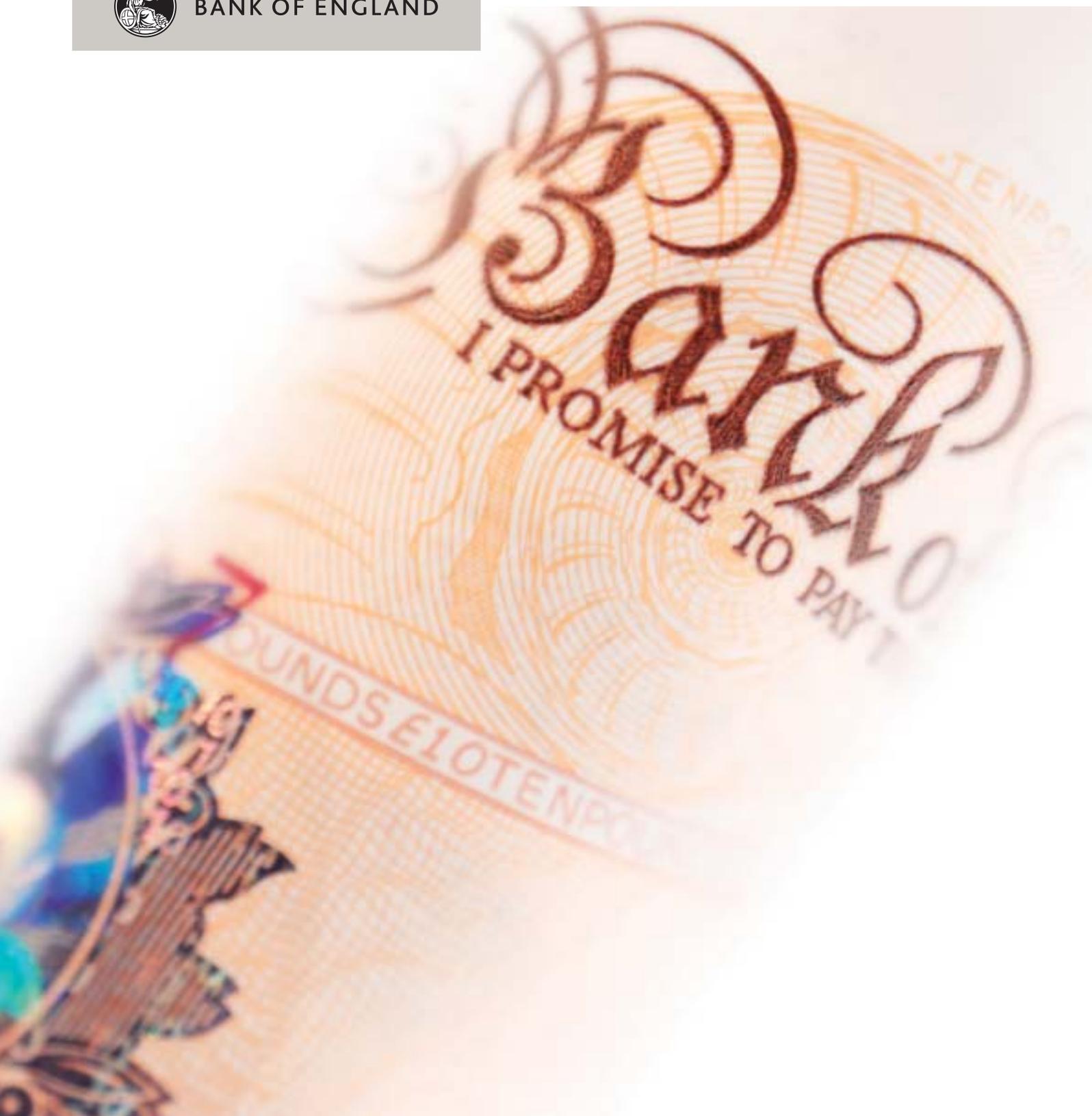


Inflation Report

May 2012



BANK OF ENGLAND





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Inflation Report

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

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

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

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

The Monetary Policy Committee:

Mervyn King, Governor

Charles Bean, Deputy Governor responsible for monetary policy

Paul Tucker, Deputy Governor responsible for financial stability

Ben Broadbent

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Paul Fisher

David Miles

Adam Posen

Martin Weale

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

The entire *Report* is available in PDF at www.bankofengland.co.uk/publications/Pages/inflationreport/ir1202.aspx.

PowerPoint™ versions of the charts in this *Report* and the data underlying most of the charts are provided at www.bankofengland.co.uk/publications/Pages/inflationreport/ir1202.aspx.

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Overview

Output had barely grown for a year and a half and was estimated to have contracted slightly in the past two quarters. The euro-area economy remained weak, but global activity overall continued to expand at a moderate pace. A number of one-off factors are likely to affect the pattern of quarterly growth of domestic output during 2012. Looking through those effects, underlying demand growth is likely to remain subdued in the near term, before a gentle increase in households' real incomes and consumption helps the recovery to gain traction. Stimulus from monetary policy should continue to support demand, although headwinds from the external environment, tight credit conditions and the fiscal consolidation are likely to persist. The possibility that the substantial challenges within the euro area will lead to significant economic and financial disruption continues to pose the greatest threat to the UK recovery.

CPI inflation stood at 3.5% in March 2012, down from a peak of 5.2% in September 2011. That fall reflected the effects of earlier increases in energy prices and VAT dropping out of the twelve-month inflation rate. The prospects for inflation are uncertain. The near-term outlook is judged to be somewhat higher than expected three months ago, with inflation now likely to remain above the 2% target for the next year or so. But a gradual easing in the impact of external price pressures, together with a continuing drag from economic slack, should lead inflation to fall back to around the target. Under the assumptions that Bank Rate moves in line with market interest rates and the size of the asset purchase programme remains at £325 billion, the risks of inflation being above or below the target by the end of the forecast period are judged to be broadly balanced.

Financial and credit markets

Since the February *Inflation Report*, the MPC has maintained Bank Rate at 0.5% and the size of its asset purchase programme at £325 billion. The European Central Bank's longer-term refinancing operations were associated with an initial improvement in bank funding conditions, although some indicators of unsecured funding costs subsequently picked up. Spreads on some euro-area countries' government debt remained elevated. UK banks raised significant funds from debt markets in 2012 Q1. They continued to pass through earlier rises in their funding costs to mortgage rates. Money growth picked up in Q1; credit growth remained weak. Sterling has appreciated by 3% since the February *Report*.

Demand

Global growth remained uneven across different regions. Output in the euro area — the United Kingdom's most important trading partner — contracted in 2011 Q4 and business surveys pointed to a further fall in 2012 Q1. In contrast, the US economy recorded solid increases, supported by household spending. Activity in the emerging economies

expanded steadily, albeit more slowly than at the beginning of last year. UK exports grew modestly in 2011, underpinned by solid export growth to non-EU countries.

At home, GDP growth was weak during 2011. That weakness was concentrated within domestic demand. Consumption fell, as the squeeze on real incomes continued and households saved more. And business investment remained significantly below its pre-crisis level, held back by weak demand, heightened uncertainty and tight credit conditions.

Output was provisionally estimated to have fallen by 0.2% in 2012 Q1, the second consecutive quarter of contraction. That fall was driven by a large decline in measured construction output. Growth in the rest of the economy was also estimated to be weak, with manufacturing and services output both broadly flat. But business surveys, labour market developments and reports from the Bank's Agents all pointed to somewhat stronger activity in the first quarter, suggesting that the underlying picture was less weak.

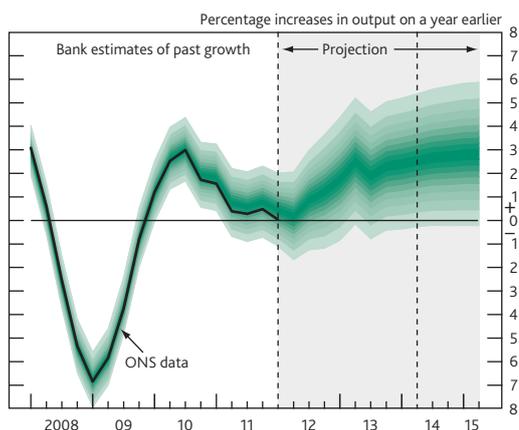
The Committee's projections are conditioned on the tax and spending plans set out in the March *Budget*. Those plans suggest that the reduction in the fiscal deficit as a proportion of nominal GDP is likely to be a little slower in 2012/13 than in the previous two years.

The outlook for GDP growth

Chart 1 shows the Committee's best collective judgement for four-quarter GDP growth, assuming that Bank Rate follows a path implied by market interest rates and the size of the asset purchase programme stays at £325 billion. The pattern of quarterly growth in 2012 is likely to be affected by a number of one-off factors, including the Queen's Diamond Jubilee and the Olympics. Looking through those effects, underlying growth is likely to remain subdued in the near term before a gentle increase in households' real incomes and consumption helps the recovery to gain traction. Stimulus from monetary policy should help to support activity, but continued strains within the euro area, tight credit conditions and the fiscal consolidation are all likely to temper the pace of expansion.

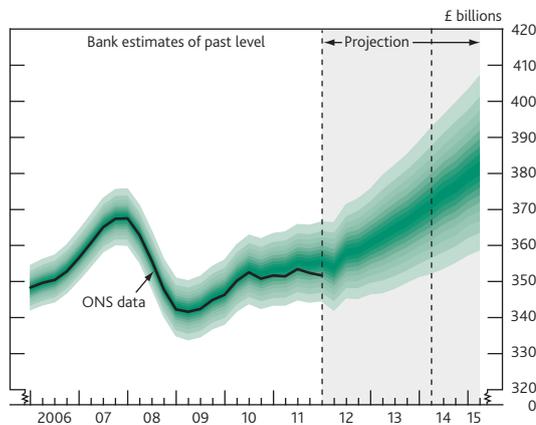
The prospects for UK growth remain unusually uncertain. The single biggest threat to the recovery stems from the challenges within the euro area, in particular the need to reduce the indebtedness and improve the competitiveness of some member countries. Even if a credible and effective set of policies is successfully implemented, the scale of the necessary adjustments suggests that a prolonged period of sluggish growth and heightened uncertainty is likely. A failure to implement such policies could have severe implications for the UK economy. As was the case in past *Reports*, the MPC sees no meaningful way to quantify the size and likelihood of the most extreme possibilities associated with developments in the euro area, and they are therefore excluded from the fan charts. But the threat of these more extreme outcomes is

Chart 1 GDP projection based on market interest rate expectations and £325 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 £325 billion throughout the forecast period. To the left of the first vertical dashed line, the distribution reflects the likelihood of revisions to the data over the past; to the right, it reflects uncertainty over the evolution of GDP growth in the future. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that the mature estimate of GDP growth would lie within the darkest central band on only 10 of those occasions. The fan chart is constructed so that outcomes are also expected to lie within each pair of the lighter green areas on 10 occasions. In any particular quarter of the forecast period, GDP growth is therefore expected to lie somewhere within the fan on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions GDP growth can fall anywhere outside the green area of the fan chart. Over the forecast period, this has been depicted by the light grey background. In any quarter of the forecast period, the probability mass in each pair of identically coloured bands sums to 10%. The distribution of that 10% between the bands below and above the central projection varies according to the skew at each quarter, with the distribution given by the ratio of the width of the bands below the central projection to the bands above it. In Chart 1, the probabilities in the lower bands are the same as those in the upper bands at Years 1, 2 and 3. See the box on page 39 of the November 2007 *Inflation Report* for a fuller description of the fan chart and what it represents. The second dashed line is drawn at the two-year point of the projection.

Chart 2 Projection of the level of GDP based on market interest rate expectations and £325 billion asset purchases



Chained-volume measure (reference year 2008). 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.

likely to affect economic activity over the forecast period, for example through its effect on asset prices, including the exchange rate, bank funding costs, and confidence; such effects are captured in the MPC's projections.

Domestically, the strength of the recovery will depend on whether households have further to adjust to the erosion in their purchasing power and to the more uncertain economic environment. The path of domestic spending will also depend on: the pace of productivity growth and how that affects households' and companies' earnings; the extent to which the availability of bank credit improves; and the effects on growth of both fiscal and monetary policy.

There remains a range of views among Committee members about the outlook for GDP growth. On the same assumptions as above, the Committee's best collective judgement is that growth is likely to remain subdued in the near term, but that by the third year of the forecast, the chances of GDP growth being above or below its historical average are broadly balanced. The projected distribution for growth is lower than in the February *Inflation Report*, reflecting weaker growth around the start of this year, a higher near-term outlook for inflation and a more gradual pickup in productivity growth.

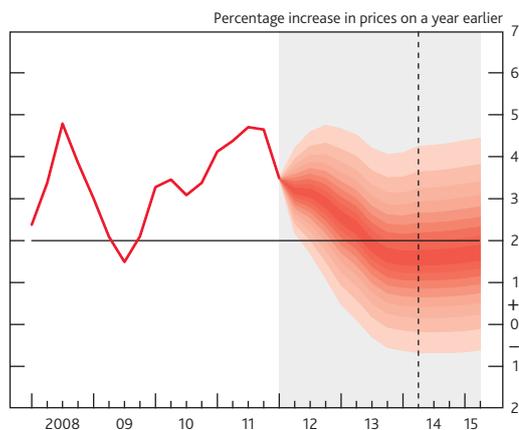
Recent growth has been weak by historical standards. **Chart 2** shows that output has been broadly flat since the middle of 2010 and is not likely to surpass its pre-crisis level before 2014. The weakness appears to have been associated with unusually slow growth in potential supply. Even so, the Committee judges that there exists a sizable margin of spare capacity, largely concentrated in the labour market. That should diminish towards the end of the forecast period, but is unlikely to close completely.

Costs and prices

CPI inflation stood at 3.5% in March 2012, down from 5.2% in September 2011. That fall reflected the effects of earlier increases in energy prices and VAT dropping out of the twelve-month comparison. The elevated rate of inflation in March largely reflected the effects of past increases in import and energy prices. In contrast, there had not been strong growth in domestic costs: companies' unit labour costs had increased at around their average historical rate over the past year. Most indicators of longer-term inflation expectations remained relatively close to their series averages.

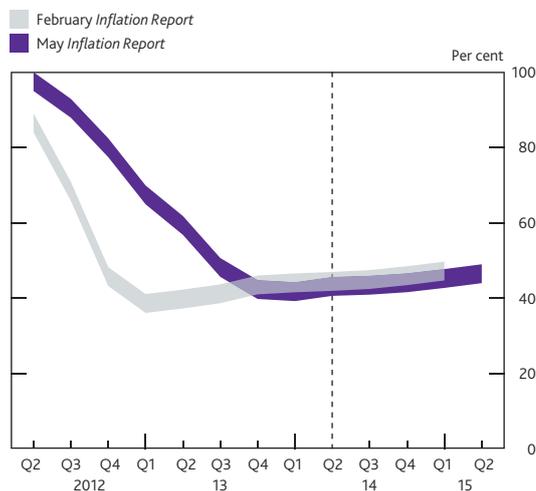
Private sector employment has increased substantially since the middle of 2010, despite weak output growth. The Labour Force Survey measure of unemployment edged lower in the three months to February. Even so, there remained a wide margin of slack in the labour market and this, along with weak productivity growth, continued to bear down on earnings growth, which declined further in early 2012.

Chart 3 CPI inflation projection based on market interest rate expectations and £325 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 £325 billion throughout the forecast period. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that inflation in any particular quarter would lie within the darkest central band on only 10 of those occasions. The fan chart is constructed so that outcomes of inflation are also expected to lie within each pair of the lighter red areas on 10 occasions. In any particular quarter of the forecast period, inflation is therefore expected to lie somewhere within the fan on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions inflation can fall anywhere outside the red area of the fan chart. Over the forecast period, this has been depicted by the light grey background. In any quarter of the forecast period, the probability mass in each pair of identically coloured bands sums to 10%. The distribution of that 10% between the bands below and above the central projection varies according to the skew at each quarter, with the distribution given by the ratio of the width of the bands below the central projection to the bands above it. In Chart 3, the probabilities in the upper bands are the same as those in the lower bands at Year 1 but they are slightly larger at Years 2 and 3. See the box on pages 48–49 of the May 2002 *Inflation Report* for a fuller description of the fan chart and what it represents. The dashed line is drawn at the two-year point.

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



The May and February swaths in this chart are derived from the same distributions as Chart 3 and Chart 5.7 on page 41 respectively. They indicate the assessed probability of inflation being above target in each quarter of the forecast period. The 5 percentage points width of the swaths reflects the fact that there is uncertainty about the precise probability in any given quarter, but they should not be interpreted as confidence intervals. The dashed line is drawn at the two-year point of the May projection. The two-year point of the February projection was one quarter earlier.

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 1. The near-term outlook is higher than in the February *Report*, with inflation likely to remain above the 2% target for the next year or so. This upward revision reflects both the impact of higher energy prices and indirect taxes, and also a judgement that cost pressures from past rises in commodity prices and weak productivity are likely to have a greater impact on inflation in the near term than expected three months ago. But a gradual easing in the impact of external price pressures and a continuing drag from economic slack should cause inflation to fall back to around the target in the second half of the forecast period.

The prospects for inflation remain uncertain, not least because it is difficult to gauge with any precision the current strength of underlying inflationary pressure. The extent to which inflation slows in the near term depends on the pace at which external price pressures ease, and hence on developments in commodity and other import prices. The path of inflation will also depend on the growth in companies' domestic costs, which will be heavily affected by the pace of productivity growth and the extent to which slack in the labour market limits wage growth. The degree to which companies seek to restore their profit margins by raising prices will also have an important bearing on inflation.

The difficulty of predicting the precise impact of these influences means that the Committee places more weight on the broad shape of the inflation outlook than its exact calibration. And there remains a range of views among Committee members regarding the relative strength of different factors. On balance, however, the Committee's best collective judgement, based on the conditioning assumptions described above, is that by the end of the forecast period, the risks of inflation being above or below the 2% target are broadly balanced (Chart 4).

The policy decision

At its May meeting, the Committee noted that, despite the changes in the near-term outlook, the fundamental policy challenges following the financial crisis and subsequent recession remained the same. GDP growth was likely to remain weak in the near term and to strengthen gradually thereafter. Developments in the euro area continued to pose a significant threat to that outlook. Inflation had declined sharply since last autumn, broadly as the Committee had expected. And although inflation was likely to remain above 2% for the next year or so, it was nevertheless likely to fall back gradually to around the target. The Committee therefore decided that it was appropriate to maintain Bank Rate at 0.5% and the size of the asset purchase programme at £325 billion in order to meet the 2% CPI inflation target over the medium term.

1 Money and asset prices

Since the *February Report*, the MPC has maintained Bank Rate at 0.5% and the size of its programme of asset purchases at £325 billion. ECB operations eased strains in sovereign debt and bank funding markets, although much of the improvement in government bond markets subsequently reversed amid renewed concerns about some euro-area countries. Conditions in bank funding markets improved in 2012 Q1, but banks continued to pass through past increases in funding costs into loan rates.

Since the *February Report*, the MPC has maintained Bank Rate at 0.5% and the size of its programme of asset purchases at £325 billion (Section 1.1). Section 1.2 discusses how asset purchases may have affected money growth. Although the European Central Bank's (ECB's) three-year longer-term refinancing operations (LTROs) boosted financial market sentiment in early 2012, that effect has begun to wane and concerns about the indebtedness and competitiveness of several euro-area countries have intensified again in recent weeks (Section 1.3). The LTROs helped to improve funding conditions for banks in Q1, but funding costs remained high. Elevated funding costs have led to a tightening in credit conditions for households and companies (Section 1.4).

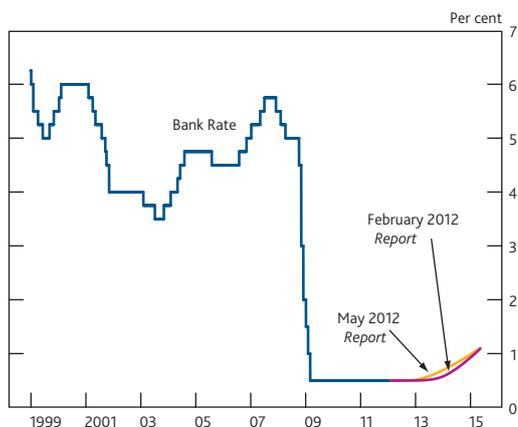
1.1 Monetary policy

The MPC has maintained Bank Rate at 0.5% since the *February Report*. Although overnight index swap rates suggest that the point at which Bank Rate is expected to increase has been brought forward marginally over the past three months, it is not expected to start rising until 2013 (**Chart 1.1**).

The MPC has also maintained the size of its programme of asset purchases financed by the issuance of central bank reserves at £325 billion. Around three quarters of respondents to the Reuters poll of economists taken on 3 May did not expect any further expansion in the size of the programme. Among those who did expect further asset purchases, the median expectation was for an additional £50 billion in total. The reasons behind the MPC's recent policy decisions are discussed in more detail in the box on page 10.

The MPC's asset purchases seek to boost asset prices and, over time, support nominal spending.⁽¹⁾ Initially, investors sell gilts to the Bank and that increases their money holdings. But

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



Sources: Bank of England and Bloomberg.

(a) The February 2012 and May 2012 curves are estimated using overnight index swap rates in the fifteen working days to 8 February 2012 and 9 May 2012 respectively.

(1) The transmission mechanism of asset purchases is described in more detail in the box on pages 12–13 of the November 2011 *Report*.

Monetary policy since the February Report

The MPC's central projection 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 £325 billion, was that growth was likely to remain weak in the near term before gradually strengthening thereafter. Under the same assumptions, the MPC judged that inflation was likely to continue to decline from its recent peak during 2012.

Near-term global activity indicators released over the month prior to the MPC's meeting on 7–8 March had developed broadly as expected and continued to point to a gradual recovery in growth. In the United Kingdom, following the 0.2% fall in GDP in 2011 Q4, business surveys remained consistent with a resumption of growth in both services and manufacturing in the first quarter of 2012.

CPI inflation had fallen to 3.6% in January from its recent peak of 5.2% in September. That decline reflected, in part, the effect of the previous year's rise in the standard rate of VAT dropping out of the twelve-month comparison. There was less certainty about the extent and pace at which inflation would fall subsequently, although the Committee's central view was that inflation would fall further as the contributions of energy and import prices continued to wane and as spare capacity weighed on wages and prices.

A clear risk to the inflation outlook surrounded the outlook for crude oil prices. The price of Brent crude oil had increased by around 12% since the end of January, which appeared to have been primarily driven by supply factors. Any worsening of the underlying tensions in the Middle East could have significant implications for future oil prices and CPI inflation. Domestically, there was a risk that labour market slack might be a less powerful restraining force on earnings growth and inflation in the future. Set against that, there were significant risks to economic activity that might result in inflation falling materially below the target in the medium term, in particular, related to enduring concerns about the indebtedness and competitiveness of some euro-area countries.

Overall, the Committee judged that the recent data had evolved in line with its expectations and that there had been little change to the balance of risks to UK activity and inflation. Most members saw no reason to change the stance of monetary policy. But two members continued to think that a larger monetary stimulus was warranted to reduce the risk that persistently weak growth would damage the future supply capacity of the economy. The Committee voted unanimously to maintain Bank Rate at 0.5%. Seven members voted to continue with the programme of asset purchases totalling

£325 billion. Two preferred to increase the size of the programme by £25 billion.

Ahead of the MPC's meeting on 4–5 April, there had been downside news on the near-term path of GDP likely to be published by the ONS. There had been unexpected falls in the ONS's measures of output in manufacturing and, in particular, construction. It was possible that the ONS's preliminary estimate for GDP could record a fall in aggregate output. But a wide range of survey indicators pointed to a moderate rate of growth in activity in the first half of the year and underlying aggregate activity growth was likely, if anything, to have picked up since the second half of 2011.

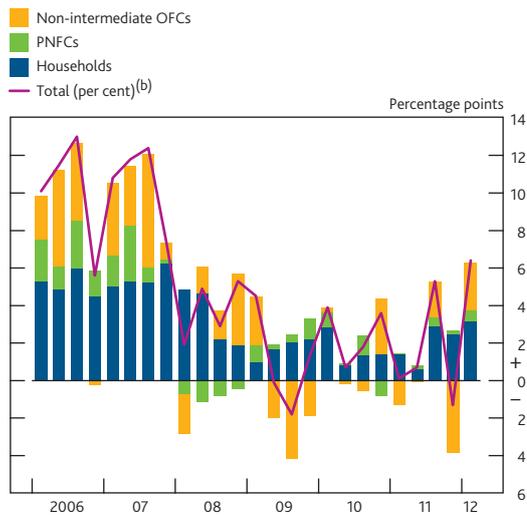
CPI inflation had fallen to 3.4% in February. But the fall since September had been slightly less than the Committee had expected. There was a risk that inflation would fall less rapidly in the near term than anticipated in the February *Report*. Recent rises in oil and gas prices and the additional increase in duties announced in the *Budget* would put upward pressure on inflation. Some statistical projections were pointing to a path for CPI inflation in the coming months somewhat above the central path contained in the February *Report*.

The speed at which inflation would return towards target could not be judged with any precision and there were risks on both sides. To the upside, elevated inflation might be more persistent than the Committee expected if there were further shocks to oil or other commodity prices or if there was greater pass-through of external price pressures to consumer prices. Domestically, companies could seek to rebuild margins more aggressively than anticipated. To the downside, the risk was that demand would not be strong enough to absorb the considerable margin of spare capacity in the economy, especially given that there was a risk that business and household sentiment could be further dented either by media reports of the economy re-entering recession or by deterioration in the situation in the euro area.

While the news about the near-term path for inflation was unwelcome, for most members there was little solid evidence yet that the balance of risks to inflation in the medium term had changed. Eight members of the Committee voted to continue with the £325 billion asset purchase programme and maintain Bank Rate at 0.5%. One member preferred to increase the size of the asset purchase programme by a further £25 billion, although the decision was finely balanced.

At its meeting on 9–10 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 £325 billion.

Chart 1.2 Contributions to annualised quarterly growth in broad money^(a)



(a) M4 growth excluding intermediate other financial corporations (OFCs). Intermediate OFCs are: mortgage and housing credit corporations; non-bank credit grantors; bank holding companies; securitisation special purpose vehicles; and other activities auxiliary to financial intermediation. In addition to the deposits of these five types of OFCs, sterling deposits arising from transactions between banks or building societies and 'other financial intermediaries' belonging to the same financial group are excluded from this measure of broad money.

(b) May not equal the sum of its components due to the method of calculation.

Table 1.A Quarterly changes in gilt holdings by sector^(a)

£ billions	Averages		2011 Q4	2012 Q1
	2009 Q1–2010 Q1	2010 Q2–2011 Q3		
Bank of England ^(b)	40	0	51	54
Non-bank private sector	-6	10	-29	-27
Banks and building societies	6	10	-11	-4
Non-residents	9	14	18	3
Sales by Debt Management Office ^(c)	49	34	30	26

Sources: Bank of England and Debt Management Office.

(a) Non seasonally adjusted.

(b) Changes in the Bank of England's sterling holdings of all securities issued by the public sector.

(c) Net issuance by the Debt Management Office.

investors are likely then to reinvest the proceeds in other assets, such as equities or corporate bonds, putting upward pressure on the prices of those assets. That reduces borrowing costs and makes it easier for companies to raise funds in the capital markets. But many other factors also affect asset prices, making it difficult to isolate the precise impact of the gilt purchases.

1.2 Money

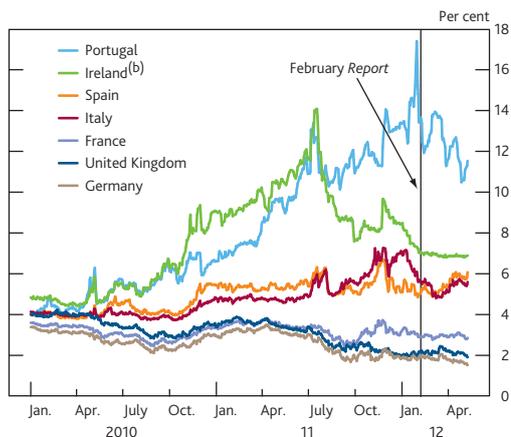
Broad money growth has been volatile in recent quarters, mainly reflecting sharp movements in the money holdings of non-intermediate other financial corporations (**Chart 1.2**). Part of that volatility reflects large intragroup transfers of funding by some financial institutions at the end of 2011 that reduced money growth in Q4. Households' contribution to broad money growth picked up slightly in 2012 Q1 to its highest level since 2008 Q2. The contribution of private non-financial corporations' (PNFCs') money was similar to its average over the past three years.

The MPC's gilt purchases in Q4 and Q1 were associated with a reduction in the gilt holdings of the non-bank private sector (**Table 1.A**). That should have boosted their money holdings. But it is hard to be sure what would have happened in the absence of the MPC's asset purchases. For instance, some investors may otherwise have used their deposits to buy gilts, as they did over the preceding year. As a consequence, the impact of the MPC's gilt purchases on money is necessarily uncertain.

The overall increase in the stock of money since asset purchases were restarted in October has been smaller than the value of gilts purchased by the Bank. Broad money increased by only £19 billion over Q4 and Q1, while the Bank purchased £105 billion of gilts. There are a number of explanations as to why money growth was so weak. First, the MPC's asset purchases have coincided with banks, as well as the non-bank private sector, holding fewer gilts (**Table 1.A**). If banks sell gilts to the Bank and simply retain the proceeds then that does not add to the money supply: rather, there is just a change in the composition of banks' assets. Second, money growth could have been weaker than might have been expected given the amount of asset purchases because of a change in the behaviour of non-residents. Non-residents' sterling deposits, which are not measured as money, have risen recently, which could be because they have bought fewer gilts than they would have done in the absence of the MPC's asset purchases. Third, companies issuing bonds and using the proceeds to pay down bank debt (Section 1.4) will also have depressed money growth.

The implications of those different explanations for weak money growth vary, but they need not imply that the MPC's asset purchases are less effective. For example, if non-residents eventually reinvest their additional sterling deposits in other sterling assets, that would have the same

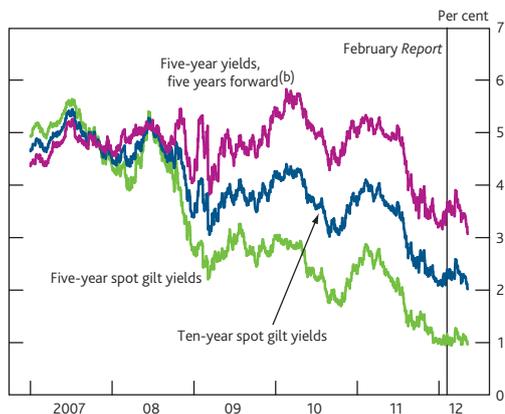
Chart 1.3 Selected European ten-year spot government bond yields^(a)



Source: Bloomberg.

(a) Yields to maturity on ten-year benchmark government bonds, unless otherwise stated.
(b) Yield to maturity on the nine-year benchmark government bond from 12 October 2011.

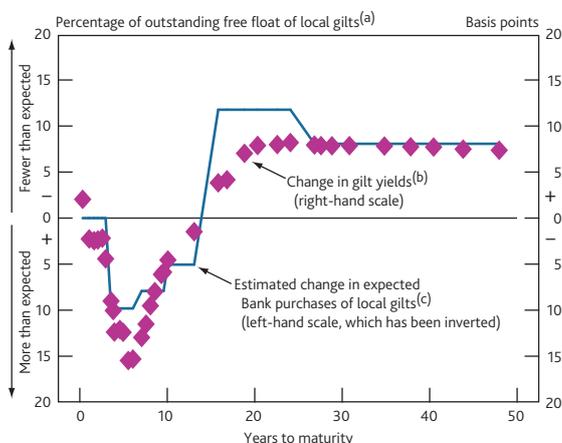
Chart 1.4 UK five-year and ten-year nominal spot gilt yields and five-year yields, five years forward^(a)



Sources: Bloomberg and Bank calculations.

(a) Zero-coupon yield.
(b) Derived from the Bank's government liability curves.

Chart 1.5 Changes in gilt yields and expected Bank gilt purchases around 9 February asset purchase announcement



Sources: Bank of England, Debt Management Office (DMO), Reuters and Bank calculations.

(a) The outstanding total free float is calculated as the total amount of conventional gilts in issue on 9 February 2012, plus projected DMO issuance over the next six months, less gilts held by the UK Government and the Bank of England. Gilts are defined as local if they fall within the same segment of the sector 0–3 years, 3–7 years, 7–10 years, 10–15 years, 15–25 years and greater than 25 years.
(b) Yields to maturity. Change between 8 and 10 February 2012.
(c) The change in total expected Bank purchases is estimated using the Reuters polls of economists taken on 1 and 9 February 2012. Total expected Bank purchases on each date are assumed to be split evenly across the maturity sectors in use at the time and, within that, evenly across eligible gilts (those for which the Bank did not hold over 70% of the free float). For each maturity, the chart shows the estimated change in purchases of all local gilts.

effect as if the UK non-bank private sector had built up deposits and then bought those assets.

1.3 Financial markets

Financial market sentiment was boosted by the ECB's three-year LTROs. Those operations, conducted in December 2011 and February 2012, eased strains in bank funding markets and contributed to rises in asset prices. But with concerns about the indebtedness and competitiveness of several euro-area countries intensifying again more recently, some of those asset price increases have unwound since March.

Euro-area government bonds

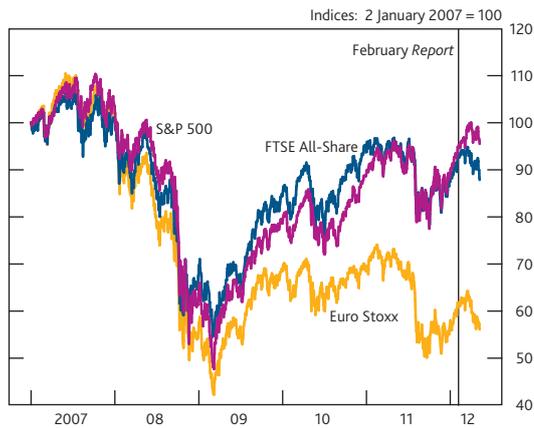
In the run-up to the *May Report*, government bond yields in the euro-area periphery countries were below their peaks reached in the second half of 2011 (**Chart 1.3**). Market contacts suggest that those falls largely reflected the LTROs because they reduced the likelihood that vulnerable banks in those countries would require additional government support. In addition, some banks in Italy and Spain were reported to have invested funds raised from the LTROs in domestic sovereign debt.

Nonetheless, sovereign bond spreads over German government bond yields have remained elevated in the euro-area periphery countries, and Spanish and Italian spreads have risen again since March (**Chart 1.3**). Elevated spreads reflect continuing concerns about the indebtedness and competitiveness of these countries. Greek and Portuguese spreads remain particularly high. And the recent increases in Spanish and Italian spreads could reflect a growing recognition that the LTROs will not resolve the fundamental challenges facing the euro-area periphery countries.

UK government bonds

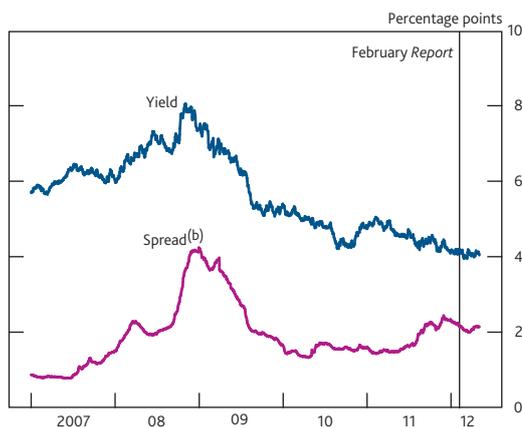
Gilt yields remain close to historically low levels (**Chart 1.4**). Domestic and international factors are both likely to have depressed yields. Domestically, the MPC's asset purchase programme and expectations that official interest rates will remain low (Section 1.1) have reduced gilt yields. The current level of yields could also reflect expectations of weak output growth in the longer term: the implied cost of government borrowing for five years in five years' time is also close to historically low levels (**Chart 1.4**), largely reflecting low real rates. Internationally, persistent concerns about euro-area periphery countries have contributed to strong demand for sovereign bonds — including those of the United Kingdom — that are perceived as more liquid or carrying little credit risk. That is also likely to have contributed to the current depressed level of gilt yields.

The £50 billion expansion of the MPC's asset purchase programme announced on 9 February was widely anticipated

Chart 1.6 International equity prices^(a)

Source: Thomson Reuters Datastream.

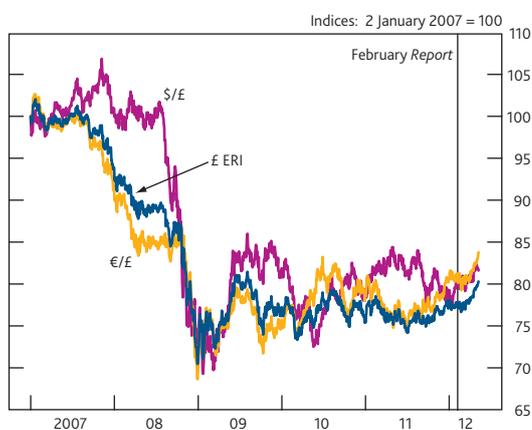
(a) In local currency terms.

Chart 1.7 Non-financial companies' sterling investment-grade corporate bond spread and yield^(a)

Source: Bank of America/Merrill Lynch.

(a) Excludes utility companies.

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

Chart 1.8 Sterling exchange rates

by market participants and is therefore likely to have been priced into gilt yields in advance. Consistent with that, there was little discernable effect on gilt yields, on average, following the announcement.

A change in the maturity structure of the gilts to be purchased by the MPC was also announced on 9 February. That change — made to reduce the risk of undesirable frictions in gilt market functioning arising from the concentration of the Bank's holdings in certain maturity sectors — involved the Bank buying more gilts at short maturities and fewer at longer maturities. Specifically, the Bank moved from purchasing gilts equally across three sectors of 3–10 years, 10–25 years and greater than 25 years, to buying evenly across sectors of 3–7 years, 7–15 years and greater than 15 years. The new maturity sectors were the same as those used by the Debt Management Office.

In the two days following the 9 February announcement, shorter-term gilt yields fell and longer-term yields rose (**Chart 1.5**). As the adjustment of maturity sectors was not widely expected by financial markets, the change in the shape of the yield curve following the announcement provides further evidence that asset purchases affect gilt yields.⁽¹⁾ It is consistent with recent asset purchases by the MPC having put downward pressure on gilt yields, even though anticipation effects make it difficult to identify exactly when those changes occurred.

Equities and corporate bonds

In the run-up to the *May Report*, UK equity prices were similar to their level at the time of the *February Report*, but had risen by over 10% since the MPC restarted asset purchases in October (**Chart 1.6**). Equity prices had increased over the past three months in the United States, possibly because of some better-than-expected macroeconomic data there.

Bond spreads and yields for UK non-financial investment-grade companies were similar in the run-up to the *May Report* to those at the time of the *February Report* (**Chart 1.7**).

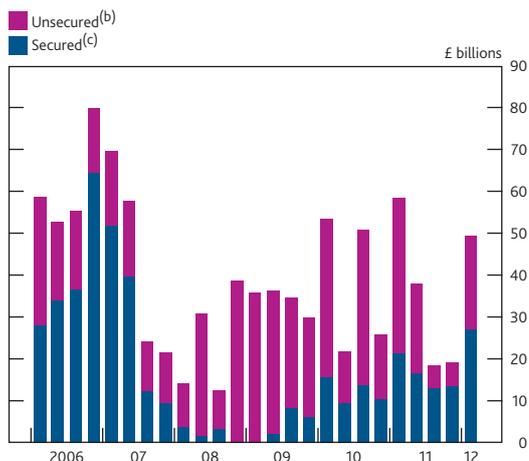
Conditions in corporate bond markets have improved since the turn of the year, which may partly reflect the MPC's asset purchase programme. It may also reflect a post-LTROs improvement in sentiment, although some of that improvement has unwound since March. Falls in the cost of raising bond finance are likely to have supported issuance in Q1, which was robust (Section 1.4).

Exchange rates

The sterling effective exchange rate has risen by around 3% since the *February Report* (**Chart 1.8**). That is part of a gradual

(1) Evidence on the effects of the Bank's previous asset purchases is discussed in Joyce, M, Tong, M and Woods, R (2011), 'The United Kingdom's quantitative easing policy: design, operation and impact', *Bank of England Quarterly Bulletin*, Vol. 51, No. 3, pages 200–12.

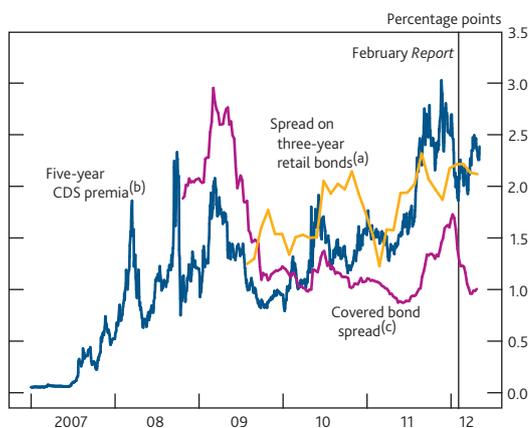
Chart 1.9 Public term issuance by the major UK lenders^(a)



Sources: Bank of England, Dealogic and Bank calculations.

- (a) Data are as at 9 May 2012. Data are shown at a quarterly frequency: the final observation is 2012 Q1. Includes debt issued by Banco Santander, Bank of Ireland, Barclays, Co-operative Financial Services, HSBC, Lloyds Banking Group, National Australia Bank, Nationwide, Northern Rock and Royal Bank of Scotland. Term issuance refers here to securities with an original contractual maturity or earliest call date of at least 18 months.
- (b) Comprises medium-term notes, subordinated debt, unguaranteed senior debt and guaranteed senior debt issued under HM Treasury's Credit Guarantee Scheme.
- (c) Comprises covered bonds, CMBS, RMBS and other ABS.

Chart 1.10 UK banks' indicative longer-term funding spreads



Sources: Bank of England, JPMorgan Chase & Co., Markit Group Limited and Bank calculations.

- (a) Sterling only. Spread over the three-year swap rate. The three-year retail bond rate is a weighted average of rates from banks and building societies within the Bank of England's normal quoted rate sample with products meeting the specific criteria (see www.bankofengland.co.uk/statistics/Pages/iadb/notesiadb/household_int.aspx).
- (b) The data show a simple average of the five-year CDS premia of Barclays, HSBC, Lloyds Banking Group, Nationwide, Royal Bank of Scotland and Santander UK.
- (c) From January 2012 onwards, the data show a weighted average of the spread between covered bonds of any maturity issued by UK banks and equivalent-maturity swap rates, weighted by the outstanding value of each bond. Before January 2012, the data show a simple average and include bonds with a maturity of between three and five years only.

appreciation from its recent trough in the summer of 2011, primarily reflecting an appreciation against the euro, although sterling has also appreciated against the dollar since the February Report. The sterling ERI is now close to the top of the relatively narrow range that it has moved within following the 25% depreciation between mid-2007 and the end of 2008.

The banking sector

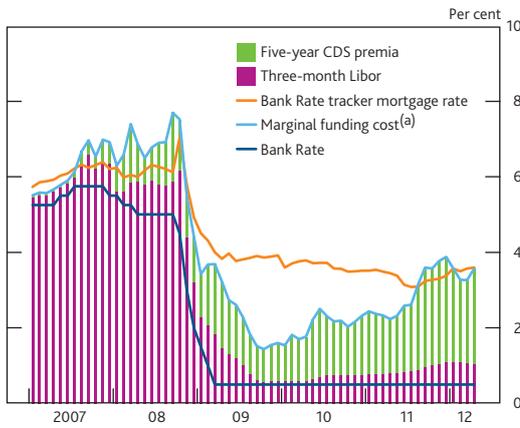
Conditions in bank funding markets have improved since the turn of the year. These markets were strained during the second half of 2011, as concerns about the impact of euro-area developments made it difficult for banks to raise funding. For some banks, public unsecured markets were effectively closed, and the cost of the secured and private funding that was issued was high. In the euro area, the first three-year LTRO in late December eased the immediate funding challenges facing banks. Banks also had the opportunity to participate in a second operation in late February. Taken together, the ECB lent around €1 trillion to euro-area banks in the two operations, although the net injection was around €500 billion after taking account of maturing ECB funding.

The LTROs also led to an improvement in sentiment in UK bank funding markets, which was reflected in strong debt issuance in 2012 Q1. The major UK banks issued around £50 billion of debt in public markets, similar to the quarterly average in the first half of 2011 and well above the average of £19 billion in the final two quarters of 2011 (Chart 1.9). And there was greater public unsecured issuance in Q1 than in the entire second half of 2011, although secured issuance still accounted for the majority of funding. Private markets also continued to be an important source of funding for UK banks and some raised funds from the LTROs through their foreign subsidiaries. In 2012, several banks are planning to reduce the size of their balance sheets; most banks are planning to increase their reliance on retail deposits; and the amount of term debt due to mature is smaller than in 2011. Consequently, banks plan to raise less wholesale term funding this year than in 2011, and they have already raised a significant proportion of that planned funding.

Bank funding costs have fallen from their late-2011 peaks, although, on average, they remain elevated relative to reference rates (Chart 1.10). Credit default swap (CDS) premia and spreads on retail funding remain higher than in the first half of 2011, but covered bond spreads have fallen back to 2011 H1 levels. Section 5 discusses the outlook for funding costs.

Elevated funding costs are likely, initially, to reduce banks' mark-ups on new loans but then put upward pressure on the interest rates on new loans as banks seek to restore margins. For example, using the sum of three-month Libor and UK banks' average CDS premia as a proxy for their marginal funding cost, it appears that the average interest rate on a new Bank Rate tracker mortgage was close to the marginal funding cost in

Chart 1.11 New Bank Rate tracker mortgage rate, Bank Rate and an estimate of banks' marginal funding cost



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

(a) The estimated marginal funding cost of extending variable-rate sterling-denominated loans. This is calculated as the sum of three-month Libor plus a weighted average of the five-year CDS premia of the major UK lenders used in Chart 1.10. Weights are based on banks' shares of new household secured lending, and, for April 2012, the weights are held fixed at March 2012 values. Marginal funding costs may vary across lenders. Lenders with a greater proportion of retail funding may also consider the cost of deposits when assessing their marginal funding cost.

Table 1.B *Credit Conditions Survey*: changes in spreads on bank loans^(a)

Net percentage balances

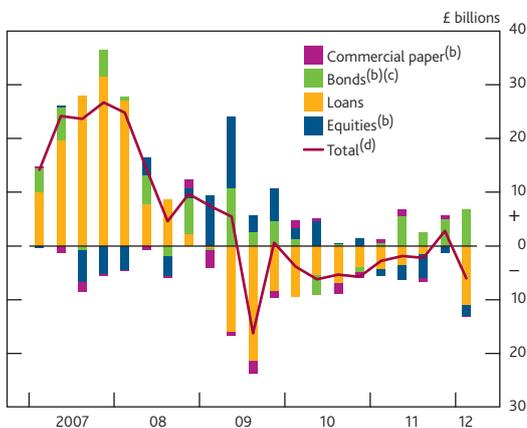
	Averages		2011 Q4	2012 Q1	2012 Q2 ^(b)
	2007 Q2–2009	2010–2011 Q3			
Businesses					
Large	35	-32	14	33	10
Medium	30	-13	20	33	12
Small ^(c)	n.a.	5	11	6	8
Households					
Secured loans	22	-16	-8	29	24
Unsecured loans	7	1	-4	-4	-4

(a) Weighted responses of lenders. A positive balance indicates that spreads over reference rates had risen and a negative balance indicates spreads had fallen in that quarter.

(b) Lenders' expectations for the following three months, reported in the 2012 Q1 survey.

(c) Data are only available from 2009 Q4.

Chart 1.12 PNFs' net external finance raised^(a)



(a) Includes sterling and foreign currency funds.

(b) Non seasonally adjusted.

(c) Includes stand-alone and programme bonds.

(d) As component series are not all seasonally adjusted, the total may not equal the sum of its components.

April 2012 (Chart 1.11).⁽¹⁾ There are, however, a number of caveats around such a calculation. For instance, it does not take account of the recent falls in the relative cost of secured funding, and there is likely to be significant dispersion in funding costs and mark-ups across individual banks. Nevertheless, in the absence of falls in funding costs, it suggests that some further increase in mortgage rates is likely as banks seek to restore their margins.

1.4 Credit conditions

Credit conditions have tightened somewhat since 2011 Q3, as interest rates on bank loans for companies and on mortgages have increased. But the price of unsecured loans for households has not risen.

Corporate sector finances

The majority of lenders responding to the Bank's *Credit Conditions Survey* reported that spreads over reference rates on corporate loans rose in 2011 Q4 and 2012 Q1 (Table 1.B). For large and medium-sized companies, those increases appear to have reversed part of the fall in spreads on loans seen during most of 2010 and the first three quarters of 2011. Some further widening in spreads on loans to companies of all sizes was expected in 2012 Q2.

Bank borrowing by companies fell sharply in 2012 Q1 (Chart 1.12). The stock of all currency loans had been declining at a decreasing rate during 2011, but the 2.4% fall in Q1 was the largest quarterly fall since 2009 Q3. A higher cost of bank loans, combined with improved conditions in bond markets (Section 1.3), may have encouraged some companies to substitute bond finance for bank loans. Corporate bond issuance was robust in Q1, but not strong enough to offset the fall in bank borrowing, so that total finance raised by PNFs fell back in Q1 after increasing in Q4 (Chart 1.12).

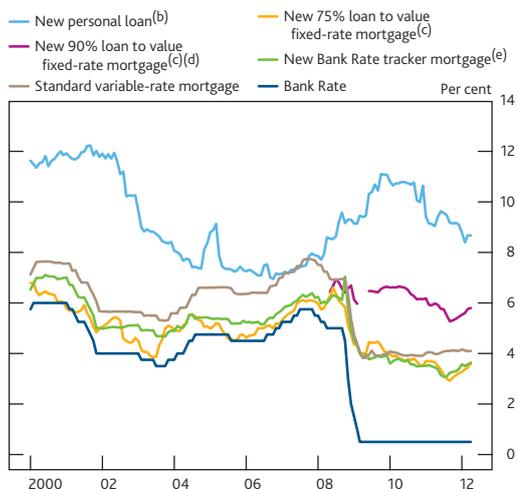
Small companies do not generally have access to capital markets and are therefore more reliant on bank borrowing than large companies. The *Credit Conditions Survey* implies that, even prior to the recent tightening, there had been no fall in spreads on bank loans to small companies since 2009 Q4 (Table 1.B). To help reduce the cost of bank borrowing for small companies, the Government launched the National Loan Guarantee Scheme in March to enable banks to lend to small businesses at a lower cost than would otherwise be the case.

Household sector finances and the housing market

Elevated bank funding costs have led to higher interest rates on mortgages. The average interest rate on a new Bank Rate tracker mortgage with a 75% loan to value ratio rose by 0.5 percentage points between August 2011 and April 2012,

(1) For more detail on estimating banks' marginal funding costs see Button, R, Pezzini, S and Rossiter, N (2010), 'Understanding the price of new lending to households', *Bank of England Quarterly Bulletin*, Vol. 50, No. 3, pages 172–82.

Chart 1.13 Bank Rate and average quoted interest rates on household borrowing^(a)



- (a) Sterling-only end-month average quoted rates. The Bank's quoted interest rates series are weighted averages of rates from a sample of banks and building societies with products meeting the specific criteria (see www.bankofengland.co.uk/statistics/Pages/iadb/notesiadb/household_int.aspx).
- (b) Quoted interest rate on a £10,000 personal loan.
- (c) Two-year fixed-rate mortgage.
- (d) Series is only available on a consistent basis back to May 2008, and is not published for March to May 2009 as fewer than three products were offered in that period.
- (e) On mortgages with a loan to value ratio of 75%.

Chart 1.14 Loans to individuals

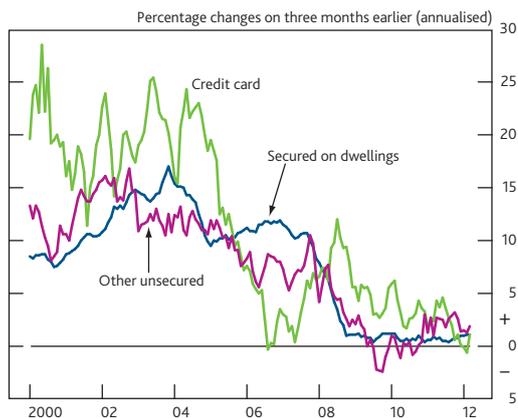
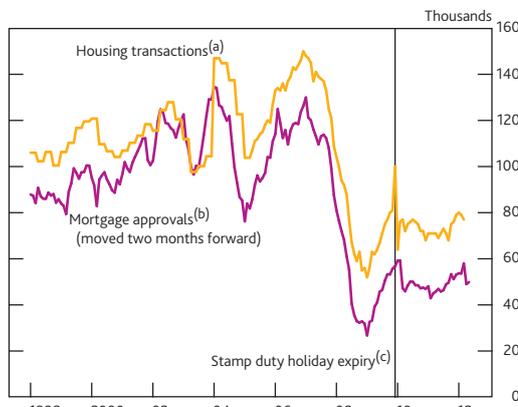


Chart 1.15 Monthly housing transactions and mortgage approvals



Sources: Bank of England, HM Revenue and Customs (HMRC) and Bank calculations.

- (a) Number of residential property transactions for values of £40,000 or above from April 2005 onwards. Prior to that date, the number of transactions per quarter has been assumed to grow in line with quarterly HMRC data on transactions in England and Wales, and the monthly data are estimated by assuming that the number of transactions is spread evenly throughout each quarter.
- (b) Loan approvals for house purchase.
- (c) Between 3 September 2008 and 31 December 2009, the threshold for exemption of residential property transactions from stamp duty land tax was raised temporarily to £175,000 from £125,000.

taking it back to its mid-2010 level (Chart 1.13). The *Credit Conditions Survey* also pointed to increases in 2012 Q2 (Table 1.B). Higher funding costs are most likely to affect the price of new lending, but mortgage rates have also increased for some existing customers: for example, some lenders raised their standard variable rate for mortgages by up to 0.5 percentage points at the beginning of May. Those changes affect around 10% of all outstanding mortgages.

Elevated funding costs have not been associated with higher interest rates on unsecured household borrowing. The cost of a £10,000 personal loan has fallen in recent months (Chart 1.13), and lenders responding to the *Credit Conditions Survey* did not expect any increase in spreads on unsecured loans in Q2 (Table 1.B). Lenders reported that defaults on unsecured loans in Q1 had been lower than previously expected, which may have put downward pressure on unsecured loan rates.

Growth in the stock of loans to individuals remained weak in 2012 Q1. That reflected subdued growth in the stocks of both mortgage debt and unsecured loans (Chart 1.14). Within unsecured loans, there was only modest growth in both credit card and other unsecured loans, which includes student loans.

Despite the increases in mortgage rates, there has been a modest pickup in housing market activity since the autumn of 2011 (Chart 1.15). That is likely, in part, to reflect some underlying strength in demand for housing. For example, the Bank's Agents reported that buy-to-let demand had picked up following earlier rises in rental yields and that initiatives to bolster demand for newly built properties have also supported activity. On the supply side, the Agents' contacts also reported that vendors had become more realistic about asking prices.

The recent increase in housing market activity could also be related to the bringing forward of transactions ahead of the expiry on 24 March of the temporary stamp duty exemption for first-time buyers of properties up to £250,000. The fall in mortgage approvals in February suggests that transactions may fall back somewhat after March because buyers will usually have arranged their mortgage well in advance of completing their transaction. Previous experience suggests that changes in stamp duty rules can have a marked impact on transactions: a spike at the end of 2009 can be attributed to the end of a temporary stamp duty exemption on purchases up to £175,000, although that exemption applied to all purchasers and not just to first-time buyers.

The Halifax and Nationwide house price indices fell by an average of 0.2% in the three months to April 2012. These indices suggest that nominal house prices remain well below their pre-recession peaks and have been broadly flat over the past year, although they continued to fall in real terms.

2 Demand

GDP growth was muted during 2011. Within that, household and business spending fell. Net trade, however, made a positive contribution to growth, as exports grew modestly while imports fell, in part restrained by the weakness in domestic demand. The pace of global growth slowed slightly in the second half of 2011. UK output is provisionally estimated to have contracted by 0.2% in Q1. Domestic demand growth is likely to have been subdued and export growth appears to have been weighed down by continued weakness in euro-area demand.

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

Percentage changes on a quarter earlier	Averages			2011			
	1998–	2008–	2010	Q1	Q2	Q3	Q4
	2007	09					
Household consumption ^(b)	0.9	-0.7	0.1	-0.9	-0.4	-0.3	0.4
Private sector investment	1.1	-3.8	1.4	-5.1	6.5	0.7	-1.5
<i>of which, business investment</i>	1.2	-2.9	0.9	-7.9	11.2	2.6	-3.3
<i>of which, private sector dwellings investment</i>	1.1	-5.1	2.9	0.5	-1.9	-3.3	2.6
Change in inventories ^{(c)(d)}	0.0	-0.2	0.3	-0.3	0.0	0.6	-0.6
Private sector domestic demand	0.9	-1.5	0.8	-1.9	0.8	0.5	-0.7
Government consumption and investment	0.9	0.6	0.0	2.0	-2.9	-0.4	0.9
Alignment adjustment ^(d)	0.0	0.0	-0.1	0.0	0.4	0.2	-0.2
Domestic demand	0.9	-1.0	0.5	-0.9	0.2	0.5	-0.5
'Economic' exports ^(e)	1.1	-0.8	2.3	1.5	-2.2	0.0	1.6
'Economic' imports ^(e)	1.4	-1.6	2.3	-1.7	-0.6	0.2	0.9
Net trade^{(d)(e)}	-0.1	0.3	-0.1	1.0	-0.5	-0.1	0.2
Real GDP at market prices	0.8	-0.8	0.4	0.2	-0.1	0.6	-0.3

(a) Chained-volume measures.

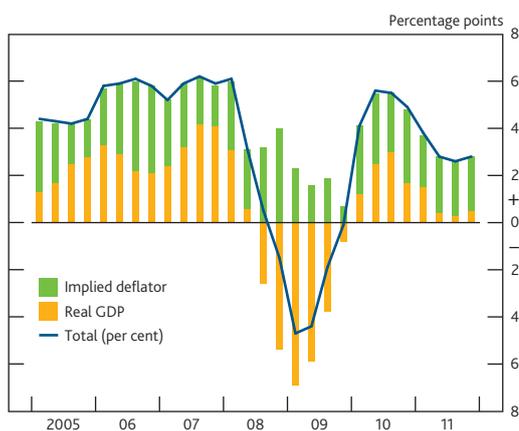
(b) Includes non-profit institutions serving households.

(c) Excludes the alignment adjustment.

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

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

Chart 2.1 Contributions to four-quarter growth in nominal GDP^(a)



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

Real demand growth was weak during 2011 (Table 2.A).

Over the year to Q4, GDP increased by only 0.5%. The pattern of growth during the year was, however, volatile, owing to the effects of one-off factors, such as the additional bank holiday associated with the royal wedding in April.

The weakness in real activity in 2011 was predominantly accounted for by domestic demand and, within that, household consumption (Section 2.1). Subdued domestic demand growth is likely to have largely reflected domestic headwinds, such as falling household real incomes, tight credit conditions and the effects of the fiscal consolidation. In addition, events in the euro area (Section 2.2) may have dampened domestic spending growth over the second half of the year, for example through their effect on business confidence.

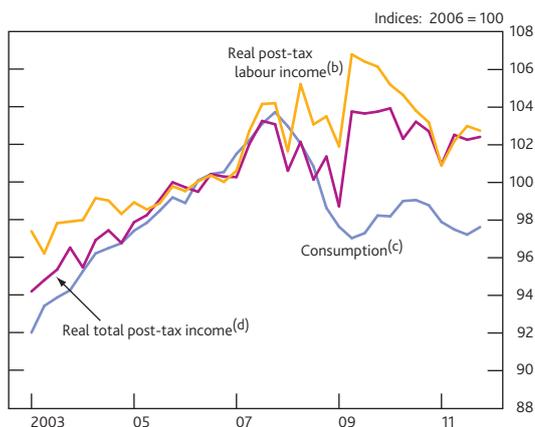
Subdued real GDP growth in 2011 was associated with an increase in nominal GDP of only 2.8% over the year to Q4 (Chart 2.1), well below its average growth rate in the decade before the 2008/09 recession. Most of the rise in nominal spending over 2011 was accounted for by increases in the prices of goods and services, in part reflecting the rise in VAT at the start of that year.

Output is provisionally estimated to have contracted by 0.2% in Q1 (Section 3). Household and business spending growth is likely to have been subdued. And export growth appears to have been dampened by continued weakness in euro-area activity.

2.1 Domestic demand

Household spending

Real household spending growth has been weak since late 2010, with consumption falling in each of the four quarters to 2011 Q3. Although consumption is estimated to have risen modestly in Q4 (Table 2.A), the level of spending in that quarter stood only a little above its 2009 Q2 trough.

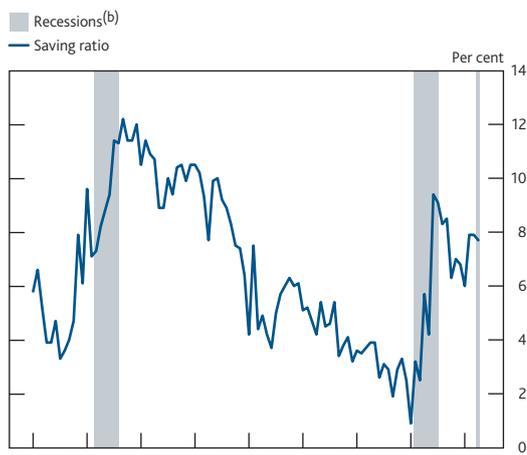
Chart 2.2 Household consumption and real income^(a)

- (a) Includes non-profit institutions serving households.
 (b) Wages and salaries plus mixed income less taxes (including income taxes and Council Tax) plus net transfers (general government benefits minus employees' National Insurance contributions), deflated by the consumer expenditure deflator.
 (c) Chained-volume measure.
 (d) Total available household resources, deflated by the consumer expenditure deflator.

It is likely that a key driver of the weakness in household spending growth since the second half of 2010 has been the substantial squeeze in household real incomes. Household real post-tax income fell by around 1% between 2010 Q3 and 2011 Q4 (**Chart 2.2**), in part reflecting rises in VAT and in energy and import prices during that period.

In addition to the squeeze in real incomes, households have faced other significant adverse shocks over the past four years. First, the 2008/09 recession is likely to have been associated with a marked reduction in future earnings prospects, perhaps prompting households to cut spending in order to smooth their consumption over time. Second, households' future earnings are likely to have become more uncertain as a result of the recession and, particularly for those in the public sector, the fiscal consolidation. That may have led them temporarily to spend less, in order to build savings up as a precaution against any unanticipated weakness in future income. And third, credit conditions have tightened, restricting the amount that households have been able to borrow.

As part of the adjustment to these shocks, some households may want to reduce their debts relative to their income — a process sometimes referred to as deleveraging. For example, some households may feel that their current debts leave them too vulnerable to future adverse events, given lower and more uncertain expected future incomes and tighter credit conditions than in the period before the 2008/09 recession.

Chart 2.3 Household saving ratio^(a)

- (a) Percentage of household post-tax income (not adjusted to account for the impact of Financial Intermediation Services Indirectly Measured).
 (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.

Households appear to have made some adjustment to these shocks. The household saving ratio rose sharply during the 2008/09 recession and households have continued to save a greater proportion of their income since the end of the recession than immediately beforehand (**Chart 2.3**). Once households have built up sufficient assets, then the saving ratio could fall back, boosting consumption growth for a period. But some households may not have completed that adjustment yet, especially since falls in real incomes over the past two years will have made it harder to accumulate savings and to pay down debt. Moreover, other factors — such as the need to make more provision for future retirement — may continue to raise household saving.

Nonetheless, household spending growth should be supported throughout 2012 by some recovery in real income growth, as the drag from past rises in energy and import prices dissipates. But that pickup in real income growth, and therefore consumption growth, is likely to be more gradual than previously expected, given the somewhat higher near-term outlook for CPI inflation (Section 5).

The latest indicators provide mixed evidence on household spending in Q1 but point, on balance, to muted growth. Retail sales volumes, an indicator of household spending on goods, rose by 0.8% in Q1. But the *CBI Service Sector Survey* suggests

that consumption of services fell, and measures of consumer confidence generally remain well below their historical averages.

Dwellings investment

Private sector dwellings investment plummeted during the 2008/09 recession. Despite some recovery since then, in 2011 Q4 it stood around 35% below its pre-recession peak. The recent increase in housing market activity (Section 1) may, if it persists, be associated with a modest increase in dwellings investment — which includes spending on services associated with the sale and purchase of property.⁽¹⁾

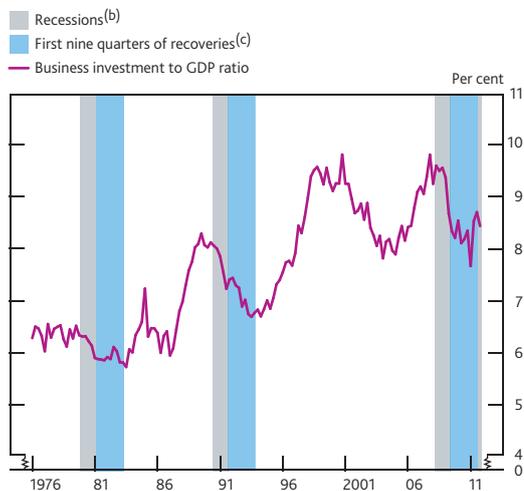
Business spending

Business investment fell sharply during the 2008/09 recession and continued to decline during the initial phase of the recovery. Companies are likely to have reduced investment as the outlook for demand became weaker and more uncertain, and as credit conditions tightened. Although business investment recovered over the year to 2011 Q3, it is estimated to have fallen by 3.3% in Q4, taking it back to around the same level as at the end of the recession.

The subdued path of business investment relative to GDP since the end of the 2008/09 recession looks broadly similar to its path following the recessions of 1980/81 and 1990/91 (Chart 2.4). On average, the ratio of real business investment to GDP has risen over time, as a gradual decline in the relative price of capital goods has encouraged companies to use more capital-intensive methods of production. But the ratio fell during the recessions of 1980/81, 1990/91 and 2008/09 and declined somewhat further after the recessions had ended — particularly in the case of the 1990s recession.

The persistent weakness in business investment following the end of recessions may reflect the fact that reversing investment projects is often difficult and costly, making companies reluctant to invest before the recovery in demand has become entrenched. Evidence from CBI surveys suggests that that does account for some of the weakness in investment following the 2008/09 recession: the proportion of businesses reporting that uncertainty about demand was likely to inhibit investment was generally higher throughout 2010 and 2011 than on average in the decade before the recession, especially for companies in the consumer, business and professional services sectors (Table 2.B). Businesses' uncertainty about demand is likely to have been compounded by concerns about the outlook for the euro area and, in particular, the risk that the necessary adjustments in several member countries may result in a disorderly outcome and substantially weaker global demand (Section 2.2).

Chart 2.4 Business investment to GDP ratio^(a)



(a) Ratio of the chained-volume measure of business investment to the chained-volume measure of GDP at market prices. The current vintage of business investment data is not available prior to 1997 Q1. Business investment prior to that date has been assumed to grow in line with the 2011 Q1 National Accounts data set.

(b) Recessions are defined as in Chart 2.3.

(c) Recoveries from recessions are assumed to begin in the quarter that follows the trough in output.

Table 2.B Uncertainty about demand as a constraint on investment^(a)

Percentages of respondents	Averages				2011		2012
	1999–2007	2008–09	2010	2011 H1	Q3	Q4	Q1
Manufacturing	51	57	50	52	55	61	46
Consumer, business and professional services	51	66	64	64	58	67	55
Financial services	48	63	56	46	50	54	55

Sources: CBI and CBI/PwC.

(a) Companies are asked to report whether or not uncertainty about demand is likely to limit capital expenditure authorisations over the next twelve months.

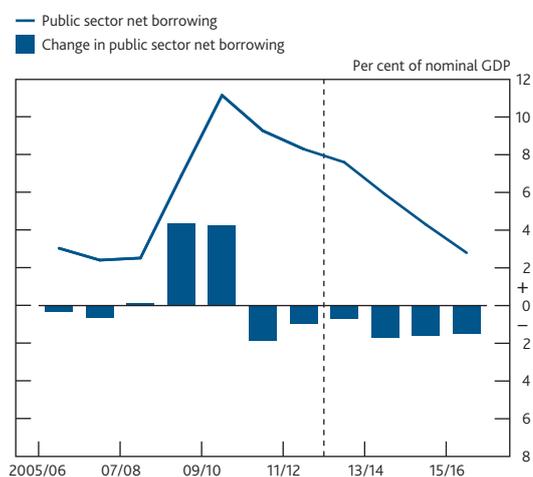
(1) The links between housing market activity and dwellings investment are discussed in more detail in the box on page 20 of the February 2012 Report.

Table 2.C Surveys of investment intentions

	Averages				2011		2012
	1999–2007	2008–09	2010	2011 H1	Q3	Q4	Q1
Manufacturing							
Agents' scores ^(a)	0.1	-1.7	0.9	2.3	1.7	1.1	1.4
BCC ^(b)	11	-13	9	11	8	5	17
CBI ^(c)	-15	-27	6	-5	-9	-6	13
Services							
Agents' scores ^(a)	1.8	-1.5	1.2	1.8	1.4	0.5	0.7
BCC ^(b)	16	-8	-2	3	1	2	5
CBI ^{(c)(d)}	-6	-29	-8	4	-7	-10	-12

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

- (a) End-quarter observations on a scale of -5 to +5, with positive scores indicating that respondents expect to increase investment over the next twelve months.
 (b) Net percentage balance of respondents reporting that they have increased planned investment in plant and machinery over the past three months. Data are non seasonally adjusted.
 (c) Net percentage balance of respondents reporting that they expect to increase investment in plant and machinery over the next twelve months.
 (d) Data cover the financial, retail and consumer/business services sectors, with the results from those surveys weighted together using shares in real business investment.

Chart 2.5 Public sector net borrowing^(a)

Sources: Office for Budget Responsibility (OBR) and ONS.

- (a) Measures exclude the temporary effects of financial interventions and the projected effect of the transfer of the Royal Mail's existing pension liabilities and a share of its pension fund assets into public sector ownership. Observations to the right of the vertical line are projections. Projections for public sector net borrowing come from the OBR's March 2012 *Economic and Fiscal Outlook*. Observations prior to 2012/13 are ONS data.

Other factors are also likely to have influenced business investment since the end of the 2008/09 recession. In particular, credit conditions facing larger businesses eased during 2010 and the first three quarters of 2011 (Section 1), which should have provided some support to investment. But credit conditions have tightened somewhat in recent months.

Business investment is likely to have picked up in Q1. Much of the fall in Q4 was accounted for by investment in the electricity, gas and water sector, which tends to be volatile and so may have rebounded in Q1. In addition, the proportion of companies reporting that demand uncertainty was likely to hold back investment fell (Table 2.B). Survey indicators of investment intentions point, on average, to modest increases in capital spending over 2012 (Table 2.C). The medium-term outlook for business investment is discussed in Section 5.

Businesses' spending on stocks reduced output growth in Q4 (Table 2.A): although companies continued to increase their stock levels, they did so by less than in the previous quarter. When the rate at which companies build up stocks stabilises, the drag on GDP growth from stockbuilding will dissipate.

Government spending

A substantial fiscal consolidation is under way. The MPC's projections are conditioned on the fiscal plans set out in the 2012 *Budget*, supplemented by the composition of nominal government spending underlying the Office for Budget Responsibility's (OBR's) associated *Economic and Fiscal Outlook*. The effects on demand of the new policy measures announced in the 2012 *Budget* were projected to be small and roughly offsetting.

The fiscal deficit continued to narrow over the past year. Public sector net borrowing fell to 8.3% of nominal GDP in 2011/12 from a peak of 11.2% in 2009/10 (Chart 2.5). The OBR's latest projections suggest that the deficit will narrow further in the next few years, although the fall in 2012/13 is expected to be relatively modest (Chart 2.5).

Although the fiscal consolidation is likely to result in continued weakness in nominal government consumption growth over the next few years, measured real government consumption growth may be less markedly weak, because of the way in which the volume of government spending is estimated. The box on page 21 provides more details.

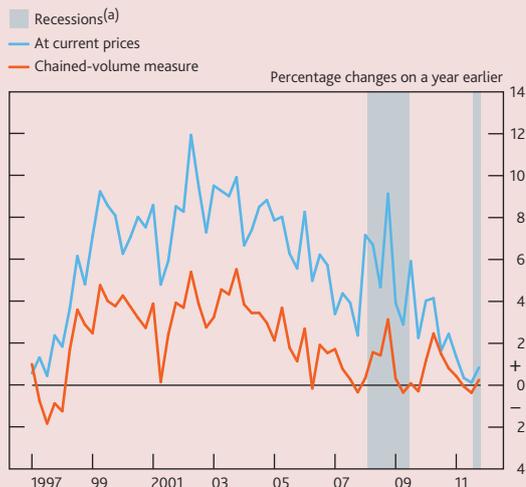
2.2 External demand and UK trade

Global demand growth slowed in the second half of 2011. That mostly reflected a weakening in euro-area output growth, although the pace of four-quarter growth also appeared to slow in some emerging economies. In contrast, US output growth remained reasonably robust. Survey indicators suggest that global activity continued to expand at a moderate rate in

Measuring real government consumption

Nominal government consumption has grown far less rapidly over the past three years than it did in the decade before the recession. But that slowing has been associated with a much smaller decline in the reported rate of growth of real government consumption (**Chart A**). This box explains how the ONS measures real government consumption and what that implies for estimates of real GDP.

Chart A Government consumption



(a) Recessions are defined as in Chart 2.3.

Measuring real government consumption is not straightforward. On the whole, the public sector provides services that are free at the point of delivery. That means that there is no direct measure of the prices of those services that can be used to deflate nominal government consumption. Instead, real consumption must be estimated in one of three ways: using an imputed indicator of the price; using indicators of the volume of inputs; or using an indicator of the volume of output.

Around one quarter of real government consumption is measured by deflating nominal spending by an imputed price index. For example, some components of central and local government procurement are deflated using specially constructed price indices based on producer prices, retail prices and other information. For a further small proportion of government consumption, the volume of output is estimated using indicators of the volume of inputs. For these components of government consumption, changes in nominal spending tend to be associated with contemporaneous changes in real consumption (**Table 1**).

Table 1 Government consumption by method of measurement

Calendar-year growth rates (per cent)	Average				
	1998–2007	2008	2009	2010	2011
Real output measured by deflating nominal consumption or using indicators of inputs^(a)					
At current prices	6.1	5.2	0.0	3.4	-2.8
Chained-volume measure	4.5	2.0	-4.1	1.0	-3.7
Implied deflator	1.6	3.2	4.3	2.4	0.9
Real output measured using output indicators^(b)					
At current prices	7.5	7.9	5.8	3.2	2.1
Chained-volume measure	1.9	1.4	2.1	1.8	1.9
Implied deflator	5.4	6.4	3.5	1.4	0.2

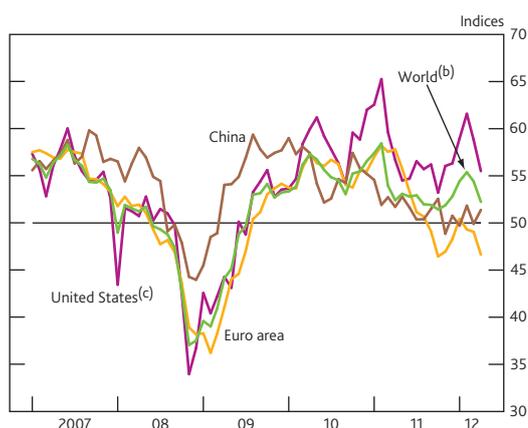
(a) Comprises total government consumption less directly measured government consumption. Includes, for example, spending on: defence procurement; and tax collection and administration.

(b) Comprises spending on health, education, social protection (social care and the administration of social security), fire services, law courts, probation and prisons.

For around two thirds of real government consumption, which includes services such as health and education, the volume of spending is measured directly using indicators of output. In the case of school education, the indicator of output — the number of pupils taught — is scaled by an adjustment factor based on past increases in the average point score of candidates sitting GCSE examinations, which is designed to capture changes in the quality of output.

Where real government consumption is measured directly from indicators of the volume of output, changes in nominal consumption are generally associated with only a limited contemporaneous change in real consumption. That is because the output indicators tend to change only slowly over time. The growth rates of these components of real consumption therefore tend to be relatively smooth, with changes in nominal consumption largely reflected in changes in the implied price deflator. Indeed, whereas annual growth in nominal consumption of these components is reported to have fallen to 2.1% in 2011 from 7.9% in 2008, real growth during that period fluctuated around its 1998–2007 average rate (**Table 1**).

The fiscal consolidation will result in persistent weakness in nominal government consumption growth over the forecast period. But it may be associated with considerably less change in estimated real government consumption growth, since the majority of government output is measured using direct volume indicators. Any change in real government consumption will be reflected in real GDP, but it will have no implications for the outlook for inflation, which depends on the public sector's use of resources rather than estimates of its real output.

Chart 2.6 Survey measures of global output growth^(a)

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

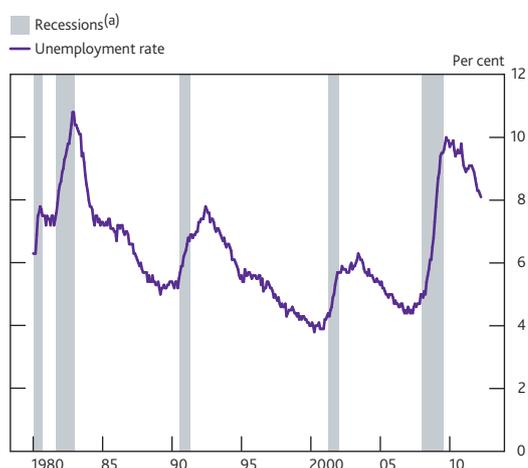
- (a) Published composite indices of manufacturing and services sectors, unless otherwise stated. A figure over 50 indicates rising output compared with the previous month, and a figure below 50 indicates falling output.
 (b) Based on the results of surveys in 30 countries, accounting for an estimated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

Table 2.D Euro-area survey measures of confidence and bank credit conditions

	Averages		2011		2012	
	1999–2007 ^(a)	2008–09	Q3	Q4	Q1	Apr.
Confidence^(b)						
Consumer	-9	-22	-16	-21	-20	-20
Business ^(c)	2	-14	-2	-7	-6	-8
Bank credit conditions^(d)						
Mortgage lending	3	26	18	29	17	n.a.
Business lending	10	37	16	35	9	n.a.

Sources: ECB and European Commission.

- (a) Bank credit conditions are averages since 2002 Q4.
 (b) Averages of monthly data.
 (c) Weighted average of the industrial, services, retail and construction confidence indicators, based on the weights of those indicators in the economic sentiment indicator.
 (d) Weighted net percentage balances of banks reporting that their credit standards as applied to the approval of loans to households for house purchase/loans to businesses had tightened over the past three months. Weights reflect national shares in total outstanding euro-area lending to euro-area residents.

Chart 2.7 US unemployment rate

Sources: Bureau of Labor Statistics and National Bureau of Economic Research (NBER).

- (a) Recession bars use NBER dating methodology.

Q1 (Chart 2.6), but it is likely that the weakness in euro-area demand growth persisted.

The euro area

Euro-area GDP contracted by 0.3% in Q4. Output continued to fall in the periphery countries, but GDP also declined in many other member countries, including Germany. The Markit euro-area composite Purchasing Managers' Index, an indicator of activity, picked up between October 2011 and January 2012. But most of those gains have since been reversed (Chart 2.6). Based on its historical relationship with output growth, the index suggests that euro-area GDP fell modestly again in Q1.

The weakness in euro-area demand growth reflects, in part, the challenges faced by several member countries as they seek to regain competitiveness and reduce indebtedness. Substantial fiscal consolidations are under way in many member countries, especially those in the periphery. In addition, the ECB's *Bank Lending Survey* suggested that credit conditions tightened a little further in Q1 (Table 2.D), albeit by much less than in Q4: respondents attributed that to improved conditions in bank funding markets following the ECB's three-year longer-term refinancing operations (Section 1). Measures of consumer and business confidence remained well below their 1999–2007 averages in April (Table 2.D).

The United States

US GDP is estimated to have increased by 0.5% in Q1, following growth of 0.7% in Q4. In both quarters, growth was largely accounted for by increases in household spending.

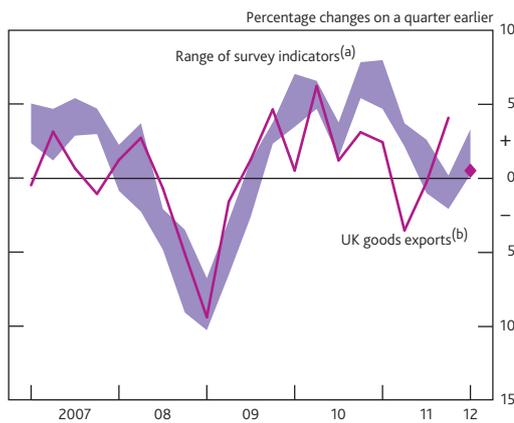
The unemployment rate dropped further from its peak of 10% in October 2009, falling to 8.1% in April (Chart 2.7). Until mid-2011, much of the decline in the unemployment rate reflected a fall in the proportion of the adult population working or seeking work. But since July 2011, increased employment has also been a factor pushing down unemployment. The unemployment rate remains well above its pre-recession level, however, and elevated unemployment, alongside other headwinds — including housing market weakness and prospective fiscal consolidation — may continue to weigh on growth.

Emerging economies

Growth in emerging economies has remained solid since the start of 2012, although the pace of four-quarter growth in many countries has slowed relative to rates seen at the start of 2011. Demand growth is likely to have been restrained by some combination of weakness in external demand, especially from advanced economies, and past domestic policy actions taken to reduce inflationary pressures.

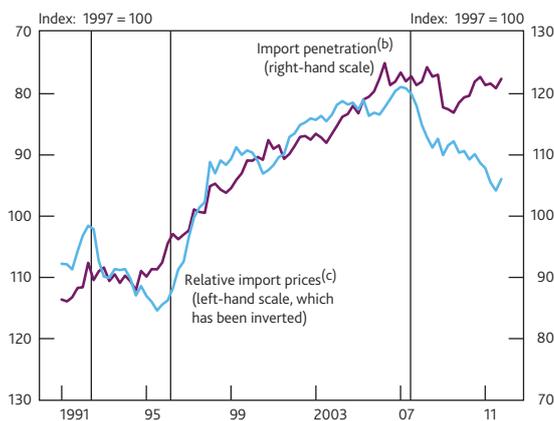
UK trade

UK exports rose by 0.8% in the year to 2011 Q4. That was more than accounted for by an increase in goods exports;

Chart 2.8 UK goods exports and surveys of export orders

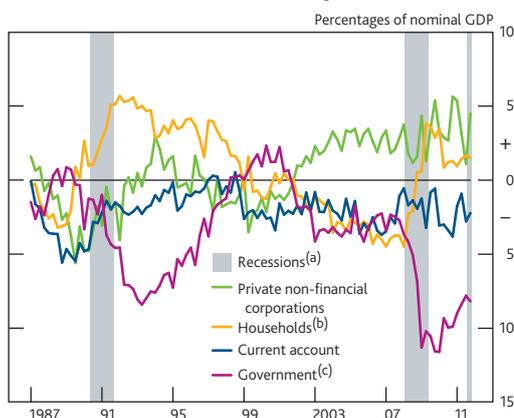
Sources: BCC, CBI, CIPS/Markit and ONS.

- (a) Includes measures of manufacturing export orders from BCC, CBI and CIPS/Markit scaled to match the mean and variance of quarterly goods export growth since 2000. BCC data are non seasonally adjusted.
- (b) Excluding the estimated impact of MTIC fraud. The diamond shows data for the change between the three months to November 2011 and the three months to February 2012.

Chart 2.9 UK import penetration and relative import prices^(a)

Sources: ONS and Bank calculations.

- (a) The vertical lines mark the beginning of major nominal exchange rate movements that began in 1992 Q3 (a depreciation), 1996 Q2 (an appreciation) and 2007 Q3 (a depreciation).
- (b) UK imports as a proportion of import-weighted total final expenditure. Import-weighted total final expenditure is 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 by their respective import intensities. Import and export data have been adjusted to exclude the estimated impact of MTIC fraud. Import intensities are estimated using the *United Kingdom Input-Output Analytical Tables 2005*.
- (c) Import prices, excluding the estimated impact of MTIC fraud, divided by the market price GDP deflator.

Chart 2.10 Financial balances by sector

- (a) Recessions are defined as in **Chart 2.3**.
- (b) Includes non-profit institutions serving households.
- (c) Excludes public corporations.

services exports fell over the year. The latest data show that goods export growth slowed to 0.5% in the three months to February from 4.1% in Q4. But that pattern of growth may, in part, prove erratic: trade data are prone to revision and surveys point to a different profile of growth over the past year (**Chart 2.8**).

The increase in goods exports in 2011 and early 2012 was driven by continued growth in goods exports to non-EU countries. In contrast, goods exports to the EU fell. Exports to non-EU countries were supported by the strength of demand in those countries. Reports from the Bank's Agents indicate that UK businesses have been looking to increase trade with non-EU countries, which may continue to support export growth.

UK imports fell by 1.2% in the year to Q4, much weaker than the average growth rate in the ten years prior to the 2008/09 recession. The latest data indicate that goods imports fell by 2% in the three months to February. That is likely, in part, to reflect the weakness in domestic activity weighing on demand for imports. But there are also signs that the depreciation of sterling between mid-2007 and the end of 2008 has led to some switching of expenditure away from imports: spending on imports relative to spending on domestically produced goods and services has been broadly flat since the start of 2007, whereas it rose in the decade prior to the depreciation (**Chart 2.9**).

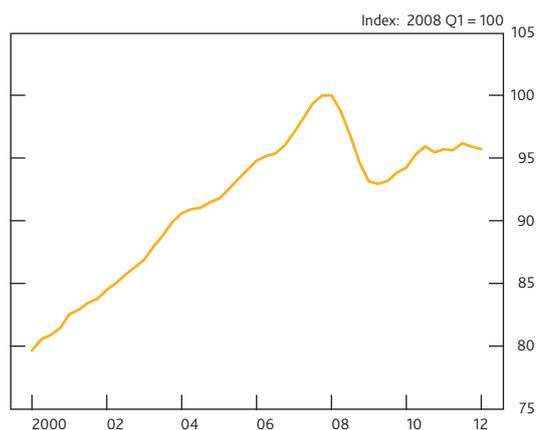
The current account remained in deficit in Q4 (**Chart 2.10**). That deficit, alongside other factors such as low national saving, indicates a need for the UK economy to rebalance away from domestic demand towards net exports.⁽¹⁾ The depreciation of sterling between mid-2007 and the end of 2008 should aid that process, by continuing to support UK net trade and the current account over the medium term.

(1) The need for the United Kingdom to rebalance is discussed in Berry, S, Corder, M and Williams, R (2012), 'What might be driving the need to rebalance in the United Kingdom?', *Bank of England Quarterly Bulletin*, Vol. 52, No. 1, pages 20–30.

3 Output and supply

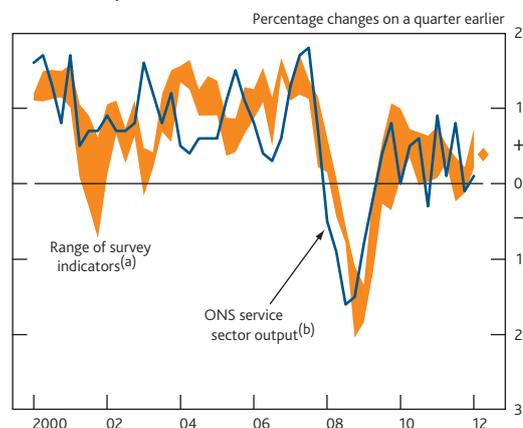
Output is estimated to have contracted by 0.2% in 2012 Q1, following a fall of 0.3% in 2011 Q4. Construction output fell sharply in Q1 and manufacturing and service sector activity were broadly flat. Despite the fall in output, employment rose and the unemployment rate edged down. Unemployment remains elevated, however, and there also appears to be a modest margin of spare capacity within companies. There remains considerable uncertainty around the overall extent of spare capacity in the economy.

Chart 3.1 GDP^(a)



(a) Chained-volume measure at market prices.

Chart 3.2 Service sector output and surveys of service sector output



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

(a) Measures included are the BCC, CIPS/Markit and the CBI financial services, business/consumer services and distributive trades surveys weighted together using nominal shares in value added. The BCC data are non seasonally adjusted. Survey measures have been scaled to match the mean and variance of service sector growth since 2000. The diamond shows the monthly CIPS/Markit indicator for April 2012.

(b) Quarterly growth, chained-volume measure at basic prices.

The recovery in output since the 2008/09 recession has been unusually weak, with activity broadly flat since the middle of 2010. Output is estimated to have fallen slightly in both of the past two quarters (Section 3.1), implying that the UK economy is technically in recession. Measured output growth in Q2 is likely to be depressed by the impact of the additional bank holiday associated with the Diamond Jubilee. And quarterly growth rates during the second half of 2012 will probably be affected by the Olympic Games (see the box on pages 26–27).

Despite the recent weakness in output growth, employment increased, as the pace of reduction in public sector employment slowed and private sector employment growth picked up (Section 3.2). The unemployment rate edged down. But it remains elevated, suggesting a significant amount of slack in the labour market. There also appears to be a modest margin of spare capacity within companies on average (Section 3.3). But considerable uncertainty around the overall degree of slack remains.

3.1 Output

The ONS estimated that output contracted by 0.2% in 2012 Q1, following a fall of 0.3% in 2011 Q4. Output is presently estimated to have been broadly flat since mid-2010, and to have remained well below its 2008 peak (**Chart 3.1**).

In Q1, all of the main sectors of the economy are estimated to have been weak. The preliminary GDP estimate suggests that service sector activity, which accounts for around three quarters of UK output, grew by only 0.1%, having fallen by 0.1% in Q4. That weakness in Q1 is somewhat at odds with indicators from business surveys of service sector activity (**Chart 3.2**), which suggested a greater pickup in growth in Q1.

In addition, an estimated 3% fall in construction output reduced reported GDP growth by 0.2 percentage points in Q1.

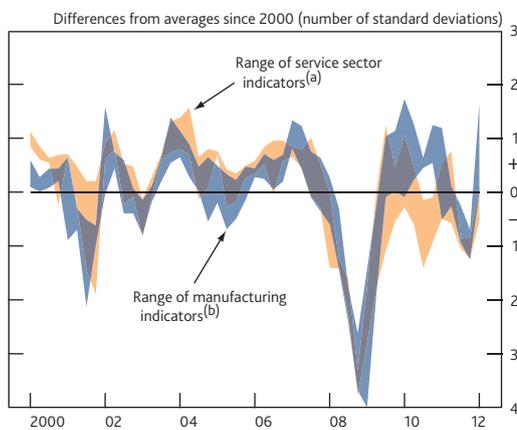
Construction output data are volatile and are prone to substantial revision. In particular, there was an unusually large fall of 12.9% in non seasonally adjusted construction output in January, with output estimated to have recovered somewhat in February. Given the past experience of revisions, in constructing their preliminary estimate of Q1 GDP the ONS assumed a stronger growth rate for construction than that suggested by the monthly data available at the time.⁽¹⁾

In Q1, output of the production industries was estimated to have reduced overall growth by 0.1 percentage points, mainly reflecting the continuing decline in oil and gas extraction. Manufacturing output was flat in Q1, following a fall of 0.7% in Q4.

Survey measures indicate that business confidence improved in Q1 (**Chart 3.3**), particularly in the manufacturing sector. That suggests some recovery in both manufacturing and services output growth in Q2. And construction output may make a positive contribution to growth in Q2, given that it has already recovered somewhat from its fall in January. But oil and gas extraction is likely to be adversely affected by disruptions at the Elgin oil field in the North Sea.

As explained in the box on pages 26–27, quarterly growth in Q2 and the remainder of 2012 will be affected by the additional Diamond Jubilee bank holiday and the Olympic Games. There is uncertainty around the precise size of these effects. But the combination of these two events is expected to lower output growth by around ½ percentage point in Q2, boost it by a little more than that in Q3 and lower it slightly in Q4 as output returns to its underlying level. Thus a fall in measured output in Q2 could still reflect an improvement in growth excluding those one-off factors. Section 5 discusses the medium-term growth outlook.

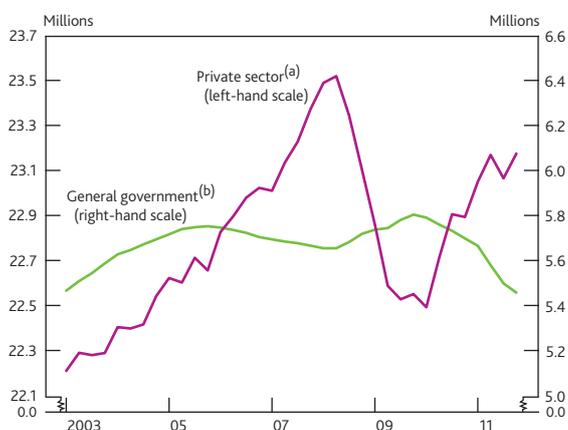
Chart 3.3 Survey indicators of business confidence



Sources: BCC, CBI, CBI/PwC, Markit Economics and Bank calculations.

- (a) Includes measures of service sector business expectations from the BCC, CBI and CIPS/Markit surveys. The CBI measure weights together financial services, business/consumer services and distributive trades surveys using shares in nominal value added. The surveys used are: BCC turnover confidence, CBI business optimism and CIPS/Markit business expectations. The BCC data are non seasonally adjusted.
- (b) Includes measures of manufacturing business expectations from the BCC (non-services), CBI and CIPS/Markit surveys. The surveys used are: BCC turnover confidence, CBI business optimism and CIPS/Markit orders. The BCC data are non seasonally adjusted.

Chart 3.4 Public and private sector employment



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

- (a) Private sector employment calculated as the difference between LFS whole-economy employment and total public sector employment from the ONS's public sector employment release, adjusted to be on a calendar-quarter basis.
- (b) General government (including public corporations) employment data are from the ONS's public sector employment release.

3.2 Labour demand and supply

The weakness in output growth since mid-2010 has been accompanied by a period of broadly flat overall employment and an elevated unemployment rate. But the amount of downward pressure that slack in the labour market exerts on wages will depend, in part, on the extent to which those not in employment are actively seeking work and have the required skills to fill vacancies.

Labour demand

Since the middle of 2010, private sector employment has risen by around 450,000, while public sector employment has fallen by around 350,000 (**Chart 3.4**). Overall employment picked up in 2011 Q4, increasing by around 60,000. And employment increased further in the three months to February.

(1) For more details see the ONS's statistical bulletin on the preliminary estimate of 2012 Q1 GDP at www.ons.gov.uk/ons/dcp171778_263578.pdf.

The impact of special factors on the path of GDP growth in 2012

Special factors, such as the additional bank holiday associated with the royal wedding in 2011, can lead to volatility in quarterly output growth. The pattern of quarterly growth in 2012 is likely to be affected by the additional bank holiday for the Diamond Jubilee and by the Olympic Games. It is important to look through these effects when judging the strength of demand and hence the outlook for inflation, as they do not reflect enduring changes in underlying activity.

The impact of the Diamond Jubilee

As part of the Diamond Jubilee celebrations, the late-May bank holiday has been moved to 4 June and an additional bank holiday granted for 5 June. The ONS does not adjust its measures of output for non-recurring bank holidays, such as the additional Jubilee bank holiday, although it does adjust for normal recurrent changes in the number of working days in a period.⁽¹⁾ So, if no activity happened on the additional bank holiday, measured output in Q2 would be commensurately lower.

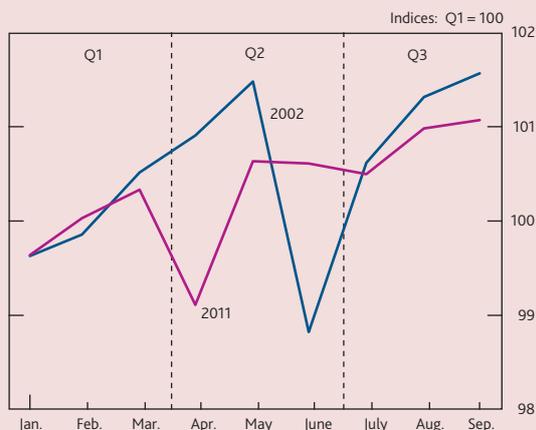
The combined holiday may also encourage some people to take extended periods of holiday or some businesses to arrange extended closures during that period. It is likely that some of the lost output will be made up at other times, but as the Diamond Jubilee falls in the last month of Q2, the extent to which that happens during that quarter may be limited. The additional bank holiday is therefore likely to reduce measured output in Q2, though it may boost it somewhat in Q3.

There are two recent examples of additional bank holidays: those for the Golden Jubilee in June 2002 and the royal wedding in April 2011.

Both services and manufacturing output fell during the month of the Golden Jubilee in 2002, but recovered over subsequent months (**Chart A**). At the time, the ONS estimated that the additional bank holiday could have reduced quarterly growth in 2002 Q2 by as much as 0.7 percentage points and boosted growth in 2002 Q3 by a similar amount.

The temporary fall in output associated with the royal wedding in 2011 was somewhat smaller (**Chart A**). Smoothing through the monthly volatility suggests that the royal wedding bank holiday lowered quarterly output growth by around 0.4 percentage points in 2011 Q2. Output growth in Q3 may consequently have been around 0.4 percentage points higher than it otherwise would have been. But there were other factors, such as supply chain disruptions following the Tōhoku earthquake, that are also likely to have affected output growth during the period, so the overall impact of the additional bank holiday is uncertain.⁽²⁾

Chart A Manufacturing and services GVA around the Golden Jubilee in June 2002 and the royal wedding in April 2011^(a)



(a) Gross value added (GVA) at basic prices for services and manufacturing weighted by their shares in nominal value added.

To the extent that the larger impact of the Golden Jubilee reflected the bank holiday occurring in the last month of the quarter, the impact of the additional Diamond Jubilee bank holiday may be more like that of the Golden Jubilee and, therefore, larger than that of the royal wedding. Overall, the MPC's central judgement is that the Diamond Jubilee bank holiday is likely to lower measured output growth in Q2 by around ½ percentage point and correspondingly increase growth in Q3 by around the same amount. But there are risks on both sides of that central judgement.

The impact of the 2012 Olympic Games

London will host the 2012 Summer Olympic and Paralympic Games during the period 27 July to 9 September.

Hosting the Olympic Games involves the production and purchase of various outputs that are directly measured. The ONS is likely to apply international conventions in recording those outputs, as, for example, the Australian Bureau of Statistics did for measuring the output of the 2000 Sydney Olympic Games.⁽³⁾ That means that expenditure on goods and services related to hosting the Games will be recorded as output when that expenditure occurs.

Although most of the expenditure associated with the Games has already occurred, there is likely to be considerable expenditure concentrated in the immediate run-up to and during the Games, which could boost measured output growth in the middle of 2012. For example, the London Organising Committee of the Olympic Games (LOCOG), the body responsible for staging the Games, estimates that it is likely to spend around £2 billion in total, equivalent to around 0.5% of quarterly UK GDP.⁽⁴⁾ And by March 2011, LOCOG had spent only around £500 million of that.

The Olympic Games may also have indirect effects on output in Q3. For example, the level of tourism may be higher as a result, although it is not clear to what extent tourism associated with the Games will displace some tourism that would have otherwise occurred. And transport disruption and a concentration of more people than normal taking holidays in Q3 could reduce the output of businesses, particularly in London. So it is uncertain what the net impact of these types of effects will be.

An alternative way of estimating the likely impact is to look at the effect of past Olympic Games. For the 2000 Sydney Olympic Games, the Reserve Bank of Australia estimated that the boost to GDP growth in the quarter of the Games was around $\frac{3}{4}$ percentage point.⁽⁵⁾ A similar size and pattern of spending in the United Kingdom related to the Olympics would provide a boost of around 0.2 percentage points to UK GDP.

The MPC's central judgement is that growth is likely to be slightly higher in Q3 as a result of the Games, with that effect reversed in Q4 as output returns to its normal level.

Conclusion

There is likely to be a significant impact from special factors on reported quarterly GDP growth during 2012. But there is considerable uncertainty around the precise magnitude and profile of that impact. The MPC's central judgement is that the ONS measure of growth is likely to be around $\frac{1}{2}$ percentage point weaker than underlying growth excluding those factors in Q2, but could be stronger by a little more than that in Q3. Growth will then also be a little weaker in Q4 as the ONS measure of output returns to its underlying level.

- (1) For example, the ONS does adjust for working days lost due to Easter each year in March and April.
- (2) For more details see the box on pages 24–25 of the May 2011 *Report*.
- (3) This is how the ONS has so far dealt with Olympic Games ticket sales. For more details see www.ons.gov.uk/ons/re/naa2/second-estimate-of-gdp/q2-2011/treatment-of-the-sale-of-olympic-tickets.pdf.
- (4) For more details see LOCOG *Annual Report 2010–2011*, which can be found at www.london2012.com/mm/Document/Publications/Annualreports/01/24/09/33/locog-annual-report-2010-11.pdf.
- (5) For more details see address by Mr I J Macfarlane, Governor, to Joint Australian Business Economists and Economic Society (New South Wales Branch) Dinner, Sydney, 10 July 2001, which can be found at www.rba.gov.au/publications/bulletin/2001/jul/pdf/bu-0701-2.pdf.

Table 3.A Average actual weekly hours worked^(a)

	Averages		2011	2012 Feb. ^(b)
	2002–07	2008–10		
Whole economy	32.1	31.7	31.5	31.8
Full-time	37.3	37.0	37.0	37.4
Part-time	15.6	15.6	15.6	15.7

Source: ONS (including the Labour Force Survey).

- (a) Average weekly hours worked in main job.
 (b) Based on data for the three months to February 2012.

Table 3.B Changes in part-time employment by reason for working part-time

Changes on a year earlier, thousands	Averages 2000–08	2009	2010	2011
Did not want full-time job	43	-83	65	-34
Other ^(a)	31	-48	3	-81
Total	76	119	221	30

Source: ONS (including the Labour Force Survey).

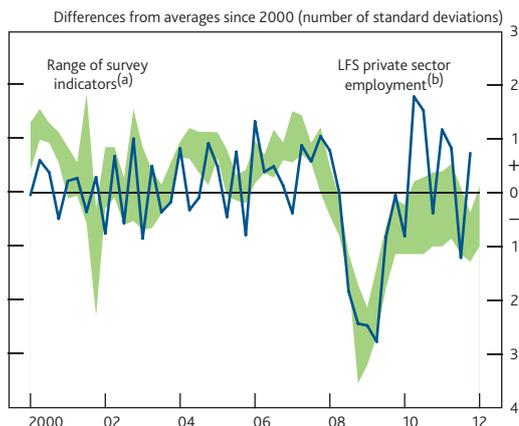
- (a) Includes those who are ill or disabled, students and those who gave no reason.

Public sector employment continued to fall in 2011 Q4 (**Chart 3.4**), though at a slightly slower rate than earlier in the year. There remains uncertainty around the overall extent of the reduction in public sector employment that is consistent with the Government's spending plans.

Private sector employment rose in Q4, more than offsetting the fall in public sector employment. The growth in private sector employment since the middle of 2010 (**Chart 3.4**) may have reflected some companies needing to increase employment just to meet current demand. Alternatively, to the extent that it reflected some companies expanding employment in anticipation of a recovery in demand, it could imply a period of employment growing more slowly than output in the near term.

Within whole-economy employment, the proportion of employees working part-time has increased since the start of the 2008/09 recession. Although the average hours worked by both part-time and full-time employees have recovered to around their long-run averages (**Table 3.A**), the increase in the share of part-time workers means that, across the economy as a whole, average hours worked remain a little below past averages. And the number of people working part-time but reporting that they would prefer a full-time job has continued to increase since the start of the 2008/09 recession (**Table 3.B**). That suggests that, before increasing the number of people employed, there may be scope for employers to increase the hours of existing staff further by moving some people from part-time to full-time positions.

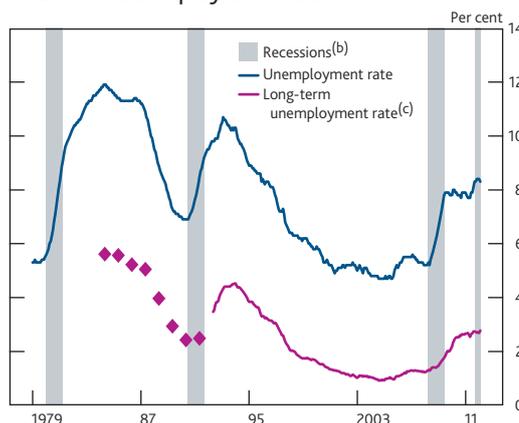
Chart 3.5 Private sector employment and surveys of employment intentions



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

- (a) Data are to 2012 Q1. Measures from the Bank's Agents (manufacturing and services), the BCC (non-services and services) and the CBI (manufacturing, financial services and business/consumer services) are weighted together using employee shares from Workforce Jobs. The Agents' data are end-quarter observations. The BCC data are non seasonally adjusted. The Manpower data cover the whole economy.
- (b) Percentage change on a quarter earlier. Data are to 2011 Q4. Calculated as in Chart 3.4.

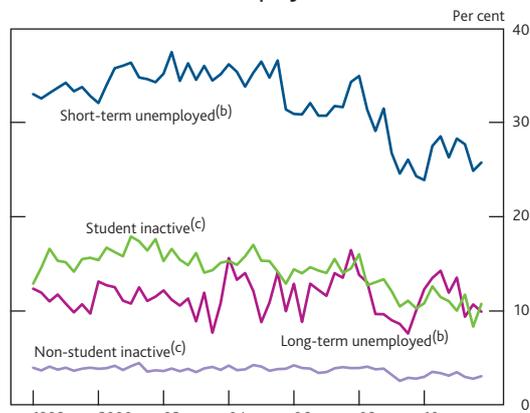
Chart 3.6 Unemployment rates^(a)



Source: ONS (including the Labour Force Survey).

- (a) Rolling three-month measures unless otherwise stated.
- (b) Recessions are defined as in Chart 2.3.
- (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 3.7 Flows into employment^(a)



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

- (a) Based on LFS microdata that have been seasonally adjusted by Bank staff. Data are to 2011 Q4 and based on the 16-64 population.
- (b) Flows into LFS employment by those who had been unemployed for fewer (more) than twelve months divided by the number of people who were unemployed for fewer (more) than twelve months in the previous quarter.
- (c) Flows into LFS employment by those who had been inactive by reason divided by the number of people who were inactive by reason in the previous quarter.

Overall, recent robust growth in private sector employment, and the scope for those already employed to work longer hours, may limit the pace of employment growth in the near term. Survey measures of employment intentions remained mixed in Q1 and point to broadly flat private sector employment in the near term (Chart 3.5).

Labour supply and labour market tightness

The unemployment rate decreased slightly to 8.3% in the three months to February (Chart 3.6). But it remains around 3 percentage points higher than at the start of 2008. That increase in unemployment — one indicator of the degree of slack in the labour market — is likely to have put some downward pressure on wages (Section 4).

There are reasons, however, why there might be less downward pressure on wages than implied by the increase in unemployment alone. For example, the long-term unemployed are typically less likely to find employment than the short-term unemployed (Chart 3.7) and hence are likely to place less downward pressure on wages. That may be because people who are out of work for a long period miss opportunities to develop the skills to compete effectively for jobs. The long-term unemployment rate has increased since the start of 2008, but by less than following the 1990s recession (Chart 3.6).

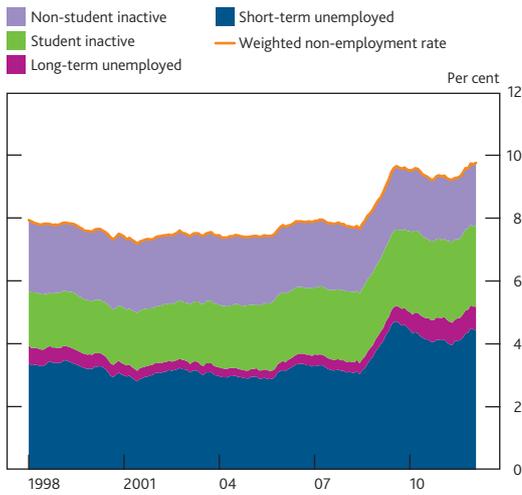
In addition to the unemployed, other non-employed people who report that they are currently not searching for a job, such as students and those looking after a family or home, do sometimes move into employment. So those groups also contribute to the pool of potential employees. For example, students who say that they are not searching for a job move into employment at a similar rate to those who are long-term unemployed (Chart 3.7).

A wider measure of overall labour market pressure can therefore be obtained by weighting together the different groups not presently in a job by their respective probabilities of moving into one — the 'weighted non-employment rate' (Chart 3.8).⁽¹⁾ This measure of labour market slack has increased significantly since the start of 2008, mainly due to increases in unemployment and the number of students not searching for a job.

Business surveys of companies' ability to find suitable employees provide alternative indicators of labour market slack. These survey balances indicate a slight increase in recruitment difficulties since 2010 (Table 3.C), despite the rise in unemployment over that period, but most remain considerably below their long-run averages. Overall, it is likely that a considerable amount of slack remains in the labour market.

(1) For more details see Jones, J, Joyce, M and Thomas, J (2003), 'Non-employment and labour availability', *Bank of England Quarterly Bulletin*, Autumn, pages 291-303.

Chart 3.8 Contributions to the weighted non-employment rate^(a)



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

(a) Percentages of the 16–64 population where each group is scaled by average 1998–2007 transition rates into employment, relative to the short-term unemployed, as shown in Chart 3.7. Rolling three-month measure.

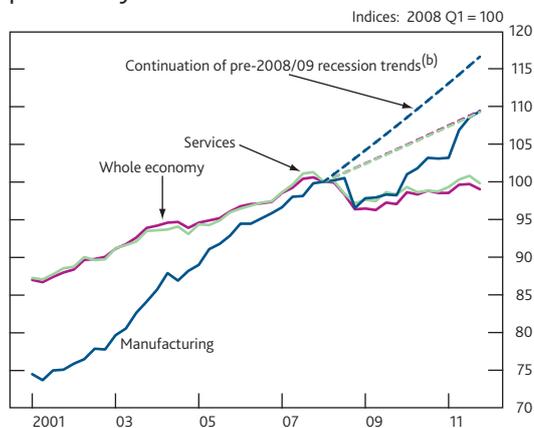
Table 3.C Survey indicators of recruitment difficulties

	Averages since 1998 ^(a)	2010	2011	2012 Q1
Agents ^(b)	0.6	-1.8	-0.7	-1.1
BCC ^(c)	59	49	50	53
CBI skilled staff ^(d)	23	12	17	17
CBI unskilled staff ^(d)	6	2	2	5

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

- (a) Unless otherwise stated.
- (b) End-quarter observations on a scale of -5 to +5, with positive scores indicating greater recruitment difficulties in the most recent three months compared with the situation a year earlier.
- (c) Percentage of respondents reporting recruitment difficulties over the past three months. Non seasonally adjusted. Services and non-services balances are weighted using employee jobs shares from Workforce Jobs.
- (d) Balances of respondents expecting skilled/unskilled labour to limit output/business over the next three months (in the manufacturing sector) or over the next twelve months (in the financial, business and consumer services sectors), weighted using employee jobs shares from Workforce Jobs. Averages are since 1998 Q4.

Chart 3.9 Whole-economy and sectoral labour productivity^(a)



- (a) Output per hour.
- (b) Continuations of pre-recession trends are calculated by projecting forward labour productivity from 2008 Q2 using the average quarterly growth rate between 1997 Q2 and 2008 Q1.

3.3 Productivity and companies' spare capacity

During the 2008/09 recession, measured labour productivity fell significantly and since then has remained substantially below where it would have been if pre-recession trends had continued (Chart 3.9). Moreover, the data currently available on output and employment suggest that productivity fell back in Q1. At face value, the large gap between the current level of productivity and a continuation of its pre-recession trend might suggest that there is a significant degree of spare capacity within companies. But business surveys indicate that a relatively small proportion of firms are operating below normal capacity, with that proportion little changed in Q1 (Chart 3.10).

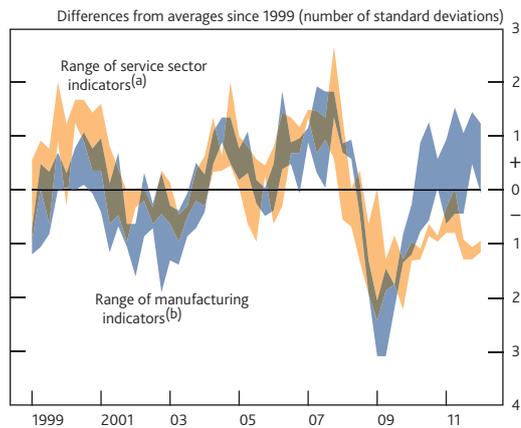
Although it is difficult to reconcile the message for overall spare capacity from the aggregate productivity data and the survey indicators, both suggest that there have been some differences between the manufacturing and service sectors. Manufacturing productivity is slightly closer to its pre-recession trend than productivity in the service sector (Chart 3.9) and business surveys suggest that manufacturers have much less spare capacity (Chart 3.10). It is possible that these survey measures do not fully capture how much capacity companies could bring on stream were there sufficient demand. But the broad divergence between manufacturing and service sector capacity pressures is also reflected in companies' stated intentions to invest to expand capacity (Chart 3.11), suggesting that a greater proportion of manufacturing companies are running up against capacity constraints.

It is possible that some of the weakness in productivity may be short-lived. For example, some companies may have held on to staff because they expect activity to recover in the future and it is costly to cut back staff and then rehire later; or companies may be having to work just as hard to compete for a lower level of overall demand. Forbearance by banks and the low level of real wage growth (Section 4) may have helped such companies to hold on to labour. When demand recovers, those companies can be expected to register a recovery in productivity. Alternatively, if they decide that demand will remain weak, they may shed labour, again boosting productivity.

Robust growth in private sector employment and evidence from business surveys of capacity pressures suggest, however, that such labour hoarding is unlikely to be responsible for all of the overall weakness in productivity. There are several reasons why productivity growth could be weak for a more sustained period.

First, the banking crisis and the associated tightening in credit conditions may have reduced the availability of working

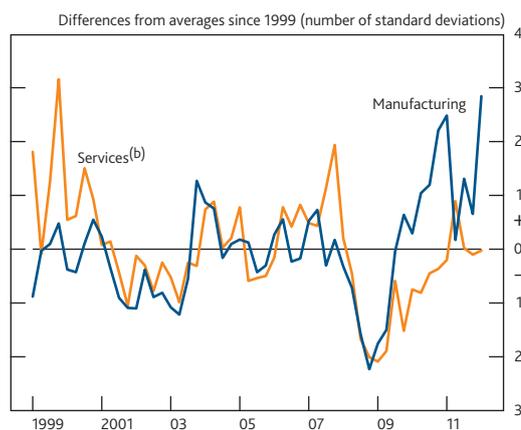
Chart 3.10 Survey indicators of capacity utilisation by sector



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

- (a) Includes measures of services capacity utilisation from the Bank's Agents, BCC and CBI. The Agents' data are end-quarter observations. The CBI measure weights together financial services, business/consumer services and distributive trades surveys using shares in nominal value added. The BCC data are non seasonally adjusted.
- (b) Includes measures of manufacturing capacity utilisation from the Bank's Agents, CBI and a measure of non-services capacity utilisation from the BCC. The Agents' data are end-quarter observations. The BCC data are non seasonally adjusted.

Chart 3.11 CBI survey measures of intentions to invest to expand capacity^(a)



Sources: CBI, CBI/PwC and Bank calculations.

- (a) Calculated by scaling the net percentage balance of respondents who report that they are increasing their capital expenditure on vehicles, plant and machinery over the next twelve months by the proportion of respondents who report that they intend to invest in order to expand capacity.
- (b) This measure weights together financial services and business/consumer services measures by their shares in nominal value added.

capital, restricting the ability of some companies to produce — particularly those that are more credit-intensive. It is also likely to have impeded the flow of finance towards new or dynamic companies with higher productivity. To the extent that credit conditions remain tight, capital constraints may continue to restrict the growth in some businesses' productive capacity.

Second, investment in both fixed and intangible capital has also been low in recent years. Moreover, company insolvencies have risen, albeit by less than following previous recessions, leading some capital to be scrapped. The resulting weakness in capital stock growth is likely to have reduced the growth rate of potential labour productivity. Until the rate of investment increases and capital stock growth recovers, labour productivity growth may be persistently weaker.

Third, the reduction in total hours worked since the start of the 2008/09 recession will have reduced the opportunities for people to acquire skills on the job, further reducing productivity growth.

Overall, the MPC judges that the underlying rate of productivity growth is likely to have been significantly weaker than usual since the start of the 2008/09 recession, although there is considerable uncertainty about that rate. It is, however, likely that, alongside substantial spare capacity within the labour market, the margin of spare capacity remaining within companies is greater than normal. Section 5 discusses the prospects for productivity growth.

4 Costs and prices

CPI inflation fell sharply in 2012 Q1, and stood at 3.5% in March. That fall was largely accounted for by the impact of the January 2011 increase in VAT dropping out of the twelve-month comparison. The near-term outlook is somewhat higher than the MPC's February projection, in part driven by news contained in the March *Budget* and a slightly higher contribution from energy prices. Earnings growth was subdued in 2011 and declined further in Q1, but private sector unit labour cost growth has been close to past average rates. The corporate profit share appears to have fallen to an unusually low level. Indicators of inflation expectations remained mixed.

CPI inflation fell sharply in 2012 Q1. That fall was largely accounted for by the rise in the standard rate of VAT to 20% in January 2011 dropping out of the twelve-month comparison (Section 4.1). The near-term outlook is higher than in the February *Report*, reflecting, in part, the impact of higher energy prices and indirect taxes as well as strength in recent outturns.

The outlook for CPI inflation will reflect developments in imported costs, and so tradable goods and services prices (Section 4.2). And it will also depend on domestic influences: labour costs; companies' pricing behaviour; and inflation expectations (Section 4.3).

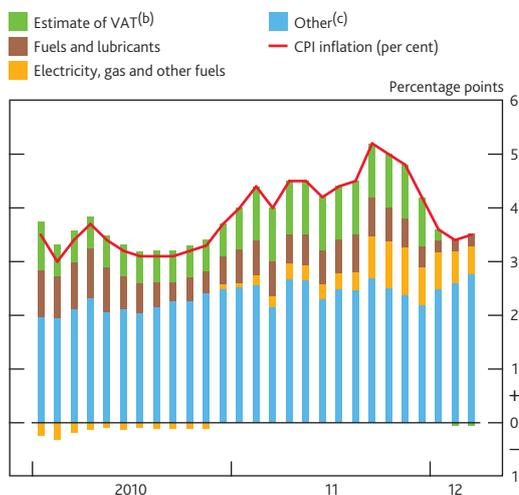
4.1 Consumer prices

Recent developments in CPI inflation

Inflation fell back from its recent peak of 5.2% in September 2011 to 3.5% in March 2012.⁽¹⁾ That fall in inflation can be partly accounted for by lower direct contributions from energy prices — initially as sharp rises in petrol prices in late 2010 and early 2011 dropped out of the twelve-month comparison, and more recently as some retail energy prices were cut by the major domestic energy companies in early 2012 (Chart 4.1).

But most of the decline in inflation in Q1 reflects the January 2011 increase in the standard rate of VAT to 20% falling out of the twelve-month comparison. Bank staff estimate that around three quarters of that increase in VAT was passed into consumer prices by the end of 2011 Q1, adding about 1 percentage point to CPI inflation for a year before the impact fell out in 2012 Q1. There remains, however, some uncertainty around the precise timing and magnitude of the effect of the VAT rise.

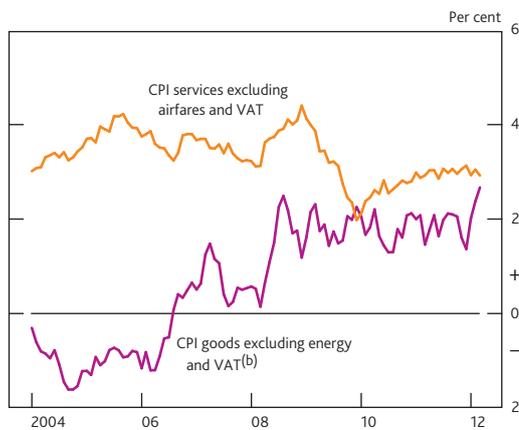
Chart 4.1 Contributions to CPI inflation^(a)



(a) Contributions to annual CPI inflation. Data are non seasonally adjusted.
 (b) The estimate is based on Bank staff's assessment that around half of the increase in VAT in January 2010 was passed into consumer prices by the end of 2010 Q1, and that three quarters of the increase in VAT in January 2011 was passed into consumer prices by the end of 2011 Q1. The VAT contribution was adjusted to allow for the fact that changes in VAT are already incorporated in the fuels and other lubricants contribution.
 (c) Includes a rounding residual.

(1) With January's CPI outturn of 3.6% lying more than 1 percentage point away from the target, the Governor, on behalf of the Committee, wrote an open letter to the Chancellor. The letter is available at www.bankofengland.co.uk/monetarypolicy/Documents/pdf/cpiletter120214.pdf.

Chart 4.2 CPI goods price inflation excluding energy and VAT and CPI services price inflation excluding airfares and VAT^(a)



Sources: ONS and Bank calculations.

(a) Annual inflation rates: data are adjusted for Bank staff's estimates of the impact of VAT changes that around 20% of the VAT cut in 2008 was passed onto consumers by the end of 2009 Q1, and the impact of changes in 2010 and 2011 are as in **Chart 4.1**.

(b) CPI goods excluding electricity, gas and other fuels and lubricants and the estimated impact of VAT changes.

Partially offsetting the declining contribution of VAT and direct energy prices, goods price inflation excluding energy and VAT rose in Q1 (**Chart 4.2**). Goods tend to be more import-intensive than services so, set against the relative stability of services price inflation, that could reflect increases in world trade prices, stemming largely from past commodity price rises.

Short-term inflation measures, which seek to isolate recent price changes from past changes that are still affecting the twelve-month inflation rate, were still at or above rates consistent with the 2% target in March (see the box on page 33).

The outlook for CPI inflation

The near-term profile for inflation — shown in **Chart 5.6** on page 41 — is somewhat higher than the MPC's February 2012 projection. That is due, in part, to slightly higher-than-expected CPI outturns in Q1, as well as news about the outlook for some CPI components since the February *Report*. For example, the ONS estimates that changes to excise duties, such as higher tobacco duties, and other indirect tax increases announced in the March *Budget* will raise inflation by around 0.2 percentage points during 2012.⁽¹⁾ Higher expected utility prices (Section 4.2) also raise the inflation profile a little from Q3 onwards.

The higher near-term inflation outlook also reflects other pipeline pricing pressures. These include the impact of weaker productivity growth on companies' unit labour costs (Section 4.3) and past rises in commodity prices passing through to consumer prices more rapidly than previously expected (Section 4.2). Overall, the speed and extent of any further fall in inflation will depend upon the rate at which external price pressures wane, and on the response of domestic wages and prices to the margin of spare capacity.

4.2 External influences on inflation

Movements in key external prices — such as increases in energy prices — can affect inflation materially, both through direct effects on prices and through their impact on companies' production costs. Given the projected increases in utility prices later this year, the contribution of energy prices to CPI inflation is likely to be slightly higher than projected three months ago. It is also possible that past increases in non-oil commodity prices are putting a little more upward pressure on inflation than previously anticipated. This subsection considers recent developments in more detail.

(1) For more details see 'Implementation in 2012/13 of measures announced in the March 2012 Budget, Previous Budgets and Pre-Budget Reports: Estimated impact on the Consumer Prices Index (CPI) and Retail Prices Index (RPI)' at www.ons.gov.uk/ons/rel/cpi/estimated-effect-of-the-budget-on-consumer-prices-index-and-retail-prices-index/spring-2012/estimated-effect-of-the-2012-budget-on-consumer-prices.pdf.

Recent developments in monthly inflation rates

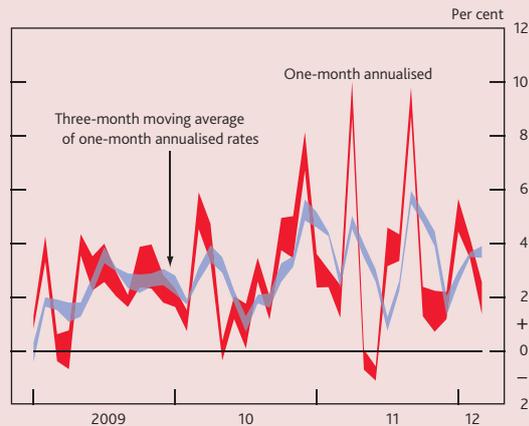
The MPC targets the twelve-month rate of CPI inflation. At times, that inflation rate can be heavily influenced by base effects — one-off changes in prices that occurred earlier in the twelve-month comparison period. For example, the increase in the headline rate of VAT in January 2011 added to inflation throughout 2011 before dropping out during 2012 Q1 (Section 4.1). There are still some significant base effects affecting twelve-month CPI inflation, and, as such, the headline inflation rate may not provide a timely guide to current inflationary pressures. This box, therefore, looks at shorter-term movements in CPI inflation and some of the issues around such measures.

The CPI and its components are not seasonally adjusted. Comparisons over a twelve-month period should be largely unaffected by price movements repeated at similar points each year — for example, January sales. But shorter-term price movements will be affected by such seasonal factors. So an assessment of short-term price trends requires judgements about the size of seasonal pricing patterns. That seasonal adjustment can be approached in different ways. For example, subcomponents of the CPI basket can be adjusted for seasonal patterns before weighting those components together; the ONS uses this method to seasonally adjust RPIY.⁽¹⁾ Alternatively, the headline index itself can be directly adjusted.

It is difficult, however, to control accurately for seasonal patterns in some components. For example, seasonal patterns may vary from year to year, perhaps with changing holiday dates or sales periods. In addition, changes in ONS collection methods and components of the CPI basket can alter seasonal patterns over time. As a result, monthly seasonally adjusted measures of CPI inflation may still be affected by seasonal variations that inject additional volatility into such measures.

The red swathe in **Chart A** presents a range of annualised monthly CPI inflation rates, excluding Bank staff's central estimate for the impact of VAT and changes in duties, generated by seasonally adjusting at the headline, divisional or main grouping levels of the CPI basket. These measures indicate that the monthly rate of consumer price inflation declined in March to rates broadly consistent with the 2% target. But these measures are volatile. Indeed, smoothing through month-to-month volatility — the lilac swathe in **Chart A** — suggests that the annualised short-term rate of consumer price inflation has increased somewhat over the past three months, and remains above the target rate of inflation (**Chart A**). That pickup reflected higher three-month

Chart A Measures of monthly CPI inflation excluding VAT^(a)



Sources: ONS and Bank calculations.

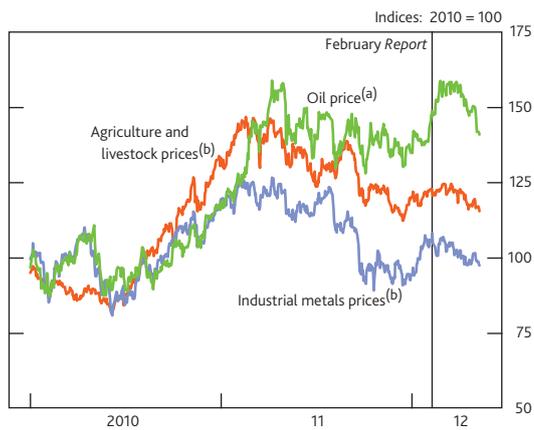
(a) The swathe contains a range of estimates based upon three different levels of aggregation. These are: headline CPI, twelve main divisions and 39 main groups. All estimates exclude the estimated impact of changes in VAT and duties. X-12 ARIMA is used to seasonally adjust these headline, division and group indices since 1996. Division and group indices are re-weighted into a headline index using weights in the consumer price basket. In addition, alternative measures are obtained by only seasonally adjusting those divisional or group indices that are found to display seasonal variation before re-weighting.

average rates of inflation in March 2012 than in December 2011 across a number of subcomponents.

Even if seasonal adjustment accurately captures repeated price movements, short-term measures of inflation are likely to remain difficult to interpret. Indeed, even the smoothed measures in **Chart A** are volatile, perhaps because the prices of some components of the CPI basket change only infrequently. Moreover, these measures will also be buffeted by external price pressures.

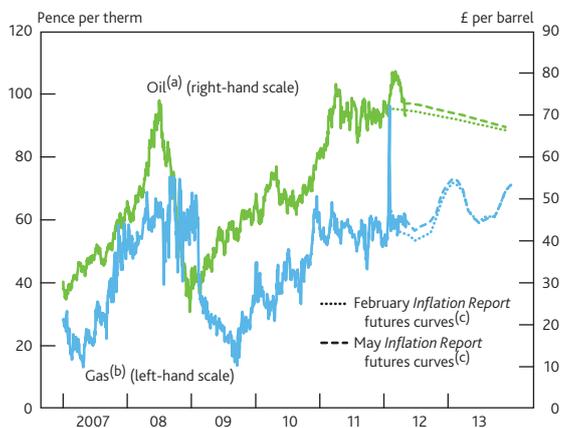
Overall, measures of shorter-term inflation can provide an additional gauge of underlying inflationary pressures within the economy. In March 2012, such measures pointed to near-term inflation at or above the 2% target.

(1) More detail on the ONS estimate of seasonally adjusted RPIY can be found in 'The seasonal adjustment of RPIY', *Economic Trends*, No. 546, May 1999 at <http://ons.gov.uk/ons/rel/elmr/economic-trends--discontinued-/no--546--may-1999/the-seasonal-adjustment-of-rpiy.pdf>.

Chart 4.3 US dollar oil and commodity prices

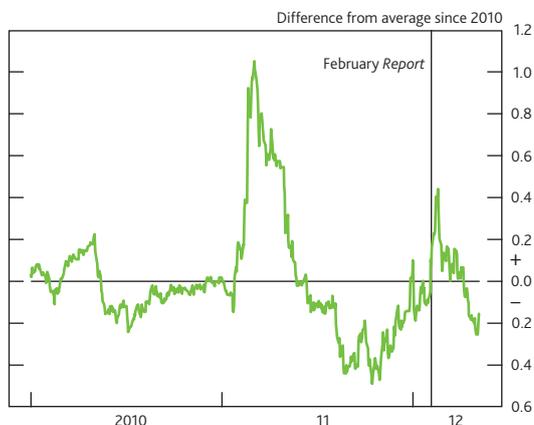
Sources: Bloomberg, S&P indices and Thomson Reuters Datastream.

- (a) Brent forward prices for delivery in 10–21 days' time in US dollars.
 (b) Calculated using S&P (US dollar) commodity price indices.

Chart 4.4 Sterling oil and wholesale gas prices

Sources: Bank of England, Bloomberg, Thomson Reuters Datastream and Bank calculations.

- (a) Brent forward prices for delivery in 10–21 days' time converted into sterling.
 (b) One-day forward price of UK natural gas.
 (c) The futures prices shown are averages during the fifteen working days to 8 February 2012 (dotted lines) and 9 May 2012 (dashed lines). The sterling oil futures curve is calculated by assuming that the sterling-dollar exchange rate remains at its average level during those respective fifteen-day periods.

Chart 4.5 Oil price option-implied asymmetry^(a)

Sources: Bloomberg, New York Mercantile Exchange and Bank calculations.

- (a) Three-month measure. Option-implied asymmetry is measured by the skewness of the distribution of returns on West Texas Intermediate light sweet crude oil in US dollars implied by options price data. These calculations assume that investors are risk-neutral. For more details, see Clews, R, Panigirtzoglou, N and Proudman, J (2000), 'Recent developments in extracting information from options markets', *Bank of England Quarterly Bulletin*, February, pages 50–60.

Energy prices

Oil prices rose sharply around the time of the *February Report* but have fallen back in recent weeks (**Chart 4.3**). The initial increase in oil prices was likely to have reflected developments in oil supply rather than positive news on global demand, as other commodity prices were largely unchanged over that period (**Chart 4.3**). Indeed, there were some disruptions to actual oil production, such as those in South Sudan. And there were also concerns about future oil supplies, in part due to political tensions in the Middle East — particularly the EU embargo on Iranian oil exports, which is likely to reduce overall market capacity. The fallback in oil prices over recent weeks is likely to have reflected weaker global demand prospects together with some easing in those concerns over oil supply.

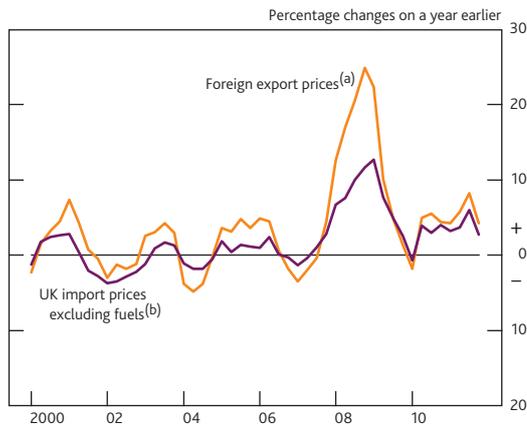
Those demand and supply considerations will be reflected in the spot and futures prices of oil. In the fifteen days running up to the *May Report*, the spot price and futures curve, in sterling terms, were broadly back to their levels at the time of the *February Report* (**Chart 4.4**), suggesting a small decline in the price of oil over the next couple of years. But there are risks around that profile. An intensification of concerns about future oil supply could raise oil prices. But they could fall further if world demand prospects weaken. Movements in the prices of option contracts suggest that the relative weight that market participants attach to a rise in oil prices has fallen in recent weeks (**Chart 4.5**).

Gas futures prices are slightly higher over the near term than they were three months ago (**Chart 4.4**). That may eventually feed into retail gas and electricity prices. The conditioning assumption underlying the MPC's central projection is now that the major domestic energy suppliers raise domestic energy prices slightly in the autumn, although there is significant uncertainty around that assumption. Even if utility prices do rise modestly, the overall contribution of retail energy prices to inflation is likely to fall as larger increases in energy prices in late 2011 drop out of the twelve-month comparison.

Non-energy import prices

As discussed in previous *Reports*, higher prices of non-energy imported goods and services have boosted CPI inflation over the past few years. Initially that reflected the impact of the 25% depreciation of sterling that occurred in the early stages of the financial crisis (Section 1). But over 2011, elevated import price inflation largely reflected strength in world export prices (**Chart 4.6**), which, in turn, reflected rapid commodity price rises in late 2010 and early 2011 (**Chart 4.7**).

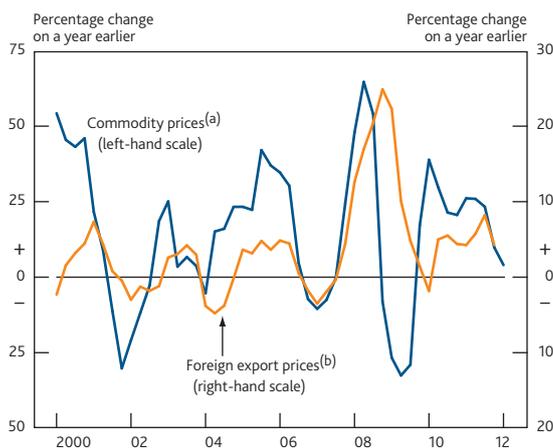
Following those increases in commodity prices, increases in the prices of imported goods and services are likely to have raised companies' production costs and subsequently added to CPI inflation over the recent past. The recent pickup in goods price inflation relative to services price inflation (Section 4.1) is

Chart 4.6 UK import prices and foreign export prices in sterling terms

Sources: Bank of England, CEIC, Eurostat, ONS, Thomson Reuters Datastream and Bank calculations.

(a) Domestic currency export prices of goods and services of 45 countries weighted according to their shares in UK imports, divided by the sterling effective exchange rate index. The sample does not include major oil exporters.

(b) Goods and services deflator, excluding the impact of MTIC fraud.

Chart 4.7 Commodity prices and foreign export prices in sterling terms

Sources: Bank of England, CEIC, Eurostat, S&P indices, Thomson Reuters Datastream and Bank calculations.

(a) Standard & Poor's GSCI commodity price index divided by the sterling-dollar exchange rate. The latest observation is 2012 Q1.

(b) Domestic currency export prices of goods and services of 45 countries weighted according to their shares in UK imports, divided by the sterling effective exchange rate index. The sample does not include major oil exporters. The latest observation is 2011 Q4.

Table 4.A Private sector earnings^(a)

	Percentage changes on a year earlier						
	Averages 2001–07	2009	2010	2011			2012 Feb. ^(b)
				H1	Q3	Q4	
(1) AWE regular pay	3.9	1.2	1.5	2.1	1.7	2.2	1.7
(2) Pay settlements ^(c)	3.3	2.5	1.7	2.0	2.2	2.3	2.4
(1)–(2) Regular pay drift ^(d)	0.6	-1.3	-0.2	0.1	-0.5	-0.1	-0.7
(3) Total AWE	4.3	-0.9	2.0	2.9	2.4	2.2	0.8
(3)–(1) Bonus contribution ^(d)	0.4	-2.1	0.6	0.8	0.7	0.0	-0.9

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

(a) Based on quarterly data unless otherwise stated.

(b) Data in the two months to February.

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

(d) Percentage points.

consistent with that, as goods tend to be more import-intensive than services. In addition, the pickup in goods price inflation may also reflect domestic producers of goods that compete with imports taking the opportunity to raise their prices.

Further ahead, unless commodity prices rise further, the upward pressure on inflation from traded goods and services prices should moderate. Indeed, import price inflation has recently fallen back, as world export price inflation has declined (**Chart 4.6**). Moreover, non-oil commodity prices have fallen back recently and remain well below early-2011 levels (**Chart 4.3**). The recent appreciation of sterling (Section 1) should also bear down on imported costs a little.

4.3 Domestic influences on inflation

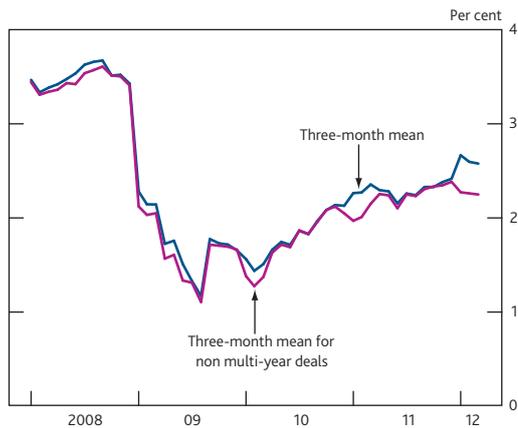
The pace at which inflation falls back will depend not only on external pressures, but also on domestic influences, such as the degree to which spare capacity weighs on labour costs, and companies' pricing decisions. Earnings growth has continued to be weak but, given subdued productivity growth, companies' labour cost growth per unit of output has been more resilient. Companies' profit margins appear to be at a lower level than normal, and companies may try to restore them over 2012, though that need not happen through higher prices. The pricing environment, including household and companies' inflation expectations, will also influence companies' pricing decisions.

Labour costs

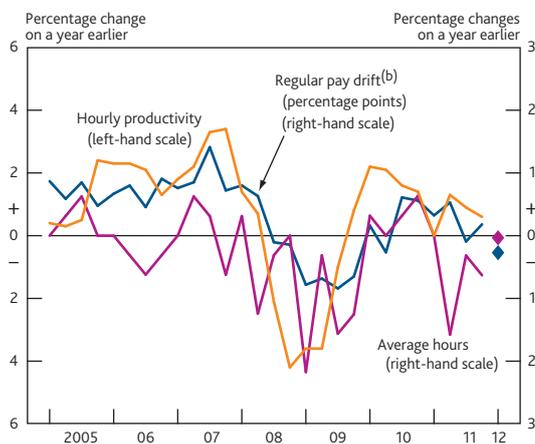
Private sector average weekly earnings (AWE) data provide a timely indicator of companies' labour costs and can also shed light on growth across different components of earnings. Private sector AWE growth weakened during the second half of 2011 and declined further in early 2012, largely reflecting weakness in bonuses (**Table 4.A**). But the significant negative contribution from bonuses, particularly in the financial sector, probably contains little information about future earnings growth or companies' costs.

Wage growth excluding bonuses, known as regular pay growth, has also been weak and declined into Q1. Within that, private sector settlements have picked up gradually since 2010 Q1: the mean settlement recorded over the three months to March was 2.6% compared with the recent trough of 1.4% in the three months to February 2010 (**Chart 4.8**). But some of that recent increase was driven by multi-year settlements agreed in previous years. Excluding multi-year deals, settlements have weakened slightly into 2012 and are running at a similar rate to those made a year ago.⁽¹⁾ Overall, settlements remain substantially below the rates seen prior to the 2008/09

(1) Multi-year settlements are described in more detail on page 36 of the May 2011 Report.

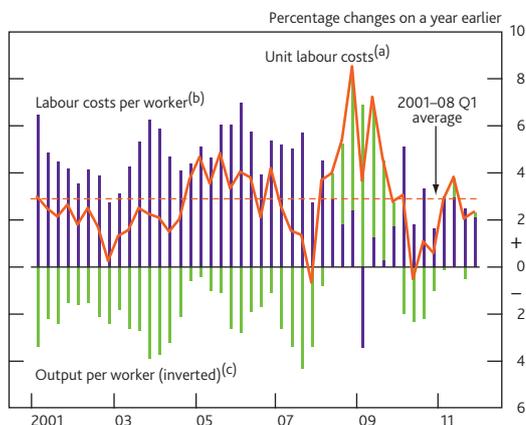
Chart 4.8 Private sector pay settlements

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

Chart 4.9 Whole-economy regular pay drift, hourly productivity and average hours worked^(a)

Sources: Bank of England, Incomes Data Services, Industrial Relations Services, the Labour Research Department and ONS (including the Labour Force Survey).

(a) Quarterly measures. The diamonds show data for 2012 Q1 based on data to February 2012.
 (b) Calculated as the difference between AWE regular pay growth (percentage change on a year earlier) and pay settlements (averaged over the past twelve months).

Chart 4.10 Contributions to private sector unit labour costs

Sources: ONS and Bank calculations.

(a) Estimated labour costs per worker as defined in footnote (b) divided by market sector output per worker.
 (b) Calculated using private sector average weekly earnings data adjusted using the ratio of private sector employee compensation to wages and salaries.
 (c) Market sector output per worker.

recession, probably reflecting the considerable degree of slack in the labour market, as well as only modest productivity growth (Section 3).

The decline in regular pay growth in Q1 largely reflects a smaller contribution from regular pay drift — the difference between regular pay growth and pay settlements. Movements in drift tend to reflect changes in earnings related to working patterns, such as overtime, as well as merit pay increases that could be associated with productivity improvements. As such, movements in this component tend to be related to movements in productivity and average hours worked (Chart 4.9).

Companies' costs depend not only on the wages of their employees but also on how productive those employees are. Although wage growth has been weak, that has been accompanied by weak productivity growth over recent years (Section 3). As well as measures of wages themselves, it is therefore also useful to look at unit labour costs — companies' total labour costs per unit of output produced. An AWE-based measure of four-quarter private sector unit labour cost growth remained close to past average rates in 2011, with weaker-than-usual earnings growth continuing to be offset by little or no productivity growth (Chart 4.10). The outlook for labour costs depends both on the extent to which slack within the labour market places downward pressure on earnings, and on the evolution of productivity (Section 5).

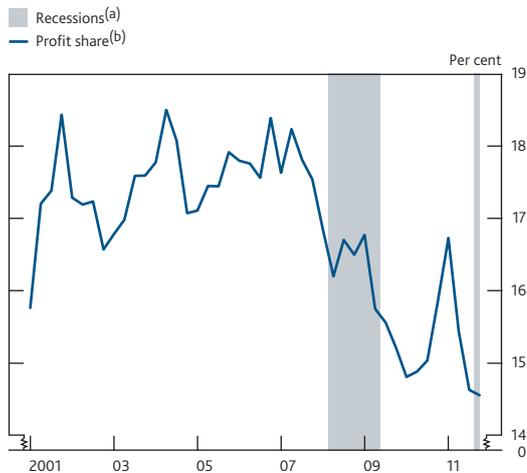
Companies' pricing decisions

Companies' pricing decisions relative to their costs also matter for the inflation outlook. In part those decisions will depend on the current level of companies' mark-ups over costs. It is difficult to ascertain, in aggregate, companies' mark-ups precisely, but the latest National Accounts estimate of the corporate profit share was significantly below its pre-2008/09 recession average in Q4 (Chart 4.11), suggesting that margins are compressed. That will, in part, reflect the increases in costs faced by many companies in recent years. But it could also reflect the significant slack in the economy, which might have encouraged companies to keep prices relatively low to bolster demand.

Within that aggregate measure, different businesses' profits will have developed in different ways. For example, evidence from Supply and Use tables up to 2009 suggests that the depreciation of sterling between mid-2007 and the end of 2008 boosted exporters' profits. At the same time, profit margins for consumer-facing companies — most directly relevant for consumer prices — declined.⁽¹⁾ And more recent cost and price trends suggest that profit margins for consumer-facing companies remain further below long-run averages than aggregate profit margins.

(1) For further information see the box on pages 34–35 of the February 2012 Report.

Chart 4.11 Corporate profit share (excluding financial corporations and the oil sector)



Sources: ONS and Bank calculations.

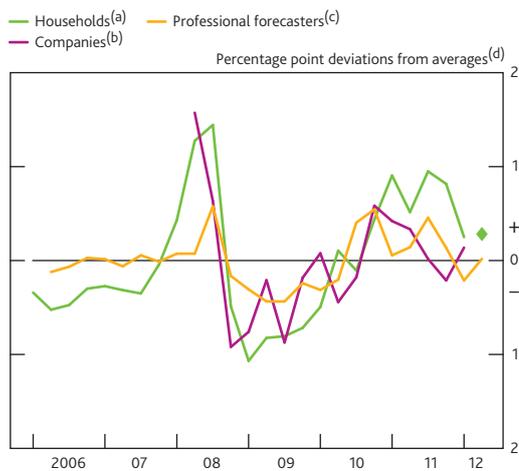
- (a) A recession is defined as at least two consecutive quarters of falling output (at constant market prices) estimated using the latest data. The recession is assumed to end once output began to rise.
- (b) PNFs' (excluding continental shelf companies) gross trading profits (excluding the alignment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

That evidence of compressed profit margins suggests that there could be some upward pressure on inflation if consumer-facing companies raise prices in order to try to restore their profitability. Alternatively, a recovery in profit margins could occur through a period of weak cost growth with little upward pressure on domestic prices. Or it could take place through a reallocation of resources towards the export sector: some domestic-facing companies with relatively low productivity and narrow margins may shift supply towards foreign markets or may go out of business.

Inflation expectations

Whether households seek higher wages or companies try to raise prices will depend, in part, on their expectations of future inflation: for example, if companies expect inflation to remain elevated, they may be more likely to raise their own prices. Over the recent past, movements in longer-term inflation expectations have been mixed: several measures have edged up, but most measures remain relatively close to their series averages.

Chart 4.12 Inflation expectations for a year ahead



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

- (a) Based on averages of expectations for inflation from the Barclays Basix, Bank/NOP and YouGov/Citigroup surveys. These surveys do not reference a specific price index and are based on the median estimated price change. The diamond shows YouGov/Citigroup data for April.
- (b) CBI data for the manufacturing, business/consumer services and distribution sectors, weighted together using nominal shares in value added. Companies are asked about the expected percentage price change over the coming twelve months in the markets in which they compete.
- (c) Averages of projections of outside forecasters provided for *Inflation Reports* between May 2006 and May 2012.
- (d) Averages from 2006 Q1 for households. Averages since 2006 Q2 for professional forecasters and from 2008 Q2 for companies. Data are non seasonally adjusted.

Movements in survey measures of inflation expected in a year's time have also been mixed. As CPI inflation declined in 2011 Q4 and 2012 Q1, such survey measures of inflation declined (**Chart 4.12**). But, more recently, the YouGov/Citigroup survey of households' expectations and the Bank's survey of professional forecasters ticked up. Higher expectations of inflation in the near term could be associated with greater persistence in inflation if companies raise their prices more rapidly as a result, or if it enables households to bid for higher wages. That said, in the latest Bank/NOP survey fewer than 10% of households said they would expect higher pay in light of higher inflation expectations.

5 Prospects for inflation

Inflation has fallen back substantially since last autumn. It is, however, still well above the 2% target, and is likely to remain elevated over the coming year. But inflation is projected to fall back further, as the current boost from external price pressures wanes. Output has barely grown since the middle of 2010, and is estimated to have contracted slightly in each of the past two quarters. Four-quarter growth should recover gradually from the middle of this year as a pickup in households' real income growth supports consumer spending. Although the expansionary stance of monetary policy should continue to support demand, headwinds from the external environment, tight credit conditions and the fiscal consolidation are likely to persist. Reflecting those headwinds, a margin of economic slack is likely to continue to bear down on inflation over the forecast period. Under the assumptions that Bank Rate moves in line with market interest rates and the stock of purchased assets remains at £325 billion, inflation is judged about as likely to be below the target as above it by the end of the forecast period.

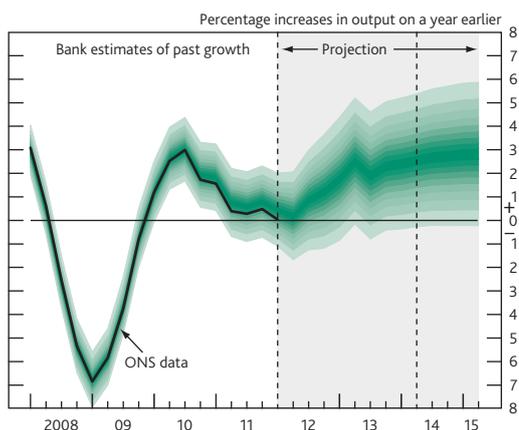
5.1 The projections for demand and inflation

Since the February *Report*, output is estimated to have fallen a little again and the near-term inflation outlook appears somewhat higher. But these developments do not fundamentally change the nature of the challenges facing the MPC following the financial crisis and subsequent recession. Those challenges make it particularly difficult to predict the path of output and inflation over the next few years with any precision. The Committee's discussions and decisions are based on the broad shape of the economic outlook rather than precise numerical projections.

Output remains some 4% below its pre-crisis peak. The sluggishness of output growth in the aftermath of the financial crisis reflects the headwinds from weak real income growth, global developments, and the process of balance sheet repair under way in the public and private — particularly the financial — sectors. Anaemic output growth has been associated with a period of exceptionally weak productivity growth.

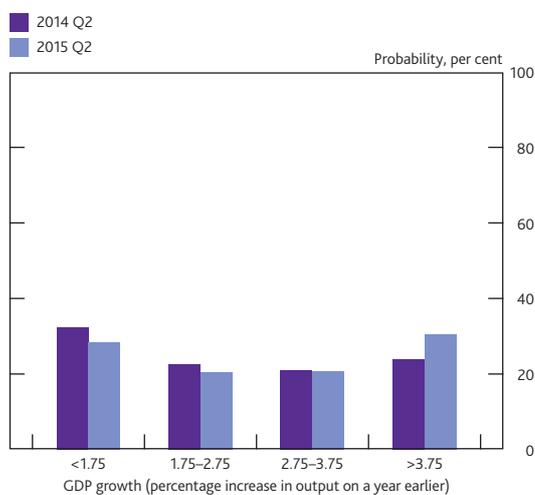
Chart 5.1 shows the outlook for four-quarter real GDP growth conditioned on the assumptions that Bank Rate follows a path implied by market interest rates and that the stock of purchased assets financed by the issuance of central bank reserves remains at £325 billion throughout the forecast period. Output will be reduced by the loss of a working day at the time of the Queen's Diamond Jubilee in June, and possibly buoyed by the impact of the Olympics in Q3. Four-quarter GDP growth is projected to increase gradually as households'

Chart 5.1 GDP projection based on market interest rate expectations and £325 billion asset purchases



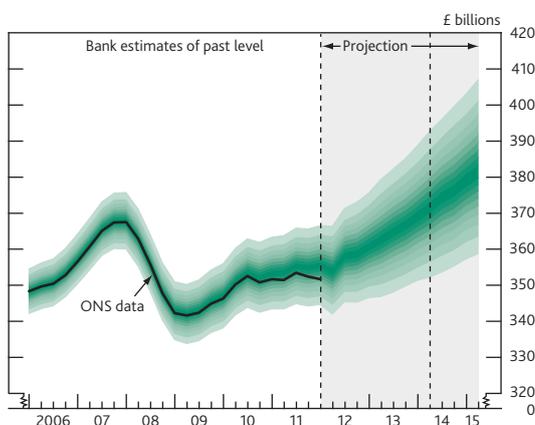
The fan chart depicts the probability of various outcomes for GDP growth. It has been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £325 billion throughout the forecast period. To the left of the first vertical dashed line, the distribution reflects the likelihood of revisions to the data over the past; to the right, it reflects uncertainty over the evolution of GDP growth in the future. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that the mature estimate of GDP growth would lie within the darkest central band on only 10 of those occasions. The fan chart is constructed so that outcomes are also expected to lie within each pair of the lighter green areas on 10 occasions. In any particular quarter of the forecast period, GDP growth is therefore expected to lie somewhere within the fan on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions GDP growth can fall anywhere outside the green area of the fan chart. Over the forecast period, this has been depicted by the light grey background. In any quarter of the forecast period, the probability mass in each pair of identically coloured bands sums to 10%. The distribution of that 10% between the bands below and above the central projection varies according to the skew at each quarter, with the distribution given by the ratio of the width of the bands below the central projection to the bands above it. In Chart 5.1, the probabilities in the lower bands are the same as those in the upper bands at Years 1, 2 and 3. See the box on page 39 of the November 2007 *Inflation Report* for a fuller description of the fan chart and what it represents. The second dashed line is drawn at the two-year point of the projection.

Chart 5.2 Frequency distribution of GDP growth based on market interest rate expectations and £325 billion asset purchases^(a)



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

Chart 5.3 Projection of the level of GDP based on market interest rate expectations and £325 billion asset purchases



Chained-volume measure (reference year 2008). 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.

real income growth picks up, supporting a revival in consumer spending.

Developments abroad, particularly in the euro area, will continue to be a major influence on the UK economy. The projections assume that euro-area policymakers ensure that the twin challenges facing the periphery countries of regaining competitiveness and reducing indebtedness are tackled in an orderly fashion. Even so, growth in the euro area is likely to pick up only modestly, and to remain below pre-crisis average rates for some time. There are substantial uncertainties around that projection given the scale of the adjustments that are necessary. Moreover, despite recent policy initiatives, there is still a possibility that this process could involve a disorderly adjustment, resulting in sharply lower output in the euro area. As was the case in past *Reports*, the MPC sees no meaningful way to quantify the size and likelihood of the most extreme possibilities associated with developments in the euro area and they are therefore excluded from the fan charts. Concerns about the possibility of a disorderly resolution have, however, already adversely influenced asset prices, bank funding costs and confidence and as a consequence affect the MPC's projections. Indeed, the MPC judges it likely that the possibility of such extreme outcomes crystallising will continue to weigh on UK activity for some time, even if those outcomes do not actually occur.

The outlook for growth also depends on: the outlook for productivity growth and its impact on household and corporate incomes; how rapidly consumption responds to the recovery in income; credit conditions; and the impacts of the fiscal consolidation and the MPC's asset purchases. There remains a range of views among Committee members about the likely effects of those factors on GDP.

Based on the conditioning assumptions described above, the Committee's best collective judgement is that four-quarter GDP growth is likely to pick up gradually, with growth still a little more likely to be below its historical average than above it two years into the forecast period, but with those risks roughly equal at the end of the three-year forecast period (Chart 5.2). The distribution for growth in the near term is somewhat lower than projected three months ago, reflecting the impacts of a higher near-term outlook for inflation on real incomes and the higher level of sterling on net trade (Chart 5.4). Further out in the forecast period the profile is lower due to a slower pickup in productivity growth and the implications that this is likely to have for household and business spending (Chart 5.5).

Given the subdued outlook for growth, output is not likely to surpass its pre-crisis level before 2014 (Chart 5.3) — some six years after the start of the recession. That weak outlook reflects, in part, continued weakness in the growth of productivity and labour supply, and therefore the economy's

Financial and energy market assumptions

As a benchmark assumption, the projections for CPI inflation and GDP growth 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 at 0.5% until 2013 Q1 and to rise gradually thereafter. The path for Bank Rate at the time of the *May Report* was, on average, 0.1 percentage points higher than that assumed in the *February Report*.

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

Per cent	2012			2013				2014				2015	
	Q2 ^(b)	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
May	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.7	0.8	0.9	0.9	1.0	1.1
February	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.6	0.7	0.8	0.9	1.0	

(a) The data are fifteen working day averages of one-day forward rates to 9 May 2012 and 8 February 2012 respectively. The curves are based on overnight index swap (OIS) rates.

(b) May figure for 2012 Q2 is an average of realised spot rates to 9 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 £325 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 83.3, the average for the fifteen working days to 9 May. That was 2.8% above the starting point for the February projections. Under the MPC's usual convention,⁽¹⁾ the exchange rate is assumed to remain broadly flat, and is higher throughout the forecast period than assumed in February.

The starting point for UK equity prices in the MPC's projections was 2970 — the average of the FTSE All-Share for the fifteen working days to 9 May. That was 0.5% below the starting point for the February projection.

Energy prices are assumed to evolve broadly in line with the paths implied by futures markets over the forecast period. Average Brent oil futures prices for the next three years were around 4% higher (in US dollar terms) than at the time of the *February Report*. Wholesale gas futures prices were slightly higher over the forecast period than at the time of the *February Report*. The outlook for energy prices is uncertain, but the central projection is conditioned on a benchmark assumption of increases in domestic gas and electricity prices averaging 2.5% in the second half of 2012.

(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.

Chart 5.4 Projected probabilities of GDP growth in 2013 Q2 (central 90% of the distribution)^(a)

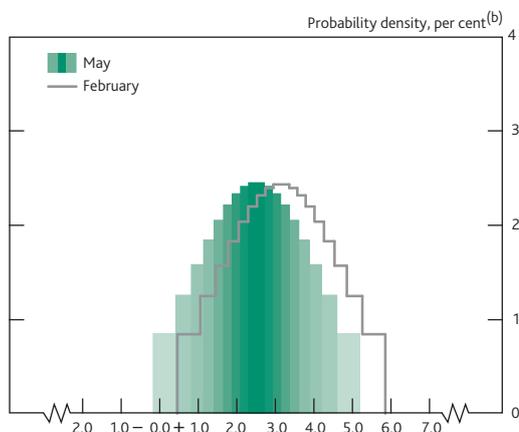
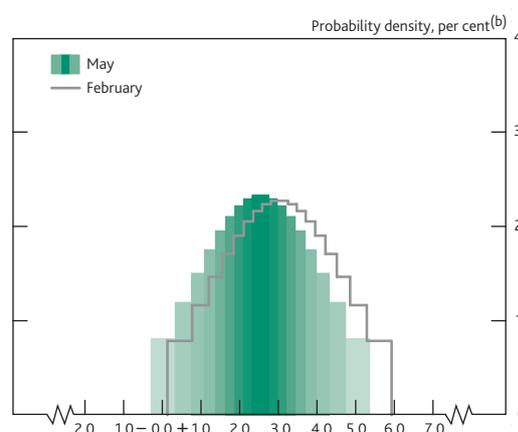


Chart 5.5 Projected probabilities of GDP growth in 2014 Q2 (central 90% of the distribution)^(a)



(a) **Charts 5.4** and **5.5** represent cross-sections of the GDP growth fan chart in 2013 Q2 and 2014 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 £325 billion throughout the forecast period. The coloured bands in **Charts 5.4** and **5.5** 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 2013 Q2 and 2014 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 5.4** and **5.5** represent the corresponding cross-sections of the February 2012 *Inflation Report* fan chart, which was conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves reached £325 billion and remained there throughout the forecast period.

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

Chart 5.6 CPI inflation projection based on market interest rate expectations and £325 billion asset purchases

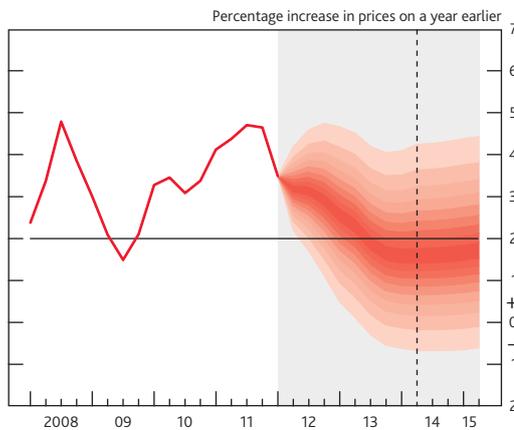
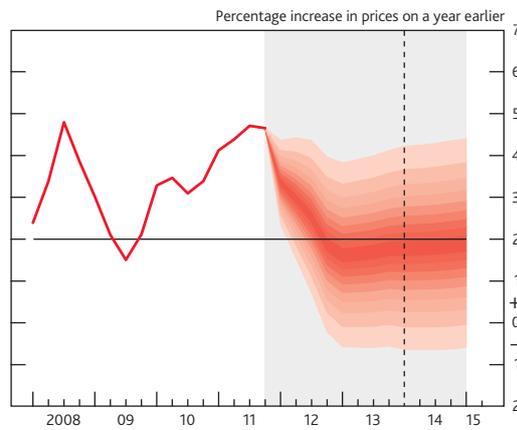


Chart 5.7 CPI inflation projection in February based on market interest rate expectations and £325 billion asset purchases



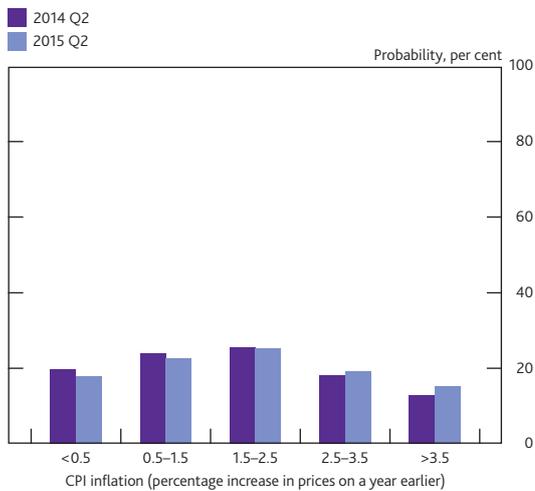
Charts 5.6 and 5.7 depict the probability of various outcomes for CPI inflation in the future. Chart 5.6 is conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £325 billion throughout the forecast period. Chart 5.7 was conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves reached £325 billion and remained there throughout the forecast period. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that inflation in any particular quarter would lie within the darkest central band on only 10 of those occasions. The fan charts are constructed so that outcomes of inflation are also expected to lie within each pair of the lighter red areas on 10 occasions. In any particular quarter of the forecast period, inflation is therefore expected to lie somewhere within the fans on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions inflation can fall anywhere outside the red area of the fan chart. Over the forecast period, this has been depicted by the light grey background. In any quarter of the forecast period, the probability mass in each pair of identically coloured bands sums to 10%. The distribution of that 10% between the bands below and above the central projection varies according to the skew at each quarter, with the distribution given by the ratio of the width of the bands below the central projection to the bands above it. In Chart 5.6, the probabilities in the upper bands are the same as those in the lower bands at Year 1 but they are slightly larger at Years 2 and 3. In Chart 5.7, the probabilities in the lower bands are the same as those in the upper bands at Years 1, 2 and 3. See the box on pages 48–49 of the May 2002 *Inflation Report* for a fuller description of the fan chart and what it represents. The dashed lines are drawn at the respective two-year points.

supply capacity. That said, the Committee judges that there is presently a sizable margin of spare capacity, largely concentrated in the labour market. This should diminish over the forecast period, although it is unlikely to disappear completely.

Inflation has continued to fall back from its recent peak of 5.2% in September 2011. But it remains well above the 2% target. Chart 5.6 shows the outlook for CPI inflation, on the same conditioning assumptions. In the near term, inflation is likely to remain well above the target, a somewhat higher profile than thought likely three months ago (Chart 5.7). That change reflects, in part, the impact of higher energy prices and indirect taxes. But it also reflects other pipeline pricing pressures, including the impact of weaker productivity on companies' unit labour costs and past rises in commodity prices passing through to consumer prices more rapidly than previously expected. Inflation is expected to decline towards the end of this year as the utility price rises in Autumn 2011 drop out of the twelve-month comparison, the impact of past rises in commodity prices wanes, and the higher level of sterling reduces inflationary pressures a touch.

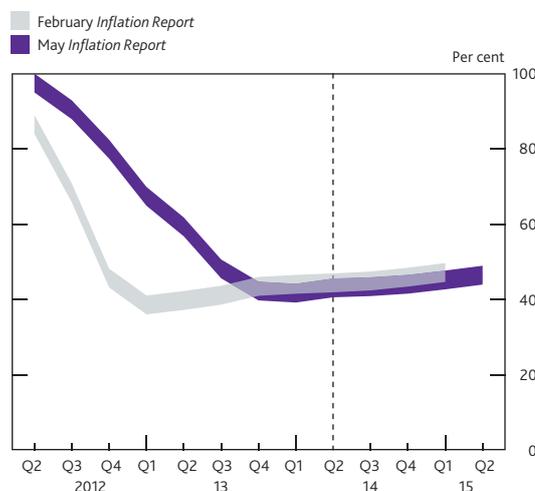
The outlook for inflation depends on a number of major influences. There may be further shocks to energy and other commodity prices. Companies' domestic costs will be influenced by spare capacity. And the outlook also depends upon the extent to which, and how quickly, slower growth in costs is reflected in inflation. The precise impact of these influences is difficult to predict. Given the degree of uncertainty, the MPC places more weight on the broad shape of the distribution than its exact calibration. Notwithstanding the difficulty in assessing the precise path of inflation over the

Chart 5.8 Frequency distribution of CPI inflation based on market interest rate expectations and £325 billion asset purchases^(a)



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

Chart 5.9 An indicator of the probability that inflation will be above the target



The May and February swatches in this chart are derived from the same distributions as Charts 5.6 and 5.7 respectively. They indicate the assessed probability of inflation being above target in each quarter of the forecast period. The 5 percentage points width of the swatches reflects the fact that there is uncertainty about the precise probability in any given quarter, but they should not be interpreted as confidence intervals. The dashed line is drawn at the two-year point of the May projection. The two-year point of the February projection was one quarter earlier.

forecast period, the Committee judges it likely that inflation will fall back, possibly to a little below target, with the risks to that outlook skewed slightly to the upside. By the end of the forecast period, there is roughly a one-in-four chance that inflation will be within half a percentage point of the target (Chart 5.8) but, within that central range, the MPC finds it difficult to attach relative probabilities to different outcomes with confidence.

Overall, the Committee's best collective judgement is that, by the end of the forecast period, the risks of inflation being above or below the target are broadly balanced (Chart 5.9). Although the near-term news on inflation means that the distribution is a little higher than in the February Report in 2013 Q2 (Chart 5.10), by 2014 Q2 the distribution is similar to that in February, with the downward revision to demand associated with a weaker outlook for supply (Chart 5.11).

5.2 Key judgements and risks

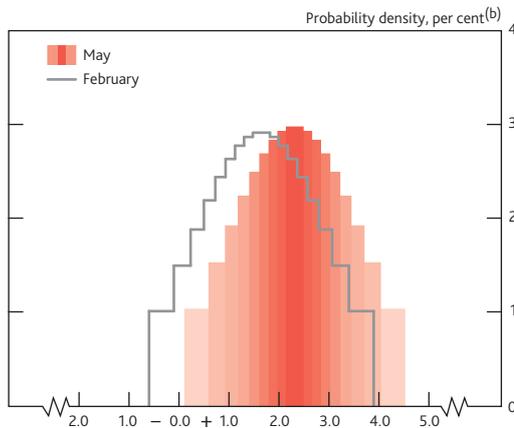
How will developments in the rest of the world affect UK activity?

Developments elsewhere in the world will be a key influence on UK output. UK export growth is likely to strengthen gradually over the forecast period as global growth picks up. There is considerable uncertainty around the strength of the recovery in the United States, as well as the drivers of slowing growth in emerging economies since early 2011 (Section 2). Consequently the support to UK growth from these regions is uncertain. But the biggest risks stem from developments in the euro area — the United Kingdom's most important trading partner.

Several euro-area countries face significant challenges in regaining competitiveness and reducing indebtedness. In part reflecting that, euro-area output fell at the end of 2011 and business surveys pointed to a further fall in 2012 Q1. A prolonged period of adjustment in the most vulnerable countries is likely to continue to weigh on growth over the forecast period. Overall euro-area output growth is judged likely to pick up only modestly, to below pre-crisis average rates. Even assuming that the adjustment within the euro area proceeds in an orderly manner, there are substantial uncertainties around the outlook for activity there, and hence also UK exports.

Moreover, despite recent policy initiatives, there is still a possibility that this process could involve a disorderly outcome, resulting in considerably lower output in the euro area, and significant disruption to global banking and financial markets. As was the case in past Reports, the MPC sees no meaningful way to quantify the size and likelihood of the most extreme outcomes associated with developments in the euro area and they are therefore excluded from the fan charts. But concerns about the possibility of a disorderly

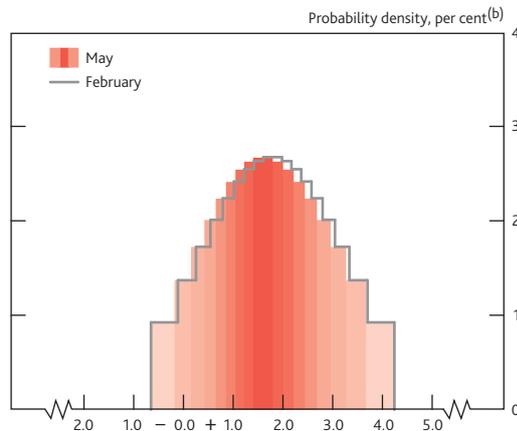
Chart 5.10 Projected probabilities of CPI inflation outturns in 2013 Q2 (central 90% of the distribution)^(a)



(a) **Charts 5.10 and 5.11** represent cross-sections of the CPI inflation fan chart in 2013 Q2 and 2014 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 £325 billion throughout the forecast period. The coloured bands in **Charts 5.10 and 5.11** 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 2013 Q2 and 2014 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 5.10 and 5.11** represent the corresponding cross-sections of the February 2012 *Inflation Report* fan chart, which was conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves reached £325 billion and remained there throughout the forecast period.

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

Chart 5.11 Projected probabilities of CPI inflation outturns in 2014 Q2 (central 90% of the distribution)^(a)



adjustment continue to be reflected in financial market prices and in household and business confidence, both in the euro area and elsewhere, and so inevitably affect spending and the MPC's projections. Indeed, the MPC judges that the threat of such extreme outcomes is likely to continue to affect asset prices, including the exchange rate, confidence and hence UK activity for some time to come, even on the assumption that the most extreme events do not materialise.

In particular, UK bank funding costs, and hence credit conditions, are likely to depend, in part, on euro-area prospects. Heightened euro-area concerns contributed to higher UK bank funding costs in the second half of 2011. Although the ECB's longer-term refinancing operations were associated with an initial improvement in funding conditions, some indicators of unsecured funding costs have since picked up again (Section 1). The MPC judges that funding costs are likely to fall back only gradually, reflecting the continued threat of adverse developments in the euro area. That implies that the cost of credit for UK households and businesses is likely to remain elevated relative to risk-free rates throughout the forecast period. There is, however, a considerable degree of uncertainty around that judgement.

Continued uncertainty about the euro area could, more generally, weigh on domestic spending. If businesses remain concerned about the prospects for demand from the euro area for their exports, or the impact on domestic demand of continued tight credit conditions, that may deter them from making major spending decisions. Business and housing investment are likely to pick up over the forecast period as demand recovers. But the extent of the recovery will depend crucially on the extent to which the drags from tight credit conditions and heightened uncertainty ease.

Will consumption recover in line with real incomes?

Household consumption is only a little higher than its 2009 Q2 trough. That partly reflects the squeeze on real incomes from significant rises in import and energy prices and VAT. But households have also saved a greater fraction of their incomes than in the years immediately prior to the recession, prompted by heightened uncertainty, diminished income expectations and tighter credit conditions (Section 2).

As the factors squeezing real income growth ease, the drag on consumption growth should moderate, though at a somewhat slower pace than assumed in the February *Report*, given the higher near-term inflation outlook. But the outlook for consumption will also depend on how much of their income households save. If the recent period of higher saving has left households' precautionary holdings of assets close to desired levels, then they may save a smaller proportion of their income in the future. That would support consumption growth. But acting in the other direction, the sustained period of weak income growth may mean that some households have not yet adjusted their balance sheets as much as they would like, and others may need to save more for future retirement provision. Their consumption may therefore grow more slowly than their income for a period, as they increase the rate at which they repay debt or accumulate financial assets.

The process of adjustment in the household sector is judged likely to continue over the forecast period, so that the household saving rate remains around current levels. As household income growth recovers, consumption growth is therefore likely to rise gradually, to a little below its historical average rate. But there are substantial risks around those judgements.

How will productivity evolve?

The outlook for both GDP and inflation depends significantly on the evolution of the economy's supply potential. Supply appears to have grown unusually weakly since the onset of the financial crisis. Low levels of investment have been reflected in slow growth in the capital stock. The rise in long-term unemployment means that the proportion of the workforce that is able to compete effectively for jobs has probably declined. And, most importantly, persistently sluggish measured productivity growth suggests that underlying productivity has grown weakly.

The Committee's central judgement is that underlying productivity growth is likely to pick up gradually over the second half of the forecast period to a little below its historical average rate. That outlook is, however, highly uncertain, particularly because it is unclear why productivity growth has been so subdued in the recent past (Section 3). It is possible that the past weakness in productivity growth in part reflected the impact of tighter credit conditions and heightened uncertainty. Those factors could, for example, have

constrained the rate at which companies have been implementing new ideas, and they may continue to constrain both demand and supply over the forecast period. In addition, underlying productivity growth could depend upon the pace of demand growth: if demand recovers, that could spur a stronger recovery in productivity, but persistent weakness in demand growth could continue to retard productivity growth. Even if productivity growth remains weak during the forecast period, that does not imply that it will be permanently weaker. Indeed some of the lost ground could well be recovered beyond that horizon. For example, it is possible that there is a growing stock of innovative ideas that would be exploited in a more conducive financial environment.

How quickly will companies' domestic costs grow?

The degree of slack in the labour market appears to have increased significantly since the beginning of 2008. That is likely to be a reason why nominal wages have been growing at below-average rates over the past few years. Over the forecast period, the Committee judges that labour market slack is likely to diminish somewhat. That reflects some increase in employment later in the forecast period, as activity picks up. But it also reflects slower growth in labour supply as the ability of some of those without jobs to compete for work erodes or they quit the labour market completely. So although slack is likely to weigh on wage growth throughout the forecast period, that drag may decline a little towards the end.

Companies' labour costs, however, depend on the evolution of productivity as well as earnings. Over the recent past, weak productivity growth has offset the downward impact of labour market slack on unit labour costs, so that those costs have grown at close to their historical average rate (Section 4). But over the forecast period, it is likely that some recovery in productivity growth will put downward pressure on unit labour cost growth, even as wage growth picks up.

Overall, therefore, companies' unit labour cost growth is judged likely to fall back and remain well below its historical average rate for much of the forecast period. There are considerable risks around that outlook. On the upside, it may be that less of the past weakness in nominal wage growth reflects the restraining effect of slack and more of it reflects the impact of subdued productivity. In that case, wages and costs might rise somewhat faster as productivity growth picks up. But on the downside, if more labour market slack builds up — for example, if fewer people lose touch with the labour market — that may exert a greater downward influence on companies' costs.

Will there be further increases in the prices of traded goods and services?

Companies' external costs have risen sharply in recent years. The marked fall in the sterling exchange rate between mid-2007 and the end of 2008 has, over time, been reflected

in higher prices for a wide range of traded goods and services. And costs have also been pushed up by increases in global commodity prices — most importantly the cost of energy.

In marked contrast to the experience of substantial price rises over the past few years, the MPC's projections incorporate little further increase in the prices of imported goods and services over the forecast period. That is in large part because those projections are conditioned on a downward-sloping oil futures curve and broadly flat futures prices for other commodities, on average. But such assumptions may well be confounded, and the risks around that outlook probably lie to the upside. Further adverse news about oil supply — for example, relating to heightened tensions in the Middle East — over and above that already captured in current spot and futures prices, could lead to sharp rises in prices. And, although any unexpected slowing in world growth could be associated with weaker commodity price pressures, the composition of global growth will also matter, with prices closely linked to activity in emerging economies where output growth is particularly commodity-intensive.

How much and how quickly will margins be restored?

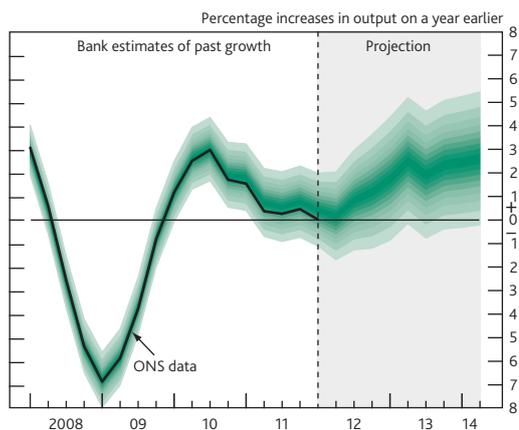
Although the outlook for costs appears subdued, the path of inflation over the forecast period will depend significantly on whether companies, especially those in the consumer-facing sector, need to restore their profit margins and, if so, how they do that. Timely and accurate indicators of aggregate margins do not exist. A measure based on National Accounts data, though imperfect, suggests that profits were unusually low as a share of GDP at the end of 2011 (Section 4). And, given that the fall in sterling in 2007 and 2008 has probably bolstered exporting companies' margins relative to those in other sectors, consumer-facing companies' profit margins have probably been substantially squeezed. That could reflect both the rises in costs in recent years and a desire to keep prices low in the face of weak demand and plentiful spare capacity.

There is considerable uncertainty about the likelihood and nature of a restoration of consumer-facing companies' profit margins. The MPC's central judgement is that these margins are likely to increase somewhat by the end of the forecast period, as prices rise more quickly than costs, resulting in some upward pressure on inflation. Consumer sector margins could, however, be restored primarily through a period of weak labour cost growth in that sector rather than higher inflation. Or the process of rebalancing towards the export sector that is under way could be associated with a longer period of high export sector margins and low consumer sector margins. Alternatively, it is possible that the recent period of above-target inflation will enable businesses to raise their prices more easily, or that spare capacity will have less restraining influence on margins.

5.3 Summary and the policy decision

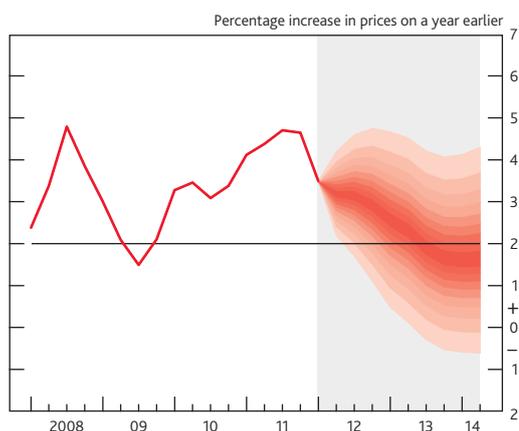
Inflation has fallen from its peak in late 2011. It is likely to remain above the 2% target over the next year or so but, as the effects of external price pressures wane, the drag on CPI inflation from the substantial degree of spare capacity in the economy should become apparent. How fast and how far inflation falls will depend on: the balance between demand and supply in the UK economy — and in particular the extent to which any factors weighing on demand also weigh on supply; the degree to which any persistent spare capacity pulls down costs and prices; and the path of energy and other tradable goods and services prices. There remains a range of views among Committee members about the likely evolution of those various factors, and around the overall outlook for inflation. The Committee's best collective judgement is, however, that inflation is rather more likely to be above the target than below it in the near term but, based on the conditioning assumptions described above, those risks are judged to be broadly balanced by the end of the forecast period.

Chart 5.12 GDP projection based on constant nominal interest rates at 0.5% and £325 billion asset purchases



See footnote to Chart 5.1.

Chart 5.13 CPI inflation projection based on constant nominal interest rates at 0.5% and £325 billion asset purchases



See footnote to Chart 5.6.

Charts 5.12 and 5.13 show the GDP and CPI inflation projections for the next two years under the alternative assumption that Bank Rate is held constant at 0.5%. As that path for Bank Rate is only a little lower than the path implied by market interest rates over the next two years, these projections are very similar to the fan charts conditioned on market interest rates.

In evaluating the outlook for growth, the Committee will focus on indicators of: the prospects for the world economy, and in particular developments in the euro area; the implications of those developments for the banking system and credit conditions; households' and businesses' uncertainty; the evolution of underlying productivity growth; and the impact of the MPC's asset purchases on demand.

In evaluating the outlook for inflation, the Committee will in addition focus on indicators of: commodity and other global trade prices; the degree of spare capacity in the economy; unit labour costs; and companies' price-setting behaviour.

At its May meeting, the Committee noted that, despite the changes in the near-term outlook, the fundamental policy challenges following the financial crisis and subsequent recession remained the same. GDP growth was likely to remain weak in the near term and to strengthen gradually thereafter. Developments in the euro area continued to pose a significant threat to that outlook. Inflation had declined sharply since last autumn, broadly as the Committee had expected. And although inflation was likely to remain above 2% for the next year or so, it was nevertheless likely to fall back gradually to around the target. The Committee therefore decided that it was appropriate to maintain Bank Rate at 0.5% and the size of the asset purchase programme at £325 billion in order to meet the 2% CPI inflation target over the medium term.

Other forecasters' expectations

Every three months, the Bank asks a sample of external forecasters for their latest economic projections. This box reports the results of the most recent survey, carried out during April. On average, forecasters expected annual CPI inflation to fall back to the 2% target by 2013 Q2 and to remain close to the target thereafter (Table 1). The near-term profile for CPI inflation was somewhat higher than that reported three months ago: the dispersion of central views about inflation one year ahead had shifted upwards a little (Chart A). The average central projection for four-quarter GDP growth in 2013 Q2 was 1.7%. Growth was expected to continue to increase gradually over the following two years (Table 1).

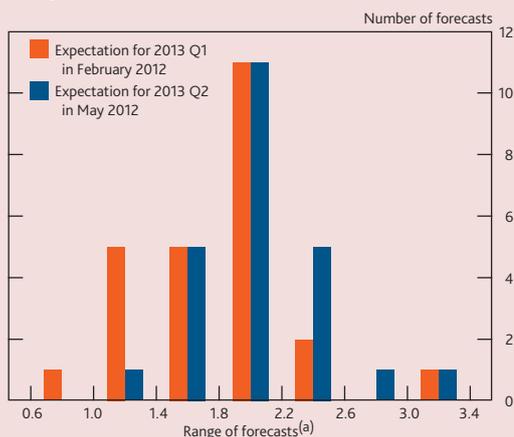
Table 1 Averages of other forecasters' central projections^(a)

	2013 Q2	2014 Q2	2015 Q2
CPI inflation ^(b)	2.0	2.0	2.1
GDP growth ^(c)	1.7	2.1	2.4
Bank Rate (per cent)	0.6	0.9	1.8
Stock of purchased assets (£ billions) ^(d)	368	376	360
Sterling ERI ^(e)	82.9	82.5	83.1

Source: Projections of outside forecasters as of 1 May 2012.

- (a) For 2013 Q2, there were 24 forecasts for CPI inflation, GDP growth and Bank Rate, 20 for the stock of purchased assets and 17 for the sterling ERI. For 2014 Q2, there were 20 forecasts for CPI inflation and GDP growth, 21 for Bank Rate, 16 for the stock of purchased assets and 15 for the sterling ERI. For 2015 Q2, there were 20 forecasts for CPI inflation and GDP growth, 19 for Bank Rate, 16 for the stock of purchased assets and 15 for the sterling ERI.
- (b) Twelve-month rate.
- (c) Four-quarter percentage change.
- (d) Original purchase value. Purchased via the creation of central bank reserves.
- (e) Where necessary, responses were adjusted to take account of the difference between the old and new ERI measures, based on the comparative outturns for 2006 Q1.

Chart A Distribution of CPI inflation central projections one year ahead



Sources: Projections of 25 outside forecasters as of 31 January 2012 and 24 outside forecasters as of 1 May 2012.

- (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.

These forecasts assume somewhat less monetary stimulus than was assumed three months ago. On average, projections of Bank Rate were little changed over the first year, but were slightly higher at years two and three. And, on average, the expected level of asset purchases financed by central bank reserves was around £30 billion lower than projected three

months ago. The level of the sterling ERI was also expected, on average, to be somewhat higher over the next three years.

The Bank also asks forecasters for their assessment of the risks around their central projections for GDP growth and CPI inflation (Table 2). The average likelihood of different GDP growth outturns were broadly unchanged from the assessments made three months ago at the two and three-year horizons.

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

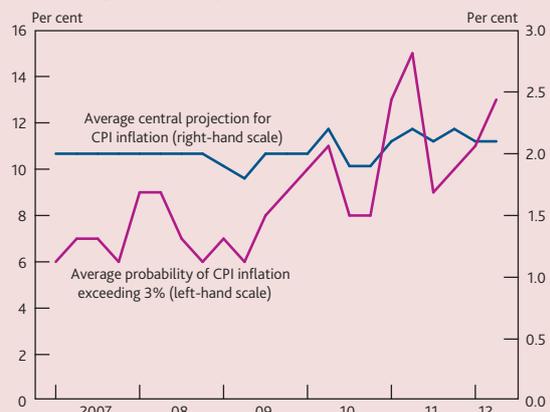
CPI inflation		Range:						
Probability, per cent	<0%	0-1%	1-1.5%	1.5-2%	2-2.5%	2.5-3%	>3%	
2013 Q2	2	7	16	24	25	16	10	
2014 Q2	3	7	12	23	25	18	12	
2015 Q2	3	7	12	20	27	18	13	
GDP growth		Range:						
Probability, per cent	<-1%	-1-0%	0-1%	1-2%	2-3%	>3%		
2013 Q2	4	8	22	36	21	8		
2014 Q2	3	8	18	28	27	16		
2015 Q2	3	7	13	24	32	20		

Source: Projections of outside forecasters as of 1 May 2012.

- (a) For 2013 Q2, 24 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 2014 Q2 and 2015 Q2, 20 forecasters provided assessments for CPI and GDP. The table shows the average probabilities across respondents. Rows may not sum to 100 due to rounding.

In contrast, the average probabilities respondents attached to CPI inflation exceeding the inflation target had increased at the one, two and three-year horizons. On average, respondents judged that the risks around the inflation target at the one-year horizon were broadly balanced. But forecasters attached an average probability of almost 60% to inflation being above the 2% target at the three-year horizon. And the average probability attached to inflation being above 3% in three years' time had also increased a little, despite the unchanged average central projection (Chart B).

Chart B Other forecasters' average central projections for CPI inflation and average probabilities of CPI inflation exceeding 3% three years ahead



Sources: Projections of outside forecasters provided for Inflation Reports between February 2007 and May 2012.

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Text of Bank of England press notice of 8 March 2012

Bank of England maintains Bank Rate at 0.5% and the size of the Asset Purchase Programme at £325 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 continue with its programme of asset purchases totalling £325 billion financed by the issuance of central bank reserves.

The Committee expects the announced programme of asset purchases to take another two months to complete. The scale of the programme will be kept under review.

The minutes of the meeting will be published at 9.30 am on Wednesday 21 March.

Text of Bank of England press notice of 5 April 2012

Bank of England maintains Bank Rate at 0.5% and the size of the Asset Purchase Programme at £325 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 continue with its programme of asset purchases totalling £325 billion financed by the issuance of central bank reserves.

The Committee expects the announced programme of asset purchases to take another month to complete. The scale of the programme will be kept under review.

The minutes of the meeting will be published at 9.30 am on Wednesday 18 April.

Text of Bank of England press notice of 10 May 2012

Bank of England maintains Bank Rate at 0.5% and the size of the Asset Purchase Programme at £325 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 £325 billion.

The Committee's latest inflation and output projections will appear in the *Inflation Report* to be published at 10.30 am on Wednesday 16 May.

The minutes of the meeting will be published at 9.30 am on Wednesday 23 May.

Glossary and other information

Glossary of selected data and instruments

ABS – asset-backed security.

AWE – average weekly earnings.

CDS – credit default swap.

CMBS – commercial mortgage-backed security.

CPI – consumer prices index.

CPI inflation – inflation measured by the consumer prices index.

ERI – exchange rate index.

GDP – gross domestic product.

LFS – Labour Force Survey.

Libor – London interbank offered rate.

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

OIS – overnight index swap.

RMBS – residential mortgage-backed security.

RPI – retail prices index.

RPIY – retail prices index excluding indirect taxes.

Abbreviations

BCC – British Chambers of Commerce.

CBI – Confederation of British Industry.

CIPS – Chartered Institute of Purchasing and Supply.

DMO – Debt Management Office.

ECB – European Central Bank.

EU – European Union.

FTSE – Financial Times Stock Exchange.

GCSE – General Certificate of Secondary Education.

GfK – Gesellschaft für Konsumforschung, Great Britain Ltd.

GVA – gross value added.

HMRC – Her Majesty's Revenue and Customs.

ISM – Institute for Supply Management.

LOCOG – London Organising Committee of the Olympic Games.

LTRO – longer-term refinancing operation.

MPC – Monetary Policy Committee.

MTIC – missing trader intra-community.

NBER – National Bureau of Economic Research.

OBR – Office for Budget Responsibility.

OFCs – other financial corporations.

ONS – Office for National Statistics.

PNFCs – private non-financial corporations.

PwC – PricewaterhouseCoopers.

S&P – Standard & Poor's.

VAT – Value Added Tax.

Symbols and conventions

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

n.a. = not available.

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

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

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