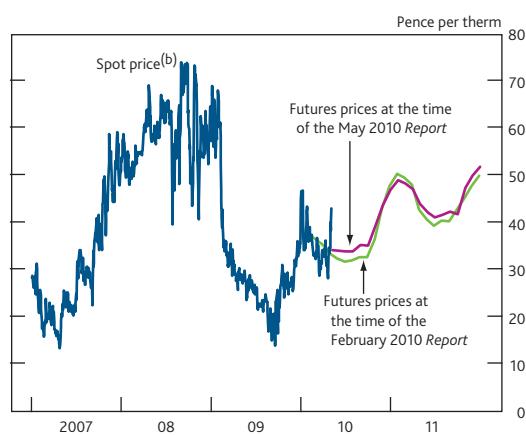
(1) The letter is available at [www.bankofengland.co.uk/monetarypolicy/pdf/cpiletter100216.pdf](http://www.bankofengland.co.uk/monetarypolicy/pdf/cpiletter100216.pdf).  
(2) See the box on page 33 of the November 2009 *Report*.

**Chart 4.2** Oil prices<sup>(a)</sup>

Source: Bloomberg.

(a) Futures prices for February and May are averages during the fifteen working days to 3 February and 7 May respectively.

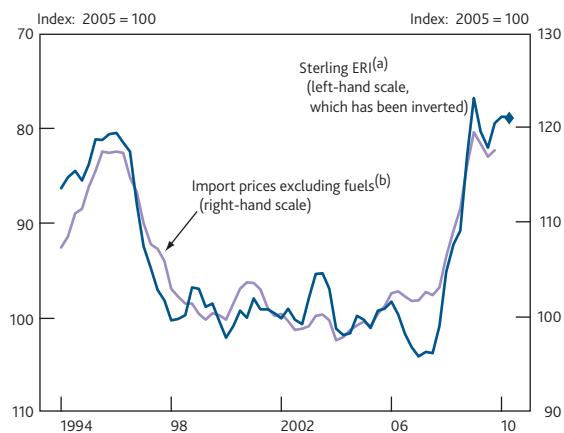
(b) Brent forward price for delivery in 10–21 days' time.

**Chart 4.3** Wholesale gas prices<sup>(a)</sup>

Sources: Bloomberg and Thomson Reuters Datastream.

(a) Futures prices for February and May are averages during the fifteen working days to 3 February and 7 May respectively.

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

**Chart 4.4** Import prices excluding fuels and the sterling ERI

Sources: Bank of England, ONS and Bank calculations.

(a) Quarterly averages of daily data. The diamond is an estimate for 2010 Q2 based on the average between 1 April and 7 May.

(b) Import price data are non seasonally adjusted, and exclude the estimated impact of missing trader intra-community fraud. The latest observation is 2009 Q4.

Although energy and import prices have been a key influence on prices over the past few years, the weak level of nominal demand and tight credit conditions are also likely to have influenced companies' pricing decisions (Section 4.3). Section 4.4 discusses the associated impact on labour costs. Prices are also influenced by expectations of inflation. A key risk for the MPC is the extent to which the current episode of elevated inflation leads to any increase in medium-term inflation expectations, and hence inflationary pressure (Section 4.5).

## 4.2 Energy and import prices

### Energy prices

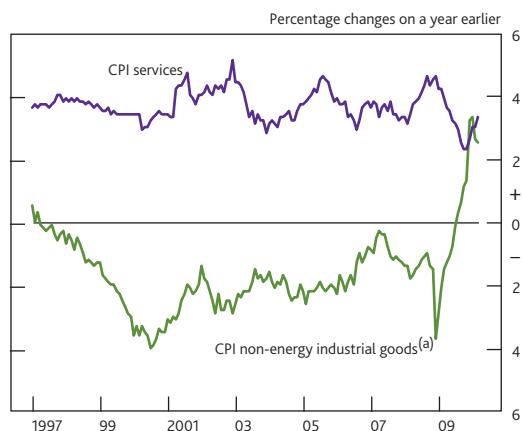
Over much of the past three months, oil prices continued to rise, supported by signs of a pickup in global activity (**Chart 4.2**). In part reflecting that increase, petrol prices at the pump in April rose above their mid-2008 peak. But oil prices then weakened markedly, as concerns over the sustainability of fiscal positions in some countries intensified, leading to renewed worries about downside risks to the near-term outlook for global growth. Despite a fall of around 10% during the fifteen working days to 7 May, US dollar Brent oil prices remained around 13% higher in the fifteen-day window, on average, than in the run-up to the February Report.

In contrast to oil prices, movements in domestic gas and electricity prices have reduced CPI inflation in recent months (**Chart 4.1**). In part, that reflected price cuts by British Gas. And price cuts announced subsequently by other major suppliers will have reduced CPI inflation in April. The scale of the announced price cuts was broadly in line with what the MPC had assumed at the time of the February Report. The evolution of retail gas and electricity prices will depend in part on changes in wholesale gas prices. Wholesale gas spot prices were around 8% lower in the run-up to the May Report compared with at the time of the February Report, but futures prices were around 4% higher over the next two years (**Chart 4.3**). The MPC's latest projections are conditioned on an assumption of no changes in domestic energy prices over the summer.

### Import prices

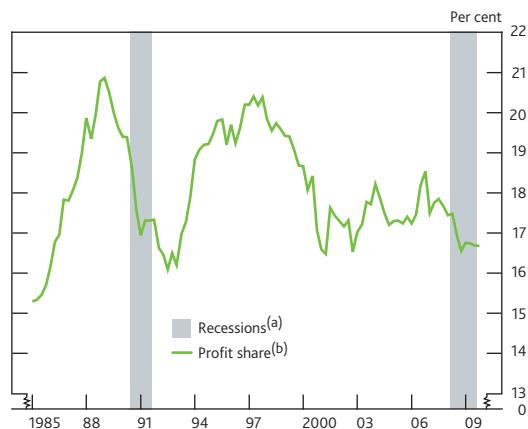
Import prices, even excluding energy prices, have increased over the past few years. While the price of imports excluding fuels was broadly unchanged over the year to 2009 Q4, that was still around 15% higher than in 2007 Q4 (**Chart 4.4**). To a considerable extent, higher import costs reflect the significant depreciation of sterling since mid-2007. The small depreciation since the February Report is therefore likely to put further upward pressure on import prices, and will in due course affect companies' pricing decisions (Section 4.3).

**Chart 4.5** CPI non-energy industrial goods and CPI services



(a) CPI goods excluding food and non-alcoholic beverages, alcoholic beverages and tobacco, fuels and lubricants, and electricity, gas and other fuels.

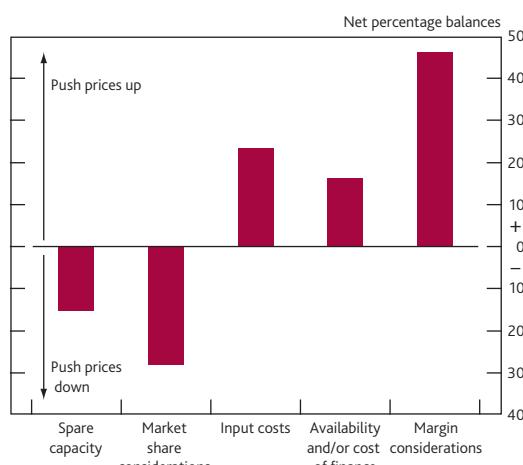
**Chart 4.6** Profit share



Sources: ONS and Bank calculations.

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

**Chart 4.7** Agents' survey: factors influencing output price expectations<sup>(a)</sup>



- (a) The survey asked respondents how the factors listed were affecting their expected change in output prices in 2010. Based on around 350 responses to a survey carried out by the Bank's Agents between February and March 2010. Responses have been weighted by employment.

### 4.3 Companies' pricing decisions

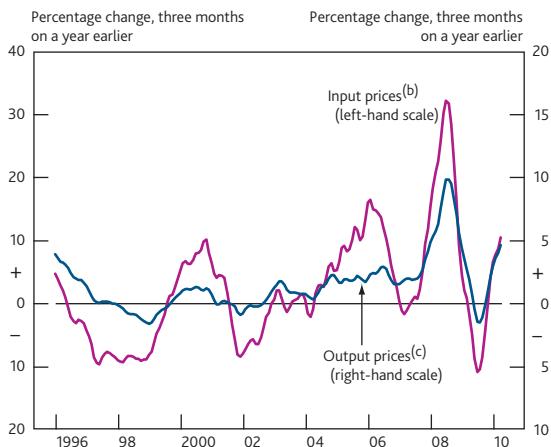
Inflation has been more resilient over the past year than would have been expected given developments in demand alone. Weak demand encourages companies to reduce costs, including wages (Section 4.4), and puts downward pressure on prices. In part, the resilience of inflation reflects increases in imported costs. But tight credit conditions, changes in companies' operating practices, and concerns over cash flow may also have played a role.

Companies have faced increased costs over the past few years, which are likely to have pushed up prices. In response to higher costs, businesses may initially accept lower profit margins but, over time, they are likely either to increase the prices charged to their customers, or else to seek to push down other costs, including pay (Section 4.4). Import prices have risen markedly since 2007 (Section 4.2) and it seems likely that some of that has fed through to prices. That is consistent with the rise in non-energy non-food goods price inflation relative to services price inflation over the past year (**Chart 4.5**), as goods tend to be more import-intensive than services. Increases in the cost of credit, including working capital finance, are also likely to have raised some companies' costs.

Changes in some companies' operating practices during the recession may also have contributed to the resilience of inflation. As discussed in Section 3, if companies mothballed some capacity and reduced working hours as demand fell, then the effective margin of spare capacity in the short run may be rather smaller than the fall in demand would appear to suggest. So that may have attenuated the downward pressure on inflation from the weakness in nominal demand.

Concerns over maintaining short-run cash flow may also help to explain the resilience of inflation. In the past, profit margins in the United Kingdom have tended to fall back during periods of weak demand, perhaps because companies chose to keep prices down temporarily and forego current profits in order to build future market share ahead of any recovery in demand. But reports from the Bank's Agents suggest that during this recession some businesses have focused instead on maintaining short-term cash flow, perhaps in response to the reduced availability of credit. Consistent with that, profit margins — measured by the share of businesses' profits in total income — have been unusually resilient, falling no more in this recession than during that of the early 1990s, despite the larger fall in output and increase in import costs (**Chart 4.6**).

There is uncertainty over the relative role of all these factors in explaining the resilience of inflation, and therefore the likely path of inflation going forward (Section 5). But a recent survey by the Bank's Agents suggested that respondents expected costs and concerns over maintaining margins to lead to higher

**Chart 4.8** Manufacturing output and input prices<sup>(a)</sup>

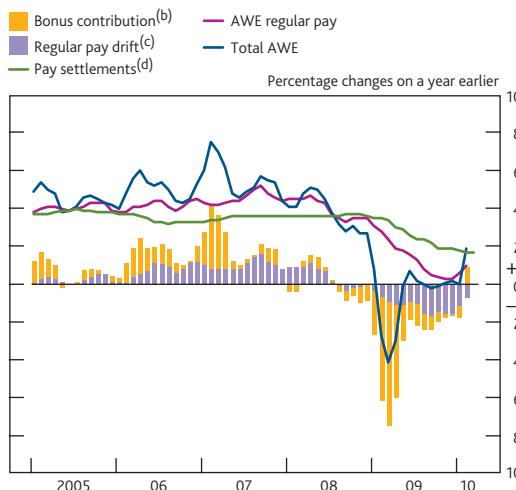
(a) Data are non seasonally adjusted.  
 (b) Excluding Climate Change Levy.  
 (c) Excluding excise duties.

**Table 4.A** Indicators of output prices in the service sector

|   | Averages since 2000 | 2009 |      |      | 2010 |      |
|---|---------------------|------|------|------|------|------|
|   |                     | Q2   | Q3   | Q4   | Q1   | Apr. |
| Services Producer Price Index <sup>(a)</sup>          | 2.1                 | -0.3 | -0.9 | -0.7 | n.a. | n.a. |
| Agents' scores <sup>(b)</sup>                         | 1.5                 | -1.2 | -1.7 | -1.9 | -1.3 | n.a. |
| CIPS/Markit services <sup>(c)</sup>                   | 52.2                | 46.3 | 47.8 | 48.9 | 50.4 | 50.1 |
| CBI business and professional services <sup>(d)</sup> | -8                  | -35  | -31  | -35  | -21  | n.a. |

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

(a) Percentage change on a year earlier. The Services Producer Price Index is an experimental index. It is not classified as a National Statistic.  
 (b) Average is based on quarterly data since 2005. Business to business services prices in the most recent three months compared with the situation a year earlier.  
 (c) Quarterly figures are averages of monthly data. A reading above 50 indicates increasing average prices this month relative to the situation one month ago.  
 (d) Percentage balance of respondents reporting average selling prices to be 'up' relative to 'down' over the past three months.

**Chart 4.9** Private sector earnings<sup>(a)</sup>

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

(a) Three-month moving average measures, unless otherwise stated.  
 (b) Percentage points. Calculated as the difference between total AWE growth and AWE regular pay growth.  
 (c) Percentage points. Calculated as the difference between AWE regular pay growth and pay settlements.  
 (d) Average over the past twelve months.

output prices over the remainder of 2010, while they expected spare capacity to push down prices (Chart 4.7).

Prices nearer to the start of the supply chain may also provide an early signal of changes in inflationary pressures.

Manufacturing output price inflation has picked up sharply since mid-2008, largely reflecting higher input price inflation (Chart 4.8). In turn, that mainly reflected the rise in oil prices, although inflation has also risen for a number of other inputs, most notably metals. By contrast, services output price inflation has remained weak. And, although survey measures of services price inflation have picked up a little in recent months, perhaps also reflecting oil, they remain lower than their averages since 2000 (Table 4.A).

## 4.4 Labour costs

Earnings growth has weakened markedly over the past two years. Twelve-month average weekly earnings (AWE) private sector earnings growth in the two years to February 2010 averaged 1.2%, around a third of its average rate since the series began in 2001. Higher import costs, weak nominal demand, and concerns over cash flow may have prompted businesses to bear down on nominal wages over this period. And companies' desire to bear down on labour costs may have been facilitated by employees' willingness to accept pay restraint (Section 3).

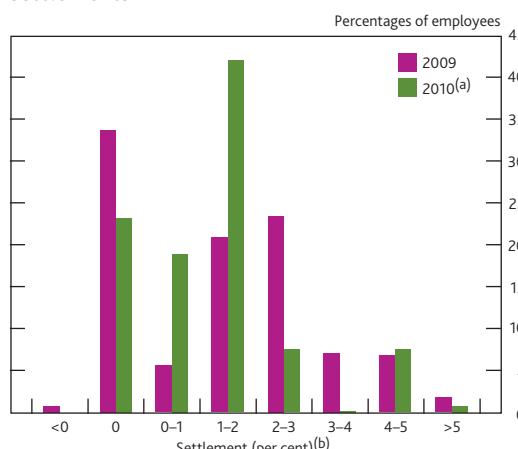
Private sector pay growth remained weak in the three months to February, although both total and regular pay growth picked up (Chart 4.9). Bonus payments, concentrated in the finance and business services sector, picked up particularly sharply, raising total pay growth. Bonus payments are typically related to past performance, so that rise may contain limited information about future pay pressures. The pickup in regular pay growth was most pronounced in the manufacturing sector. Reports from the Bank's Agents suggest that could in part reflect additional hours worked, as some companies have reinstated shifts that had been cut a year earlier; some contacts also reported higher overtime payments.

Pay settlements, which make the largest contribution to overall earnings growth on average, have remained weak in recent months (Chart 4.9). Although the proportion of pay freezes so far in 2010 has been lower than during 2009, a greater proportion of settlements have been at or below 2% (Chart 4.10).

There are tentative signs that downward pressure on pay is waning. For example, responses to the KPMG/REC Report on Jobs indicated that salaries have risen so far in 2010, in contrast to sharp falls a year earlier.

The near-term outlook for pay will depend in part on how important higher import prices, weak demand and heightened

**Chart 4.10 Distribution of private sector wage settlements**

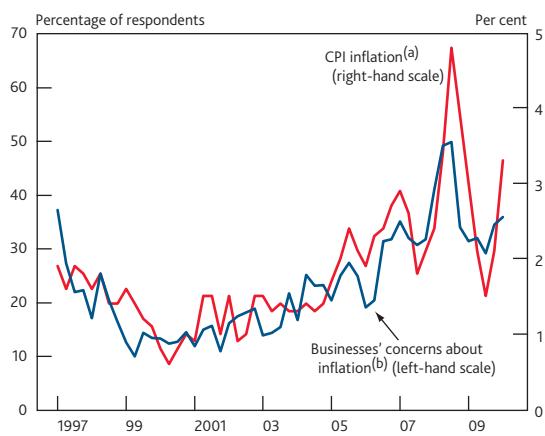


Sources: Bank of England, Incomes Data Services, Industrial Relations Services, the Labour Research Department and ONS.

(a) Based on settlements effective between 1 January and 7 May.

(b) A settlement that is a round number is classified within the bucket where that round number is the upper bound. For example, a 2% settlement is included within the 1% to 2% bucket.

**Chart 4.11 CPI inflation and survey measure of businesses' concerns about inflation**

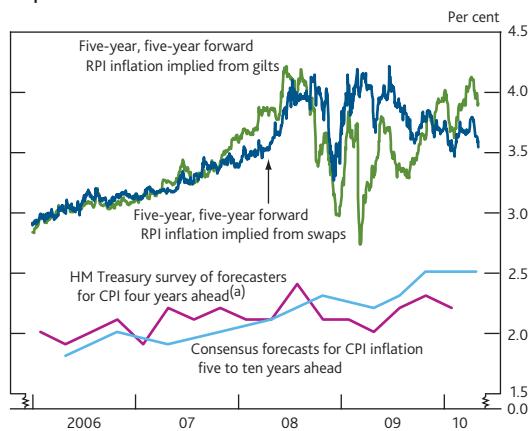


Sources: BCC and ONS.

(a) Quarterly averages of monthly data.

(b) Companies are asked: 'Is inflation more of a concern to your business than three months ago?'. Manufacturing and service sector responses are weighted together using shares in nominal value added. Data are non seasonally adjusted.

**Chart 4.12 Market-based indicators of inflation expectations and selected forecasters' inflation expectations**



Sources: Bloomberg, Consensus Economics, 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.

concerns over cash flow have been in encouraging companies to hold down pay growth to date. Uncertainties about the relative contribution of these factors and prospects for earnings are discussed in Section 5.

## 4.5 Inflation expectations

Inflation will be determined in part by households' and companies' expectations of inflation. The MPC's latest projection is for CPI inflation to remain above the 2% target throughout 2010. A key question for the MPC is whether that will be accompanied by higher medium-term inflation expectations, particularly given that inflation has been above the target for much of the past few years.

Although households' inflation expectations have picked up a little over the past year, the box on page 37 concludes that they remain at levels that appear consistent with inflation being around the target in the medium term.

Companies' inflation expectations can affect both prices charged and wage bargaining. Although there are no available direct measures of businesses' expectations for aggregate inflation, one crude proxy is the proportion of companies reporting in the BCC survey that they are more concerned about inflation than three months ago. That has picked up a little in recent quarters, but remains significantly below its 2008 peak (Chart 4.11).

The message from other measures of inflation expectations is less clear-cut. The gap between nominal and real yields on gilts, one indicator of financial market participants' inflation expectations, has increased over the past year (Chart 4.12). By contrast, an equivalent estimate derived from inflation swaps has been broadly stable. But both measures have been volatile since mid-2008, perhaps reflecting market-specific factors. It is difficult to know how much weight to place on recent movements, but market intelligence suggests that swap-based measures are probably providing a better guide at present. Although Consensus forecast data suggest that professional economists' inflation expectations have drifted up in recent years, a survey conducted by HM Treasury suggests that expectations have remained broadly stable (Chart 4.12).

## Recent movements in households' inflation expectations

CPI inflation has risen to more than 1 percentage point above the 2% target, and the MPC expects inflation to remain elevated in the near term. There is a risk that a period of elevated inflation will lead to an increase in the public's medium-term inflation expectations, affecting price-setting and wage bargaining. Although households' inflation expectations have picked up a little over the past year, most measures remain at, or below, their historic averages, with increases to date being less marked than during the 2008 spike in inflation. Overall, households' inflation expectations remain at levels that appear consistent with inflation being around the target in the medium term.

### Short-term inflation expectations

Short-term expectations are likely to be influenced by observed inflation, as well as other economic developments affecting the future course of inflation. Around half of households in the February 2010 Bank/NOP survey reported that past price trends were a very important influence on their year-ahead inflation expectations, while 44% cited the strength of the economy.

Surveys suggest that households' near-term inflation expectations have picked up over the past year. But they remain no higher than their historical averages (**Chart A**).

The rise in inflation expectations over 2009 may in part reflect the recent rise in actual inflation. In 2008, when inflation

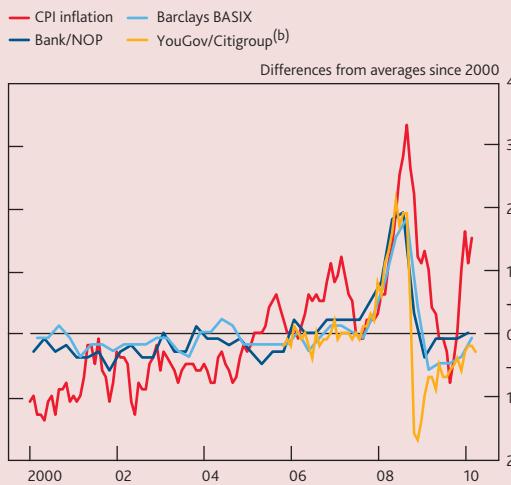
picked up markedly, year-ahead inflation expectations also rose. The rise in inflation expectations may also reflect a receding risk of significantly below-target inflation. The fall back in measures of short-term inflation expectations after the 2008 spike in inflation was more rapid than the drop in inflation itself (**Chart A**), suggesting that other factors played a role in driving down expectations. In particular, as households saw demand growth slow, they may have expected inflation to weaken. So, as the near-term prospects for demand strengthened, some households may have begun to place less weight on the risk of below-target inflation.

### Medium-term inflation expectations

Developments in medium-term inflation expectations are also likely to be relevant for the determination of prices and wages. Little information is available on how households form their expectations beyond a year ahead. But movements in medium-term expectations during the 2008 spike in inflation suggest that these measures are affected by movements in inflation (**Chart B**), although to a lesser extent than their short-term equivalents. In part, the small rise in medium-term inflation expectations since the start of 2009 may therefore reflect inflation outturns. But the two year ahead Barclays BASIX and five to ten year ahead YouGov/Citigroup measures — the only series with backruns that extend before 2008 — remain below their series averages.

Medium-term expectations may also reflect other factors. Indeed, the MPC has revised up its projection for the most likely path for inflation two years ahead since the February 2009 *Report* by a broadly similar amount to the rise in survey measures for the same horizon.

**Chart A** CPI inflation and survey measures of households' inflation expectations one year ahead<sup>(a)</sup>

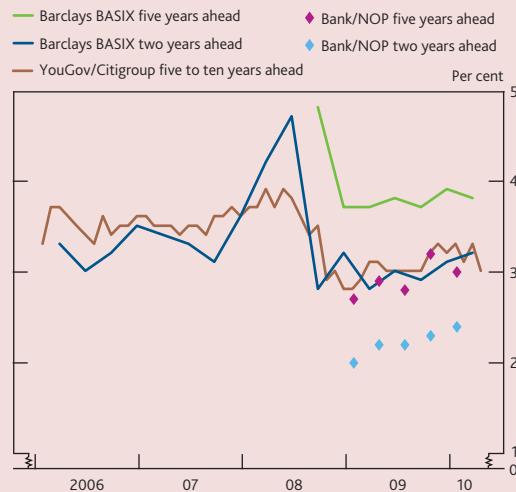


Sources: Bank of England, Barclays Capital, Citigroup, GfK NOP, ONS and YouGov.

(a) The questions ask about expected changes in prices over the next twelve months, but do not reference a specific price index. All measures are based on the median estimated price change.

(b) Differences from average since November 2005.

**Chart B** Survey measures of households' inflation expectations beyond a year ahead<sup>(a)</sup>



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

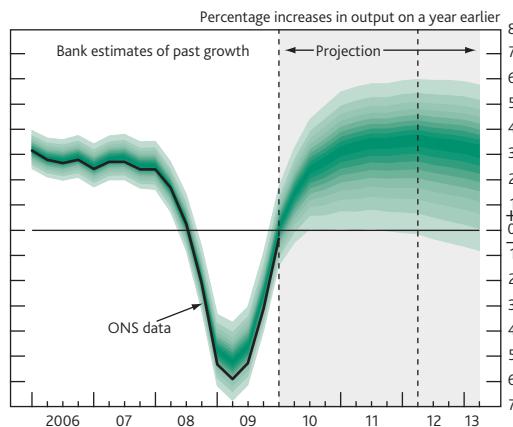
(a) Measures do not reference a specific price index and are based on median estimated price changes.

# 5 Prospects for inflation

Nominal spending and real output have continued to recover, but both remain below pre-crisis levels. The medium-term outlook for GDP growth depends on the balance between powerful countervailing forces. The substantial monetary stimulus and the past depreciation of sterling will support spending, as should the prospective recovery in global demand. But growth is likely to be tempered by the necessary fiscal consolidation, and by continuing restricted availability of credit. CPI inflation is elevated following the restoration of the standard rate of VAT to 17.5%, increased oil prices, and the past depreciation of sterling. As the impact on inflation from those factors diminishes, downward pressure from the persistent margin of spare capacity is likely to cause inflation to fall below the target for a period. But the extent to which inflation will moderate is highly 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, inflation is somewhat more likely to be below target than above it for much of the forecast period, although those risks are broadly balanced by the end.

## 5.1 The projections for demand and inflation

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

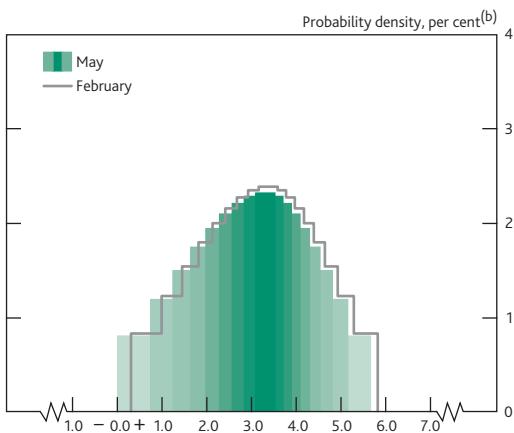


The outlook for inflation over the coming years is highly uncertain. In part that reflects significant uncertainty over the prospects for nominal demand, given the powerful but countervailing forces influencing spending. But it also reflects the difficulty in judging both the degree of spare capacity in the economy, and the sensitivity of inflation to that economic slack. The fan charts described below represent the MPC's best current assessment of the outlook, given those uncertainties. That assessment is bound to change as events unfold and more data become available.

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.

The course of demand will depend on the balance between two sets of powerful countervailing forces. The considerable stimulus from monetary policy, the past depreciation of sterling, and the prospective recovery in global demand should all support a further pickup in growth. But there are also significant headwinds, from the fiscal consolidation that is necessary in the United Kingdom and some other countries, and from the process of private sector balance sheet repair,

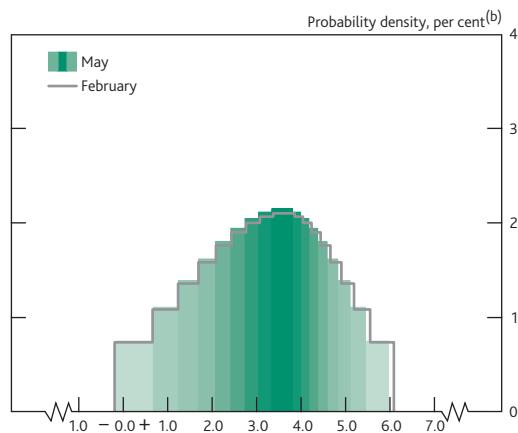
**Chart 5.2** Projected probabilities of GDP growth in 2011 Q2 (central 90% of the distribution)<sup>(a)</sup>



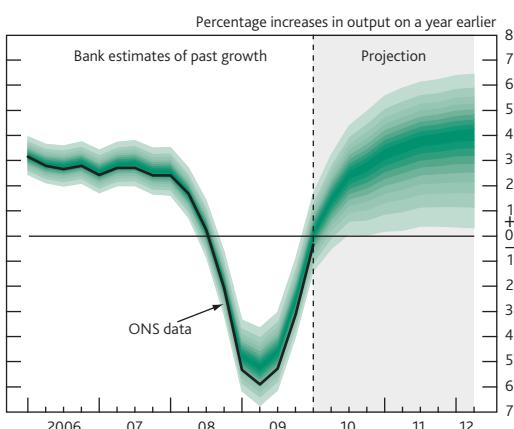
(a) Charts 5.2 and 5.3 represent cross-sections of the GDP growth fan chart in 2011 Q2 and 2012 Q2 for the market interest rate projection. They have been conditioned on the assumption that the stocks of purchased assets financed by the issuance of central bank reserves remain at £200 billion throughout the forecast period. The coloured bands in Charts 5.2 and 5.3 have a similar interpretation to those on the fan charts. Like the fan charts, they portray the central 90% of the probability distribution. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that GDP growth in 2011 Q2 and 2012 Q2 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 5.2 and 5.3 represent the corresponding cross-sections of the February 2010 *Inflation Report* fan chart, which was conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remained at £200 billion throughout the forecast period.

(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 5.3** Projected probabilities of GDP growth in 2012 Q2 (central 90% of the distribution)<sup>(a)</sup>



**Chart 5.4** GDP projection based on constant nominal interest rates at 0.5% and £200 billion asset purchases



See footnote to Chart 5.1.

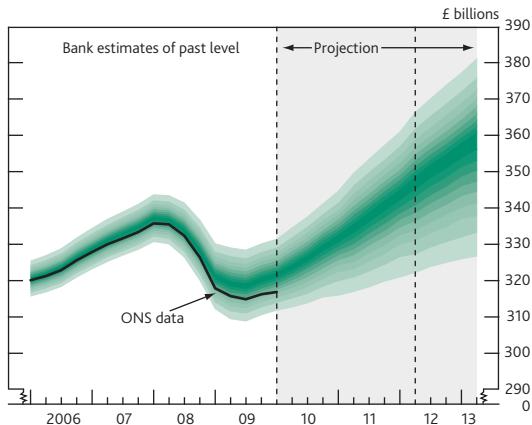
particularly in the banking sector. The magnitude of these offsetting forces, and the difficulty in calibrating their likely effects, means that the outlook for demand is highly uncertain.

The Committee judges that the recovery in economic activity is likely to continue to gather strength. But the risks to demand throughout the forecast period remain skewed to the downside — in other words, the average of all possible outcomes, weighted by their likelihood, is below the single most likely outcome. Charts 5.2 and 5.3 show the spread of outcomes for growth at the one and two-year horizons, and the equivalent spreads at the time of the February *Report*. The downside risks are, in the near term, judged to be greater than in February, reflecting the intensification of market concerns over the prospects for fiscal consolidation in a number of countries. Some countries may accelerate the pace of fiscal consolidation in the light of market pressures. Further out, the distribution is similar to that in the February *Report*. Chart 5.4 shows the GDP growth projection for the next two years under the alternative assumption that Bank Rate is held constant at 0.5%. Under that assumption, the outlook for growth is a little stronger, particularly in the second year of the projection.

Even if growth is relatively robust throughout the forecast period, output is likely to remain substantially below the level implied by a continuation of its pre-crisis trend (Chart 5.5). Much of that shortfall will probably be matched by a reduction in the supply capacity of the economy. But output is also likely to remain below potential supply 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. Chart 5.8 shows the corresponding probability

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



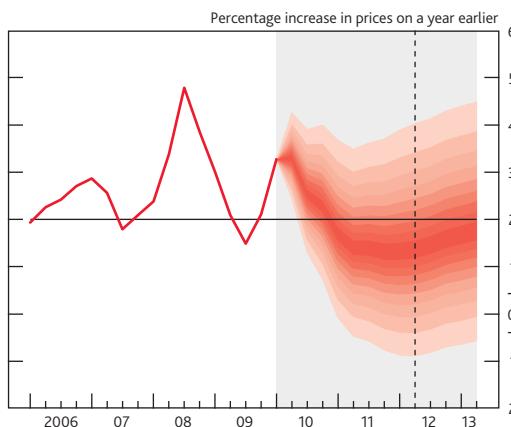
Chained-volume measure. See the footnote to Chart 5.1 for details of the assumptions underlying the projection for GDP growth. The width of this fan over the past has been calibrated to be consistent with the four-quarter growth fan chart, under the assumption that revisions to quarterly growth are independent 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.

of inflation being above the 2% target, and the probability implied by the February Report projections. Inflation is likely to remain above the 2% target throughout 2010, boosted by the restoration of the standard rate of VAT to 17.5%, the effects of the past depreciation of sterling, and the increase in oil prices. The near-term outlook is somewhat above that in the February Report (Chart 5.7), due largely to higher oil prices and a further depreciation in sterling since February (Section 4).

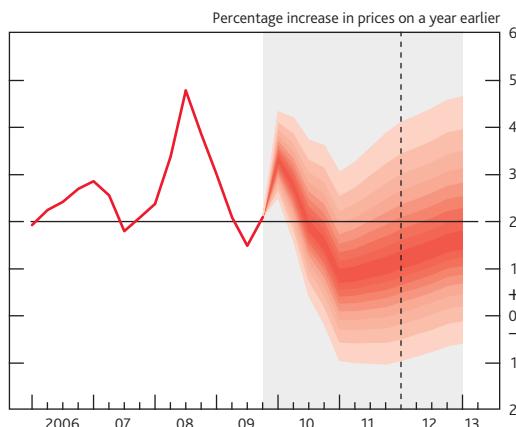
Further ahead, inflation is likely to fall back towards, and then probably go below, the 2% target, as the temporary upward effects on inflation wane, and the substantial margin of spare capacity bears down on prices. But the pace and extent of the fall in inflation are highly uncertain, and there are substantial risks in both directions. To the downside, spare capacity may exert a greater influence, pulling inflation more significantly below the target. To the upside, further adjustment to the lower level of sterling, or increases in commodity prices as a result of strong global demand, might cause inflation to remain above target for longer. That would increase the risk that medium-term inflation expectations, which currently appear reasonably well-anchored, might rise. There is a range of views among Committee members regarding the relative strengths of these various factors. On balance, the Committee judges that, conditioned on the monetary policy assumptions described above, inflation is somewhat more likely to be below target than above it for much of the forecast period, although those risks are broadly balanced by the end.

Charts 5.9 and 5.10 show the spread of outcomes for CPI inflation at the one and two-year horizons, and the equivalent spreads at the time of the February Report. The Committee's

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

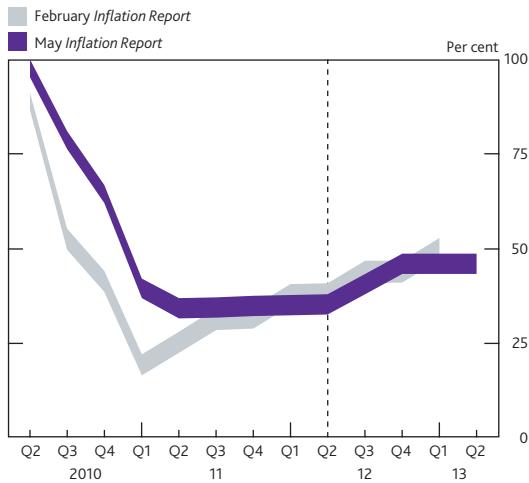


**Chart 5.7** CPI inflation projection in February based on market interest rate expectations and £200 billion asset purchases



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 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 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 the identically coloured bands sums to 10%. The distribution of that 10% between the bands above and below 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 probabilities in the lower bands are very slightly smaller than those in the upper bands at Years 1, 2 and 3 reflecting an upward skew. That skew is slightly smaller than that in Chart 5.7. The bands widen as the time horizon is extended, indicating the increasing uncertainty about outcomes. 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 May and February 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, with the width of the swathe at each point in time corresponding to the width of the band of the fan chart in which the target falls in that quarter. 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.

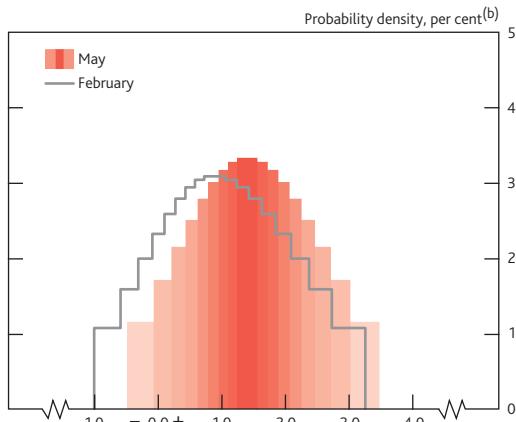
best collective judgement is that within the distribution, the risks to inflation are skewed slightly to the upside, albeit a little less so than in February, given the increased downside risks to demand in the near term. Nonetheless, by the two-year horizon there is a roughly three-in-five chance that inflation will be below the target.

**Chart 5.11** shows the projection for CPI inflation conditioned on the alternative assumption that Bank Rate is held constant at 0.5%. Under that assumption, faster growth leads to a slightly stronger outlook for inflation, so that the risks around the target are broadly balanced by the end of the second year of the forecast. The inflationary impact of that faster growth could be smaller if it caused companies to reverse cuts in their effective supply capacity more rapidly (see below). But, with growth only slightly stronger over the first year of the forecast period than in the distribution conditioned on market interest rates, the impact of any supply response on inflation two years out is judged unlikely to be significant.

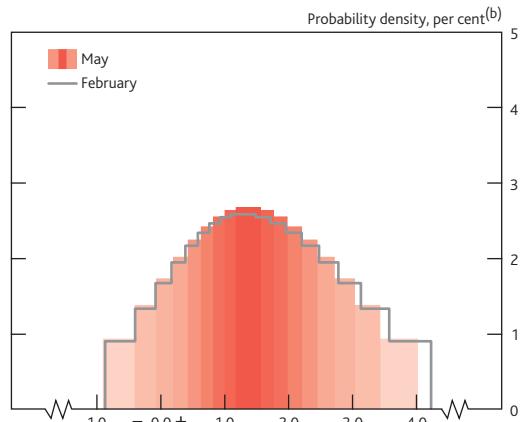
## 5.2 Key uncertainties

The outlook for demand embodies a substantial rebalancing of the UK economy over the coming years. The lower level of sterling should help push the current account towards surplus. Some decline in the household saving rate, and a gradual recovery in corporate investment, are likely to lead the private sector financial surplus to fall back from its current high level. And the projections are conditioned on the plans set out in the March 2010 *Budget*, in which the fiscal deficit declines over the forecast period. But there are substantial uncertainties around the elements of this rebalancing, and its implications for growth and inflation. On the supply side, the key uncertainties

**Chart 5.9** Projected probabilities of CPI inflation outturns in 2011 Q2 (central 90% of the distribution)<sup>(a)</sup>



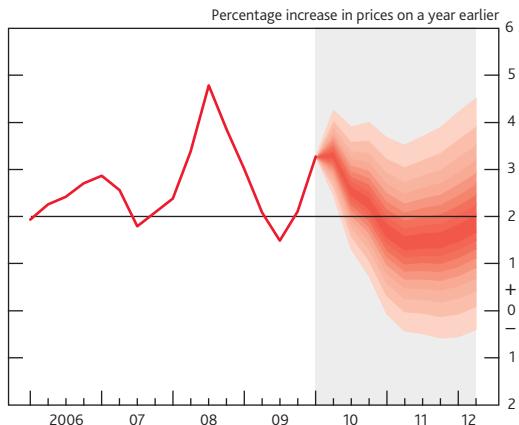
**Chart 5.10** Projected probabilities of CPI inflation outturns in 2012 Q2 (central 90% of the distribution)<sup>(a)</sup>



(a) Charts 5.9 and 5.10 represent cross-sections of the CPI inflation fan chart in 2011 Q2 and 2012 Q2 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 Q2 and 2012 Q2 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 February 2010 *Inflation Report* fan chart, which was conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remained at £200 billion throughout the forecast period.

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



See footnote to Chart 5.6.

are the extent of spare capacity in the economy, and the degree to which it will bear down on inflation.

### How much, and how quickly, will growth be boosted by net trade?

The substantial depreciation of sterling since mid-2007 and the likely recovery in global demand should boost net trade and output, but the extent of that support remains uncertain. It will depend, in part, on the evolution and composition of world demand. The global recovery has so far been most vigorous in those regions which are relatively less important for UK exports (Section 2). In contrast, the United Kingdom's largest export market, the euro area, appears to have been recovering more gradually.

There are heightened risks to the global recovery from increased uncertainty about the sustainability of fiscal positions across a number of countries. Since the February *Report*, the IMF and euro-area authorities have agreed to provide financial support to Greece, where doubts in the financial markets about the viability of its fiscal plans had resulted in a prohibitive increase in the cost of issuing public debt. A further package was agreed by the European Council and Member States, in conjunction with the IMF and ECB, to stem the risk of contagion to other euro-area countries. Fiscal pressures within the euro area could impact adversely on the United Kingdom through their impact on euro-area demand, on the balance sheets of financial institutions at home and abroad, and on private sector confidence.

The extent of the boost from net trade will also depend on how rapidly the lower level of sterling encourages spending to switch towards UK-produced goods and services. Despite the depreciation and the recovery in global demand, net trade is estimated to have reduced UK growth over the second half of 2009. There are a number of potential explanations for that recent weakness. Some UK businesses may be delaying increases in output or entry into new markets. That may be due to uncertainty about future global demand, and about the likely persistence of the lower level of sterling. It may also reflect restricted credit availability, and an accompanying focus on maximising current cash flow rather than market share. Those effects might imply a more rapid boost from net trade over the forecast period, particularly if credit conditions loosen.

Weak net trade could prove more persistent, however, to the extent that the recent weakness has reflected a shift in global demand away from products in which the United Kingdom has tended to specialise: for example, the provision of financial services.

The Committee judges that the lower level of sterling and the likely recovery in global demand will provide a boost to net trade, such that the United Kingdom's trade balance moves

## Financial and energy market assumptions

The forecasts in this section have been conditioned on asset prices in the fifteen working days to 7 May. As described in Section 1, however, asset prices were volatile during that period.

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 May decision, the path implied by forward market interest rates was for Bank Rate to remain close to 0.5% until 2010 Q4. Bank Rate was assumed to rise thereafter, with the path 0.7 percentage points lower, on average, over the remainder of the forecast period than assumed in the February *Report*.

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

Per cent

|          | 2010              |     |     | 2011 |     |     |     | 2012 |     |     |     | 2013 |     |
|----------|-------------------|-----|-----|------|-----|-----|-----|------|-----|-----|-----|------|-----|
|          | Q2 <sup>(b)</sup> | Q3  | Q4  | Q1   | Q2  | Q3  | Q4  | Q1   | Q2  | Q3  | Q4  | Q1   | Q2  |
| May      | 0.5               | 0.5 | 0.6 | 0.8  | 1.1 | 1.4 | 1.7 | 2.0  | 2.3 | 2.6 | 2.8 | 3.0  | 3.2 |
| February | 0.5               | 0.6 | 1.0 | 1.3  | 1.7 | 2.1 | 2.5 | 2.8  | 3.1 | 3.3 | 3.5 | 3.6  |     |

(a) The data are fifteen working day averages of one-day forward rates to 7 May 2010 and 3 February 2010 respectively. The curves are based on overnight index swap (OIS) rates.

(b) May figure for 2010 Q2 is an average of realised spot rates to 7 May, and forward rates thereafter.

The May 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 February 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 7 May. That was 2.1% below the starting point for the February projections. Under the MPC's usual convention,<sup>(1)</sup> the exchange rate is assumed to depreciate a little, to 79.2 by 2012 Q2, and is lower throughout the forecast period than assumed in February.

The starting point for UK equity prices in the MPC's projections was 2870 — the average of the FTSE All-Share for the fifteen working days to 7 May. That was 5.2% above the starting point for the February 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 9% higher (in US dollar terms) than at the time of the February *Report*. Wholesale gas futures prices were around 4% 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 the May projections are conditioned on a benchmark assumption of no changes in domestic energy prices over the summer.

(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.

close to surplus towards the end of the forecast period. But the risks around that judgement are skewed to the downside.

## How much will companies and households want to save?

The recession has coincided with a marked increase in the private sector financial surplus, as household consumption has fallen more sharply than incomes, and companies' investment spending has plunged. A key influence on spending over the forecast period will be the extent to which that higher financial surplus persists, or falls back, for example as uncertainty about the economic outlook dissipates.

A number of factors are likely to have played a role in the sharp rise in the household saving rate (Section 2): reduced income expectations following the financial crisis and subsequent recession; concerns about the fiscal consolidation that lies ahead; tight credit conditions making borrowing more expensive and harder to obtain for some; uncertainty about the economic outlook; and attempts by indebted households to improve their balance sheet positions. With

household incomes likely to grow at below-average rates throughout the forecast period, the strength of the recovery in consumption will depend on whether or not these factors continue to encourage high levels of saving.

The Committee judges that the household saving rate is likely to remain above its level prior to the recession throughout the forecast period. But as uncertainty recedes, the saving rate may fall back somewhat from its recent peak. That would enable consumption to grow at rates at, or slightly above, its historical average later in the forecast period, despite subdued income growth. There are substantial risks on both sides of that judgement.

Private sector spending will also depend on developments in the corporate sector. The corporate sector financial surplus has increased sharply as investment spending has plunged (Section 2). To the extent that businesses put investment decisions on hold until the outlook for demand became clearer, then investment could recover strongly as uncertainty lessens and the recovery gathers pace.

Some companies may wish to cut their investment spending even further, however. The sharp falls in demand are likely to have left many businesses with excess capital. Those companies will have little incentive to invest until that excess capital is worked off.

Overall, the Committee judges that companies' desired investment is likely to recover somewhat, but to remain subdued relative to GDP throughout the forecast period. That, together with a gradual fall back in household saving, would imply some decline in the private sector financial surplus. But the surplus is likely to remain elevated relative to pre-recession levels.

### **Will there be enough bank credit to finance companies' desired investment?**

The subdued outlook for desired investment, together with the large corporate sector financial surplus in aggregate, suggest that businesses' net demand for bank credit may remain modest over the forecast period. Some companies will nonetheless need to increase their bank borrowing to finance an increase in spending as the recovery strengthens. Although the availability of bank credit to companies has improved a little (Section 1), it remains significantly tighter than prior to the crisis. The Committee judges that despite some further improvement in credit supply over the forecast period, elevated borrowing costs, relative to Bank Rate, are likely to continue to act as a drag on spending.

The risks around the supply of credit continue to lie to the downside. Banks made progress in strengthening their balance sheets during 2009 (Section 1), but that process may continue for a while longer, which might imply greater restrictions on

domestic lending. In particular, the banking sector will need to replace a large amount of funding over the coming years, including that supported by the official sector. And intensified market concerns over fiscal sustainability in a number of countries could put upward pressure on banks' funding costs. Higher funding costs for banks could be passed through into increases in borrowing costs for households and companies.

### **How much will fiscal consolidation bear down on demand?**

The public sector deficit in the United Kingdom has increased very sharply during the recession, and was projected to reach 11.8% of GDP in 2009/10. In large part that deterioration reflected the impact of the fall in activity. But with the level of output likely to remain well below its pre-recession trend for a considerable period, a significant fiscal consolidation will be necessary over the medium term. The MPC's projections are conditioned on the plans set out in the March 2010 *Budget* to reduce the deficit to 4% of GDP by 2014/15. Fiscal consolidation can be expected to weigh on demand and therefore inflation, although spending by households and businesses probably already makes some allowance for the prospective fiscal tightening.

Nevertheless the eventual nature and pace of the consolidation are uncertain and will need to be sensitive to sustaining financial market confidence. A more detailed and demanding path of fiscal consolidation than set out in the March 2010 *Budget* may therefore be needed in order to avoid unnecessary increases in the cost of issuing public debt.

### **How much spare capacity is there, and how will it evolve?**

Although nominal spending grew at close to historical average rates during the second half of 2009, by the end of the year it remained around 3% below its level at the beginning of 2008, and around 10% below the level implied by a continuation of its pre-recession trend. Prices take time to adjust to weaker nominal spending, and so the nominal shortfall has led to large falls in real output, and the emergence of spare capacity in the economy, both inside businesses and within the labour market.

That margin of spare capacity is likely to have been moderated by falls in effective supply, as is suggested by business surveys which point to less spare capacity than implied by the falls in output (Section 3). That may reflect a number of factors. A shortage of working capital has constrained some companies' output. Moreover, following the sharp falls in demand, some businesses may have made changes to their operating processes to reduce the overall cost of operating at a lower level of production. Those effects may make it more difficult for companies to increase output rapidly if demand rises.

Some of that reduction in effective supply should be reversed over the forecast period, as working capital constraints ease,

and the recovery in demand encourages businesses to bring production back on stream. But, at the same time, it is likely that the effects of higher unemployment on labour supply and weak investment on the capital stock will impact adversely on the economy's supply potential. Overall, the effects of the financial crisis and the recession are likely to depress the level of potential supply throughout the forecast period and beyond, though the magnitude of that impairment is difficult to gauge with precision.

The Committee judges that there is nevertheless significant spare capacity in the economy, both within companies and in the labour market (Section 3). Companies are likely to seek to work off their internal spare capacity relatively quickly, but some degree of slack in the labour market may persist for longer, in part reflecting lower employment in the public sector.

### **How are spare capacity and the lower exchange rate affecting inflation?**

Inflation has remained elevated (Section 4), despite the sharp fall in nominal demand and the resulting emergence of spare capacity. Some of the recent resilience of inflation is likely to reflect the depreciation of sterling between mid-2007 and early 2009, and the resulting increase in many companies' costs. If they were to maintain their profitability, businesses needed to respond either by bearing down on other costs, including wages, or by raising prices. In the event, some of the exchange rate effect appears to have been passed forward into higher prices (Section 4).

In contrast to inflation, earnings growth has remained subdued, reflecting some combination of: increased slack in the labour market; companies' response to higher imported costs; and a willingness on the part of employees to accept less pay in return for preserving jobs.

The Committee judges that spare capacity is likely to bear down on prices throughout the forecast period. In the near term, slack within companies will provide them with an incentive to reduce prices to boost demand. Even as that internal slack diminishes, high unemployment is likely to continue to exert downward pressure on earnings growth. That should mean that inflation falls back towards, and then probably moves somewhat below, the target as the effect of higher import prices wanes. There are significant uncertainties around the magnitudes of these effects, however.

It is possible that inflation will fall further below the target. Other factors, in addition to the effects of higher imported costs, may have pushed up inflation temporarily — for example, increases in the cost of finance and some rebuilding of profit margins. To the extent that such one-off factors have pushed up inflation in the past, as they fade the downward influence on prices of spare capacity may become more apparent.

Inflation may, however, take longer to fall back to the target. There may be further adjustment to the lower level of the exchange rate still to come through. The robust recovery in many emerging economies may put further upward pressure on oil and other commodity prices. And it is possible that the weakness in pay growth reflects, to a greater degree, temporary effects such as the falls in sterling, rather than the more persistent impact of higher unemployment. In that case, earnings growth might pick up more rapidly as the exchange rate effect wanes. Inflation would then prove to be less sensitive to the margin of spare capacity, and so would fall back less sharply.

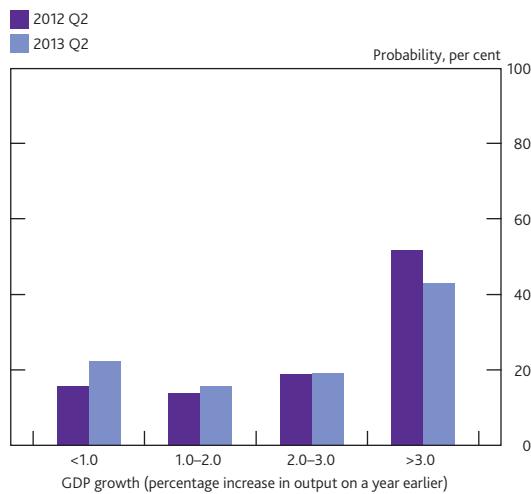
A more prolonged period of above-target inflation would increase the risk that inflation expectations might rise. Inflation has already been above the target for all but six out of the past 30 months for which data have been released. Expectations of inflation in the medium term currently appear well-anchored (see the box on page 37 of Section 4), but it is possible that a further period of above-target inflation could cause those expectations to increase. That risk would be exacerbated if the near-term upside risks to inflation were to materialise, or if the commitment to reduce the fiscal deficit over the coming years were insufficiently credible.

### 5.3 Summary and the policy decision

Four-quarter GDP growth is likely to pick up further in coming quarters, as quarterly growth strengthens, and as large falls in output a year ago drop out of the annual comparison. But the outlook remains highly uncertain, and the risks to activity are judged to be skewed to the downside, both in the near term and beyond. **Chart 5.12** shows frequency distributions for GDP growth at the two and three-year horizons. They suggest that at the two-year horizon, there is a roughly one-in-three chance that four-quarter growth will be below 2%, but a one-in-two chance that it will have risen above 3%. The distribution for growth in the medium term is similar to that in February. In the near term, however, the downside risks are judged to have increased, reflecting the intensification of market concerns over the prospects for fiscal consolidation in a number of countries.

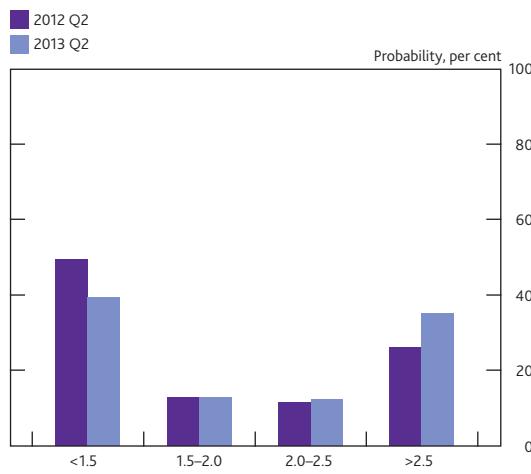
CPI inflation is likely to remain elevated in the near term. Further out, there are substantial risks relative to the target in both directions, reflecting, on the downside, the significant degree of spare capacity in the economy, but, on the upside, the expected period of above-target inflation, together with the possibility of further increases in commodity prices. **Chart 5.13** shows frequency distributions for inflation. The Committee judges that, given the scale of the risks in both directions, at both the two and three-year horizons there is only around a one-in-four chance that inflation will be within 0.5 percentage points of the 2% target.

**Chart 5.12** 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.

**Chart 5.13** 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.

In evaluating the outlook for growth, the Committee will focus on: developments in financial markets and the banking sector, including the growth of money and credit; the pace and composition of the global recovery; the evolution of incomes and household saving; indicators of businesses' investment; and the nature and speed of the fiscal consolidation.

In monitoring those factors likely to affect inflation, the Committee will in addition focus on: evidence regarding the evolution of supply, and the associated margin of spare capacity in the economy; the response of earnings and prices to that spare capacity; developments in the relative prices of goods and services, in order to help assess exchange rate pass-through; and measures of inflation expectations.

At its May meeting, the Committee noted that the economic recovery was likely to gather pace, but heightened concerns about fiscal sustainability in some countries posed a risk. CPI inflation was likely to remain above target for the rest of this year. The downward pressure from the persistent margin of spare capacity was then likely to cause inflation to fall back to below the target, before gradually returning to around the target as the recovery proceeded. In the light of that outlook, the Committee judged that maintaining Bank Rate at 0.5% and maintaining the size of the programme 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.

## 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 April.

On average, CPI inflation was expected to be below the 2% target in 2011 Q2, rising to slightly above target in the following two years (**Table 1**). Those expectations were higher than those three months earlier. On average, respondents expected inflation to be 2.2% at the three-year horizon, but there was a range of views around that (**Chart A**).

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

|                              | 2011 Q2 | 2012 Q2 | 2013 Q2 |
|------------------------------|---------|---------|---------|
| CPI inflation <sup>(b)</sup> | 1.8     | 2.1     | 2.2     |
| GDP growth <sup>(c)</sup>    | 2.2     | 2.4     | 2.5     |
| Bank Rate (per cent)         | 1.5     | 2.9     | 3.7     |
| Sterling ERI <sup>(d)</sup>  | 80.3    | 81.2    | 82.6    |

Source: Projections of outside forecasters as of 26 April 2010.

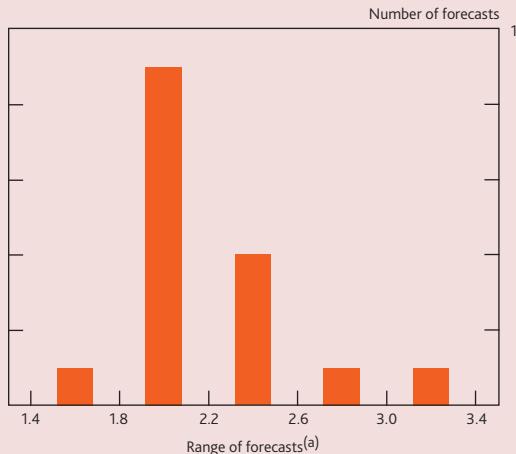
(a) For 2011 Q2, there were 20 forecasts for CPI inflation, GDP growth and Bank Rate and 15 for the sterling ERI. For 2012 Q2, there were 17 forecasts for CPI inflation, 16 for GDP growth and Bank Rate and 13 for the sterling ERI. For 2013 Q2, there were 16 forecasts for CPI inflation and GDP growth, 15 for Bank Rate and 13 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 for 2013 Q2



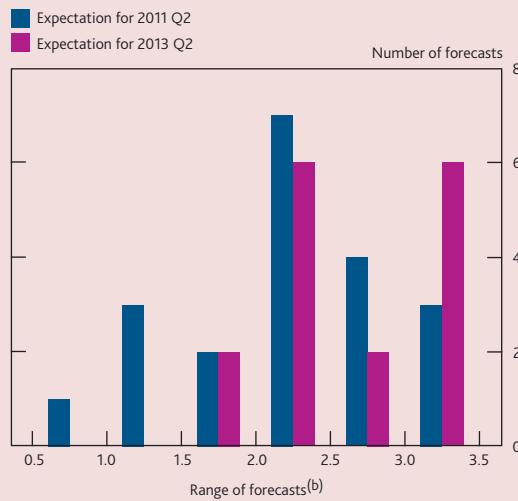
Source: Projections of 16 outside forecasters as of 26 April 2010.

(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, forecasters expected four-quarter GDP growth to be 2.2% at the one-year horizon, rising to 2.5% by 2013 Q2. This was little changed from three months ago. There was a range of central views about growth, though that range was wider in the near term than further out (**Chart B**).

A majority of forecasters expected Bank Rate to have risen by 2011 Q2, with further increases predicted in the following two

**Chart B** Distribution of GDP growth central projections<sup>(a)</sup>



Source: Projections of outside forecasters as of 26 April 2010.

(a) For 2011 Q2 there were 20 forecasts. For 2013 Q2 there were 16 forecasts.  
(b) 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.

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

The Bank also asks forecasters for an assessment of the risks around their central projections for CPI inflation and GDP growth (**Table 2**). Respondents judged that inflation was more likely to be below target in 2011 Q2 than above target. Compared to three months ago, respondents thought that the probability of inflation being below 1% at the two-year horizon had fallen slightly, while the probability of inflation being above 3% had increased. The probability distribution for four-quarter GDP growth one year ahead was little changed since the February Report.

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

| CPI inflation | Probability, per cent | Range: |      |        |        |        |        |
|---------------|-----------------------|--------|------|--------|--------|--------|--------|
|               |                       | <0%    | 0–1% | 1–1.5% | 1.5–2% | 2–2.5% | 2.5–3% |
| 2011 Q2       | 2                     | 10     | 23   | 31     | 19     | 9      | 6      |
| 2012 Q2       | 2                     | 8      | 15   | 25     | 25     | 14     | 11     |
| 2013 Q2       | 3                     | 7      | 13   | 26     | 26     | 15     | 11     |

### GDP growth

| GDP growth | Probability, per cent | Range: |       |      |      |      |
|------------|-----------------------|--------|-------|------|------|------|
|            |                       | <-1%   | -1–0% | 0–1% | 1–2% | 2–3% |
| 2011 Q2    | 2                     | 5      | 12    | 28   | 36   | 17   |
| 2012 Q2    | 3                     | 6      | 11    | 22   | 33   | 25   |
| 2013 Q2    | 3                     | 6      | 11    | 20   | 31   | 29   |

Source: Projections of outside forecasters as of 26 April 2010.

(a) For 2011 Q2, 20 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 Q2, 17 forecasters provided assessments for CPI and 16 forecasters provided assessments for GDP; for 2013 Q2, 16 forecasters provided assessments for CPI and GDP. The table shows the average probabilities across respondents. Rows may not sum to 100 due to rounding.

# Index of charts and tables

## Charts

|  |           |  |           |
|--|-----------|--|-----------|
| <b>Overview</b>  | <b>5</b>  | <b>3 Output and supply</b>   | <b>26</b> |
| 1 GDP projection based on market interest rate expectations and £200 billion asset purchases                   | 7         | 3.1 GDP and sectoral output  | 26        |
| 2 Projection of the level of GDP based on market interest rate expectations and £200 billion asset purchases   | 7         | 3.2 Survey indicators of aggregate output growth   | 26        |
| 3 CPI inflation projection based on market interest rate expectations and £200 billion asset purchases         | 8         | 3.3 GDP, total hours worked and employment   | 28        |
| 4 Assessed probability inflation will be above target  | 8         | 3.4 Unemployment rates   | 28        |
| <b>1 Money and asset prices</b>  | <b>9</b>  | 3.5 Surveys of employment intentions and LFS employment  | 28        |
| 1.1 Bank Rate and forward market interest rates  | 9         | 3.6 Contributions to cumulative changes in the level of LFS employment since 2008 Q1                           | 29        |
| 1.2 Selected euro-area ten-year government bond yields   | 9         | 3.7 Participation rates  | 29        |
| 1.3 Ten-year nominal spot gilt yield   | 11        | 3.8 Contributions to cumulative changes in the participation rate since 2008 Q1                                | 29        |
| 1.4 Sterling exchange rates  | 11        | 3.9 Estimates of net inward migration by citizenship   | 30        |
| 1.5 International equity prices  | 11        | 3.10 Company liquidations in England and Wales and GDP   | 30        |
| 1.6 Investment-grade corporate bond spreads  | 13        | 3.11 Company incorporations  | 30        |
| 1.7 Major UK banks' leverage ratios  | 14        | 3.12 Agents' survey: speed at which companies could return output to pre-recession levels                      | 31        |
| 1.8 Major UK banks' CDS premia   | 14        | 3.13 Survey measures of capacity utilisation   | 31        |
| 1.9 UK bank senior debt issuance and secondary market spreads  | 15        | <b>4 Costs and prices</b>  | <b>32</b> |
| 1.10 PNFCs' net finance raised   | 15        | 4.1 Contributions to CPI inflation   | 32        |
| 1.11 <i>Credit Conditions Survey</i> : terms on loans to large PNFCs and overall corporate credit availability | 15        | 4.2 Oil prices   | 33        |
| 1.12 Cumulative distribution functions of bond and equity issuers in 2009                                      | 16        | 4.3 Wholesale gas prices   | 33        |
| 1.13 Mortgage approvals for house purchase   | 17        | 4.4 Import prices excluding fuels and the sterling ERI   | 33        |
| 1.14 Floating-rate mortgage spreads and product availability across loan to value ratios                       | 17        | 4.5 CPI non-energy industrial goods and CPI services   | 34        |
| 1.15 Effective interest rates  | 17        | 4.6 Profit share   | 34        |
| 1.16 Broad money and nominal GDP   | 18        | 4.7 Agents' survey: factors influencing output price expectations  | 34        |
| 1.17 Sectoral broad money  | 18        | 4.8 Manufacturing output and input prices  | 35        |
| <b>The impact of asset purchases on the gilt market</b>  | <b>12</b> | 4.9 Private sector earnings  | 35        |
| A Nominal gilt yields  | 12        | 4.10 Distribution of private sector wage settlements   | 36        |
| B Impact of asset purchase announcements on gilt yields and equivalent-maturity OIS rates                      | 12        | 4.11 CPI inflation and survey measure of businesses' concerns about inflation                                  | 36        |
| <b>2 Demand</b>  | <b>19</b> | 4.12 Market-based indicators of inflation expectations and selected forecasters' inflation expectations        | 36        |
| 2.1 Contributions to quarterly growth in nominal GDP   | 19        | <b>Recent movements in households' inflation expectations</b>  | <b>37</b> |
| 2.2 Indicators of household spending on goods  | 20        | A CPI inflation and survey measures of households' inflation expectations one year ahead                       | 37        |
| 2.3 Contributions to annual growth in real post-tax labour income  | 20        | B Survey measures of households' inflation expectations beyond a year ahead                                    | 37        |
| 2.4 Indicators of consumer confidence  | 20        | <b>5 Prospects for inflation</b>   | <b>38</b> |
| 2.5 Business investment and GDP  | 21        | 5.1 GDP projection based on market interest rate expectations and £200 billion asset purchases                 | 38        |
| 2.6 Factors limiting investment by sector: uncertainty about demand  | 21        | 5.2 Projected probabilities of GDP growth in 2011 Q2 (central 90% of the distribution)                         | 39        |
| 2.7 Financial balances by sector   | 22        | 5.3 Projected probabilities of GDP growth in 2012 Q2 (central 90% of the distribution)                         | 39        |
| 2.8 Stockbuilding  | 22        | 5.4 GDP projection based on constant nominal interest rates at 0.5% and £200 billion asset purchases           | 39        |
| 2.9 Public sector net borrowing  | 23        | 5.5 Projection of the level of GDP based on market interest rate expectations and £200 billion asset purchases | 40        |
| 2.10 Domestic demand in selected euro-area countries   | 23        | 5.6 CPI inflation projection based on market interest rate expectations and £200 billion asset purchases       | 40        |
| 2.11 Contributions to quarterly growth in US GDP   | 24        |  |           |
| 2.12 UK goods exports and world imports of goods   | 24        |  |           |
| <b>Recent developments in UK imports</b>   | <b>25</b> |  |           |
| A UK imports and import-weighted demand  | 25        |  |           |
| B UK import penetration and relative import prices   | 25        |  |           |

|  |   |           |
|--|---|-----------|
| 5.7                                    | CPI inflation projection in February based on market interest rate expectations and £200 billion asset purchases    | 40        |
| 5.8                                    | Assessed probability inflation will be above target   | 41        |
| 5.9                                    | Projected probabilities of CPI inflation outturns in 2011 Q2 (central 90% of the distribution)                      | 41        |
| 5.10                                   | Projected probabilities of CPI inflation outturns in 2012 Q2 (central 90% of the distribution)                      | 41        |
| 5.11                                   | CPI inflation projection based on constant nominal interest rates at 0.5% and £200 billion asset purchases          | 42        |
| 5.12                                   | Frequency distribution of GDP growth based on market interest rate expectations and £200 billion asset purchases    | 47        |
| 5.13                                   | Frequency distribution of CPI inflation based on market interest rate expectations and £200 billion asset purchases | 47        |
| <b>Other forecasters' expectations</b> |   | <b>49</b> |
| A                                      | Distribution of CPI inflation central projections for 2013 Q2   | 49        |
| B                                      | Distribution of GDP growth central projections  | 49        |

## Tables

---

|  |  |           |
|--|--|-----------|
| <b>1</b>   | <b>Money and asset prices</b>  | <b>9</b>  |
| 1.A  | PNFCs' monthly equity and debt issuance  | 16        |
| 1.B  | Loans to individuals   | 16        |
| 1.C  | Broad money  | 18        |
| <b>2</b>   | <b>Demand</b>  | <b>19</b> |
| 2.A  | Expenditure components of demand   | 19        |
| 2.B  | Mortgage arrears and reposessions  | 21        |
| 2.C  | Surveys of investment intentions (plant and machinery)                             | 22        |
| 2.D  | General government deficits and gross debt in selected euro-area countries in 2009 | 23        |
| 2.E  | GDP in selected Asian economies  | 24        |
| <b>3</b>   | <b>Output and supply</b>   | <b>26</b> |
| 3.A  | Selected indicators of labour market pressure                                      | 31        |
| <b>Temporary factors affecting recent outturns for GDP</b> |  | <b>27</b> |
| 1  | Services and manufacturing output  | 27        |
| 2  | Selected indicators of consumer spending and trade                                 | 27        |
| <b>4</b>   | <b>Costs and prices</b>  | <b>32</b> |
| 4.A  | Indicators of output prices in the service sector                                  | 35        |
| <b>5</b>   | <b>Prospects for inflation</b>   | <b>38</b> |
| <b>Financial and energy market assumptions</b>             |  | <b>43</b> |
| 1  | Conditioning path for Bank Rate implied by forward market interest rates           | 43        |
| <b>Other forecasters' expectations</b>                     |  | <b>49</b> |
| 1  | Averages of other forecasters' central projections                                 | 49        |
| 2  | Other forecasters' probability distributions for CPI inflation and GDP growth      | 49        |

**Text of Bank of England press notice of 4 March 2010****Bank of England maintains Bank Rate at 0.5% and maintains 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 17 March.

**Text of Bank of England press notice of 8 April 2010****Bank of England maintains Bank Rate at 0.5% and maintains 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 21 April.

**Text of Bank of England press notice of 10 May 2010****Bank of England maintains Bank Rate at 0.5% and maintains 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 12 May.

The minutes of the meeting will be published at 9.30 am on Wednesday 19 May.

# 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.

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

## Abbreviations

**A8 Accession countries** – Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

**BCC** – British Chambers of Commerce.

**CBI** – Confederation of British Industry.

**CFO** – chief financial officer.

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

**ECB** – European Central Bank.

**ERM** – Exchange Rate Mechanism.

**EU** – European Union.

**FTSE** – Financial Times Stock Exchange.

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

**IMF** – International Monetary Fund.

**LTV** – loan to value.

**MPC** – Monetary Policy Committee.

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

**OFCs** – other financial corporations.

**ONS** – Office for National Statistics.

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

**PwC** – PricewaterhouseCoopers.

**REC** – Recruitment and Employment Confederation.

**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.

© Bank of England 2010

ISSN 1353-6737

Printed by Park Communications Limited



**Mixed Sources**

Product group from well-managed forests, controlled sources and  
recycled wood or fiber  
[www.fsc.org](http://www.fsc.org) Cert no. SGS-COC-2842  
© 1996 Forest Stewardship Council