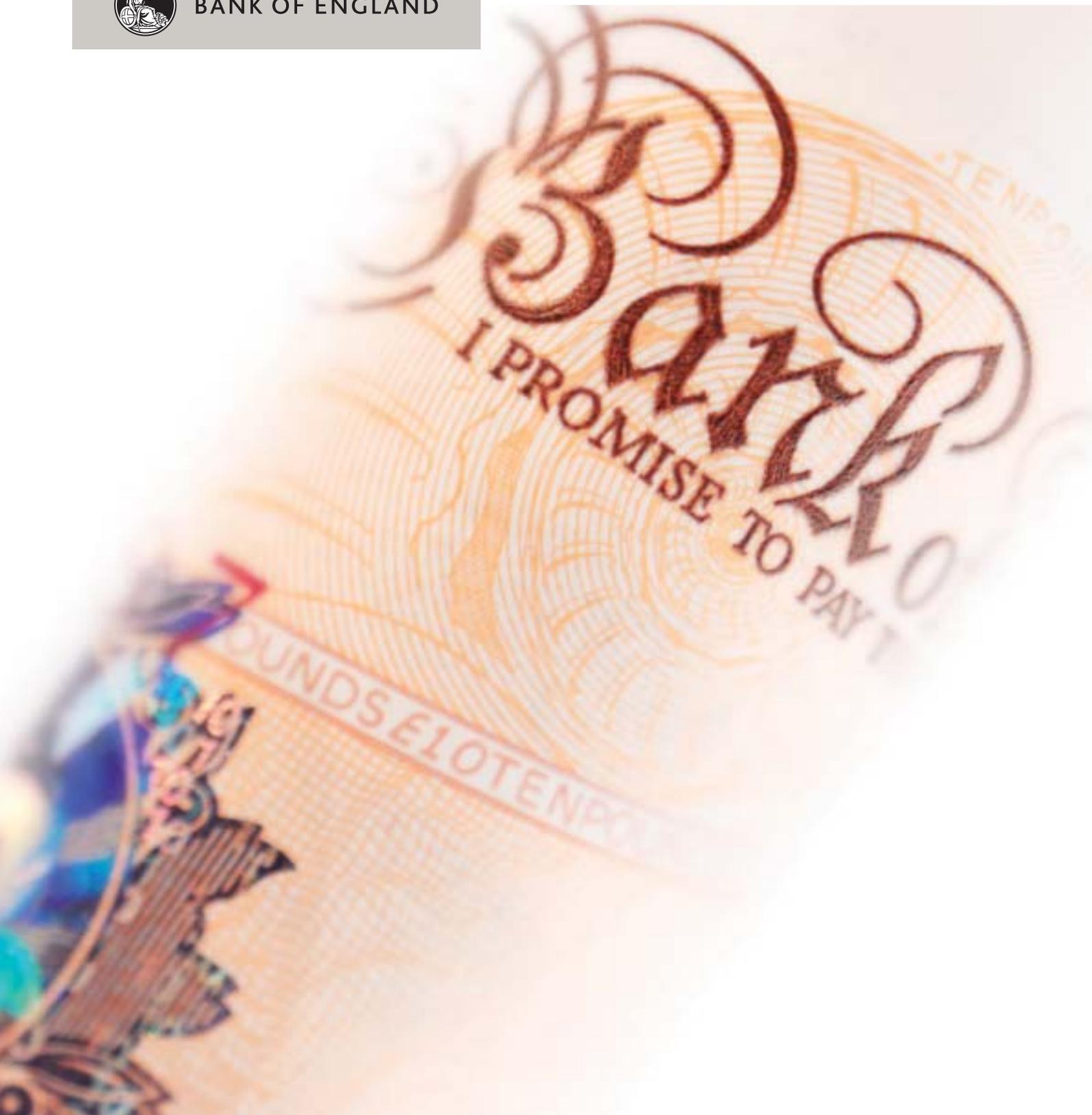


Inflation Report

November 2013



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 economic policy, including its objectives for 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, output and unemployment, as well as 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:

Mark Carney, Governor

Charles Bean, Deputy Governor responsible for monetary policy

Jon Cunliffe, Deputy Governor responsible for financial stability

Ben Broadbent

Spencer Dale

Paul Fisher

Ian McCafferty

David Miles

Martin Weale

The Overview of this *Inflation Report* is available in PDF at www.bankofengland.co.uk/publications/Documents/inflationreport/2013/ir13novo.pdf.

The entire *Report* is available in PDF at www.bankofengland.co.uk/publications/Pages/inflationreport/2013/ir1304.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/2013/ir1304.aspx.

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Overview

In the United Kingdom, recovery has finally taken hold. The economy is growing robustly as lifting uncertainty and thawing credit conditions start to unlock pent-up demand. But significant headwinds — both at home and abroad — remain, and there is a long way to go before the aftermath of the financial crisis has cleared and economic conditions normalise. That underpins the MPC's intention to maintain the exceptionally stimulative stance of monetary policy until there has been a substantial reduction in the degree of economic slack.

The pace at which that slack is eroded, and the durability of the recovery, will depend on the extent to which productivity picks up alongside demand. Productivity growth has risen in recent quarters, although unemployment has fallen by slightly more than expected on the back of strong output growth.

CPI inflation fell to 2.2% in October. The near-term outlook for inflation is lower than expected three months ago, reflecting unexpectedly low outturns and the recent appreciation of sterling. Inflation is set to fall back to around the 2% target over the next year or so as the impetus from past increases in import prices fades and a gradual revival in productivity growth, together with a persistent margin of spare capacity, curbs domestic price pressures.

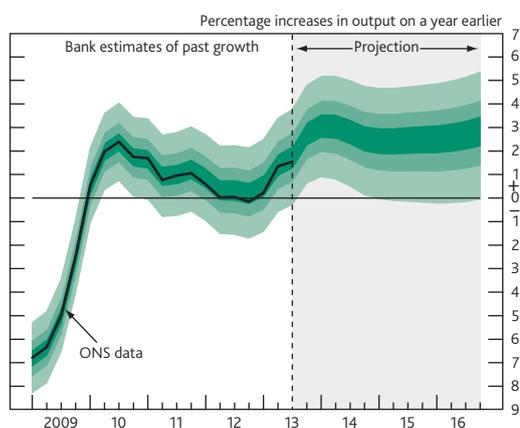
Economic outlook

Demand and supply

The UK economy expanded by 0.8% in 2013 Q3 and business surveys point to continued robust growth in Q4. The gathering pace of expansion during 2013 was supported by an increase in domestic demand. That reflects both an improvement in credit conditions — for example, rates on new loans to households have fallen significantly over the past year — and a reduction in uncertainty. The easing of these headwinds has supported consumer spending and helped to revive the housing market: housing activity and prices increased and housing investment rose robustly in the first half of this year. Leading indicators suggest that housing activity is likely to strengthen further in the near term.

Although official statistics suggest that capital expenditure is yet to increase, companies' investment intentions have also improved on the back of reduced uncertainty and improved access to credit, as well as stronger demand prospects. The prospective revival of investment may be most pronounced for large companies since, despite some improvement, access to finance for small businesses remains constrained. Companies' plans may also be bolstered by a gradual recovery in world demand, although the extent to which UK companies are able

Chart 1 GDP projection based on market interest rate expectations and £375 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 £375 billion throughout the forecast period. To the left of the 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 30 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 30 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. See the box on page 39 of the November 2007 *Inflation Report* for a fuller description of the fan chart and what it represents.

to capitalise on that expansion may be tempered by the rise in sterling of around 3% over the past three months.

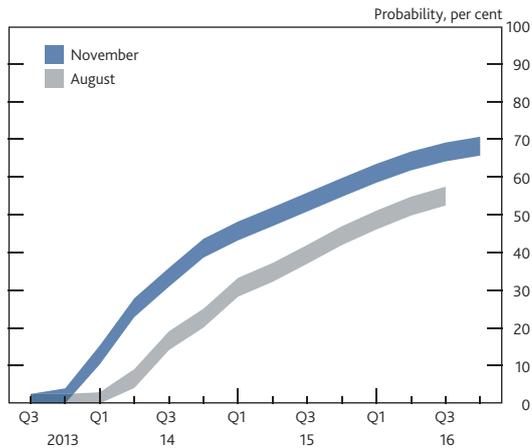
Since the *August Report*, the MPC has maintained Bank Rate at 0.5% and the size of its asset purchase programme at £375 billion. Short-term UK market interest rates have risen, partly reflecting the strength of domestic activity. The projections below are based on the assumption that Bank Rate follows a path implied by market interest rates, rather than the constant rate assumption used in August. That does not reflect the Committee's view of the most likely path of Bank Rate; it is simply a reversion to the convention of using the market curve now that financial markets have had the opportunity to absorb the policy guidance provided by the Committee in August.

On that basis, and assuming that the size of the asset purchase programme is maintained at £375 billion, the recent recovery is likely to be sustained (**Chart 1**). Reduced uncertainty, especially regarding the risks to euro-area activity, and a continued easing in domestic credit conditions should help to release pent-up demand from households and companies. And the strengthening of the housing market should support increased investment in the housing stock and higher demand for housing-related goods and services. The pace of growth is likely to ease back a little in the second and third years of the forecast, as some of the initial boost provided by the lifting of uncertainty and easing of credit conditions moderates. The rise in Bank Rate implied by the market curve also acts to dampen growth over the forecast period. Despite growth becoming entrenched, the legacy of adjustment and repair left by the financial crisis means that the recovery is likely to be subdued by historical standards.

The external environment continues to pose the greatest threat to the recovery; in particular, the necessary adjustments to indebtedness and competitiveness within the euro area may yet prove to be a much greater drag on growth. At home, the continuing need for adjustment and balance sheet repair in both public and private sectors may mean that the recent boost to growth from the lifting of uncertainty proves short-lived. In contrast, domestic demand may revive more quickly than anticipated if improvements in sentiment and spending feed off each other and so impart further momentum to growth.

The scope for economic expansion depends critically on the extent to which the unprecedented weakness in labour productivity seen over recent years unwinds as demand recovers. The stronger the revival in productivity, the slower will be the absorption of spare capacity and so the greater the scope for the economy to grow without generating inflationary pressure. Labour productivity growth picked up in the first half of 2013, suggesting that stronger demand is likely to elicit some response in productivity. The recent increase in demand has, however, also led to a narrowing of spare capacity within companies and to a further edging down in the unemployment rate. The headline Labour Force Survey (LFS) unemployment rate fell to 7.7% in August, a touch lower than expected three months ago.

Chart 2 Cumulative probability of unemployment having reached the 7% threshold



The November swathe in this chart is derived from the same distribution as Chart 5.8 and is conditioned on market interest rate expectations; the August swathe is that shown in Chart 5.11 of the August Report and is conditioned on constant interest rates. The swathes show the probability that unemployment has reached 7% by each quarter of the forecast period. The 5 percentage points width of the swathes reflects the fact that there is uncertainty about the precise probability in any given quarter, but it should not be interpreted as a confidence interval.

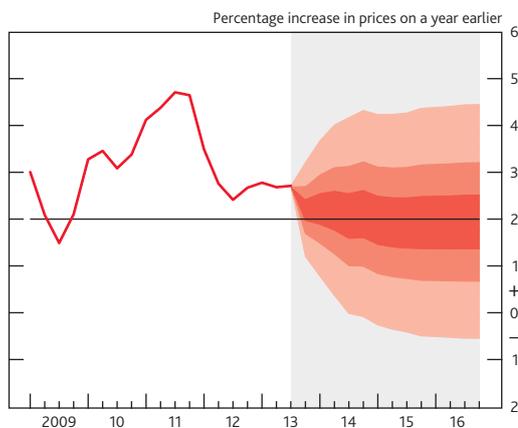
There remains a range of views on the Committee about the factors that led to the recent weakness in productivity and about the extent to which productivity will rise as demand increases. But there is little in the recent data to alter those views materially and the MPC’s best collective judgement remains that productivity is likely to increase as the economy recovers, such that slack is eroded only gradually. As a result, despite the sustained recovery in activity, and based on the same assumptions as Chart 1, the MPC attaches only around a two-in-five chance to the LFS unemployment rate having reached the 7% threshold by the end of 2014. The corresponding figures for the end of 2015 and 2016 are around three in five and two in three respectively (Chart 2). These probabilities are higher than in August, reflecting the stronger outlook for near-term demand.

Costs and prices

CPI inflation fell from 2.9% in June to 2.2% in October, which is much lower than expected three months ago. That unexpectedly large fall reflects both recent broad-based weakness in goods and services price inflation, together with a number of specific factors including: the impact of recent falls in oil prices on petrol prices; utility price increases occurring later than expected; and a smaller contribution from university tuition fees this year. Domestic cost pressures remain contained, with the weakness in productivity growth broadly matched by muted pay growth.

Some measures of household inflation expectations have picked up; that may have been a response to imminent utility price increases and so may prove temporary. Measures of medium-term expectations derived from financial markets and professional forecasters were little changed, although some were slightly higher than their post-crisis average. Overall, the MPC judges that medium-term inflation expectations remain sufficiently well anchored.

Chart 3 CPI inflation projection based on market interest rate expectations and £375 billion asset purchases

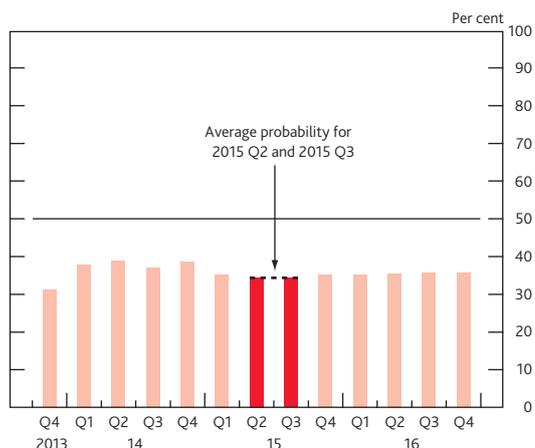


The fan chart depicts the probability of various outcomes for CPI inflation in the future. It has been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 billion throughout the forecast period. If economic circumstances identical 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 30 of those occasions. The fan chart is constructed so that outturns of inflation are also expected to lie within each pair of the lighter red areas on 30 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. 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.

Chart 3 shows the Committee’s best collective judgement of the outlook for CPI inflation, based on the same assumptions as Chart 1. Inflation is projected to fall a little further over the next year or so, as the impetus from import prices fades. This near-term projection is lower than in August, reflecting the impact of unexpectedly low outturns and sterling’s recent appreciation. In consequence, the probability of CPI inflation being at or above the 2.5% knockout 18 to 24 months ahead is judged to be lower than in August, at around one third (Chart 4). A gradual revival in productivity growth and a persistent margin of spare capacity should contain domestic price pressures, ensuring that inflation is close to target in the medium term, despite a continuing elevated contribution from administered and regulated prices.

There are a number of sources of uncertainty affecting the inflation outlook. The path of inflation will depend on the extent to which productivity picks up as demand increases, the

Chart 4 Probability that CPI inflation will be at or above the 2.5% knockout



The bars in this chart are derived from the same distribution as Chart 3. The bars indicate the assessed probability of inflation being at or above 2.5% in each quarter of the forecast period. The dashed line shows the average of the probabilities in 2015 Q2 and 2015 Q3, consistent with the 18 to 24-month period in the MPC's price stability knockout.

degree to which companies' profit margins rise, and whether that takes place through higher prices or lower costs. Inflation will also be sensitive to developments in commodity prices and the exchange rate, both of which are prone to move sharply. There remains a range of views among Committee members regarding the relative strength of these different factors. The Committee's best collective judgement is that the risks around the 2% inflation target are broadly balanced in the second and third years of the forecast.

The policy decision

A recovery appears to have finally taken hold; even so, a sustained period of strong growth is likely to be needed before slack is materially eroded. To that end, the Committee indicated in August that it intended to maintain the stance of policy at least until unemployment had reached 7%, provided that it did not entail material risks to price stability or financial stability.

At its November meeting, the Committee noted that the stronger near-term outlook for demand meant that, on the assumption that Bank Rate followed a path implied by market rates, unemployment was likely to fall more quickly than anticipated in August, while CPI inflation looked set to fall back to around the 2% target over the next year or so. The pace with which unemployment fell back would, however, depend heavily on the extent to which the recovery in demand was accompanied by higher productivity. The Committee judged that neither of its price stability knockouts had been breached, and noted that the Financial Policy Committee had concluded at its latest meeting that there had been no breach of the financial stability knockout. Its guidance therefore remained in place.

The Committee reiterated that reaching the unemployment threshold would not necessarily trigger an immediate policy response. Rather the setting of policy at that point would depend on the outlook for inflation relative to the target and on the need to provide continued support to output and employment. In that regard, the Committee noted that its projections conditioned on the assumption that Bank Rate remained at 0.5% implied that no policy action was taken when the unemployment threshold was reached. These projections suggested that inflation would be only a little above the target by the end of the forecast period, while growth was projected to be stronger, and unemployment to fall more rapidly, than in the case in which Bank Rate was assumed to rise in line with the market curve.

In the light of both the economic outlook and its policy guidance, the Committee voted to maintain Bank Rate at 0.5% and the stock of asset purchases at £375 billion.

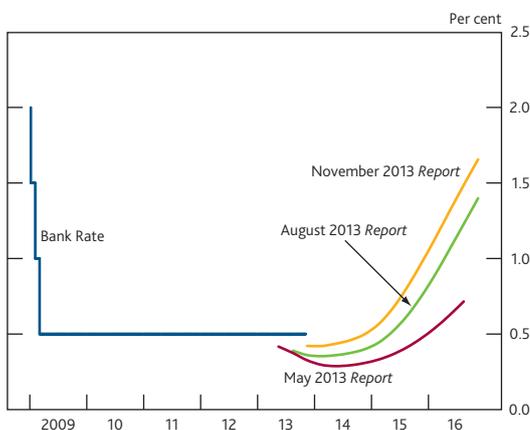
1 Money and asset prices

Monetary policy in advanced economies remains highly stimulative. UK market interest rates are, however, higher than at the time of the *August Report*. Sterling appreciated by around 3%. To date, the impact of higher UK market rates on loan rates facing households and businesses has been muted. The availability of credit continued to improve. Housing market activity and annual house price inflation picked up. Money growth remained strong relative to its post-crisis average.

Table 1.A Monitoring the MPC's key judgements

Developments anticipated if <i>August Report</i> judgements had evolved as expected	Developments since August
Cost of credit <ul style="list-style-type: none"> Modest declines in the cost of credit to households, as well as to large and small companies. 	Broadly on track <ul style="list-style-type: none"> Slight softening in new lending rates for households. New corporate lending rates little changed; surveys suggest lower cost of credit.
Credit availability <ul style="list-style-type: none"> Further increases in credit availability. 	Broadly on track <ul style="list-style-type: none"> Surveys suggest credit availability improved for households and larger companies; SMEs still report difficulty accessing credit.
Mortgage approvals <ul style="list-style-type: none"> Rise in mortgage approvals to above 60,000 by the end of the year. 	Stronger than expected <ul style="list-style-type: none"> Mortgage approvals above 60,000 by July.
PNFC lending <ul style="list-style-type: none"> Pace of decline in four-quarter PNFC net lending stabilising in Q3, gradually easing thereafter. 	Slightly stronger than expected <ul style="list-style-type: none"> PNFC net lending continues to contract, albeit at a more modest pace than in 2013 Q2.
Evolution of sterling <ul style="list-style-type: none"> Sterling evolves in line with conditioning assumptions. 	Higher than expected <ul style="list-style-type: none"> Sterling appreciated by around 3%.

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



Sources: Bank of England and Bloomberg.

(a) The May 2013, August 2013 and November 2013 curves are estimated using overnight index swap (OIS) rates in the fifteen working days to 8 May 2013, 31 July 2013 and 6 November 2013 respectively.

1.1 Monetary policy and financial markets

Monetary policy

Monetary policy remains highly stimulative in advanced economies. At its November meeting, the MPC voted to maintain Bank Rate at 0.5% and maintain the stock of asset purchases financed by the issuance of central bank reserves at £375 billion, consistent with its stated intention, at a minimum, to maintain the present highly stimulative stance of monetary policy at least until the unemployment rate falls to 7%, provided that this does not entail material risks to price stability or financial stability.⁽¹⁾ The reasons behind the MPC's policy decisions since the *August Report* are discussed on page 15.

In the United States, the Federal Open Market Committee (FOMC) continued purchasing assets at a pace of US\$85 billion per month. Market participants had expected the FOMC to slow the rate of asset purchases in September, but it instead decided to await more evidence that the improvement in economic activity and labour market conditions would be sustained.

At its 7 November meeting, the European Central Bank (ECB) cut its main refinancing rate by 0.25 percentage points to 0.25% and maintained the guidance, first provided in July, that it expects its key policy rates to remain at present or lower levels for an extended period of time.

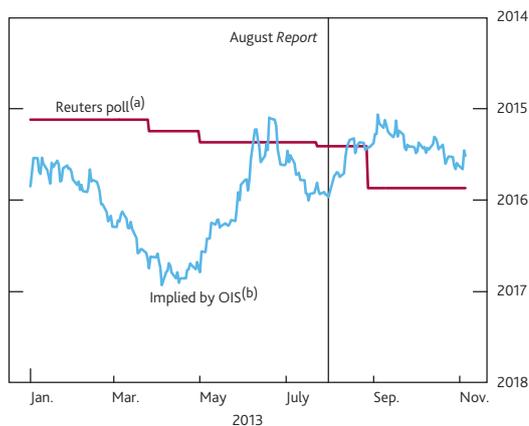
Central banks in some emerging economies, by contrast, have tightened policy in recent months. That was a response to elevated inflation and outflows of capital since May (Section 2). Central banks in Brazil, Indonesia, Turkey and India have, for example, raised interest rates, implemented capital controls and/or intervened in the foreign exchange markets.

Market interest rates

In the run-up to the *November Report*, the path of Bank Rate implied by UK short-term interest rates (OIS rates) rose above 0.75% in 2015 Q3 (Chart 1.1). When policy rates are near the

(1) See Monetary Policy Committee (2013), *Monetary policy trade-offs and forward guidance*.

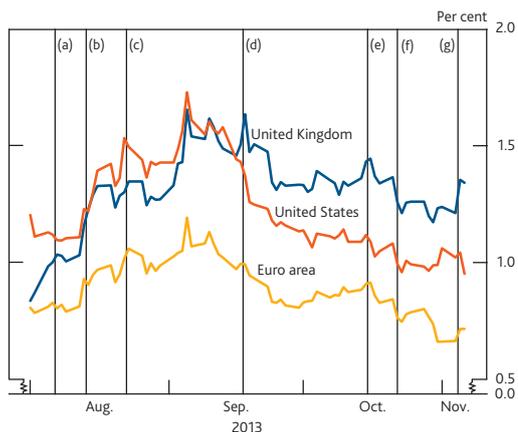
Chart 1.2 Indicators of when Bank Rate is expected to rise



Sources: Bloomberg, Reuters and Bank calculations.

- (a) Reuters poll shows the median economists' expectations of the first rise in Bank Rate. This is based on a survey of economists' responses to the question: 'When do you expect the Bank of England to change rates next?'.
 (b) Series is calculated as the first date at which one-month forward OIS rates equal or exceed 0.75%.

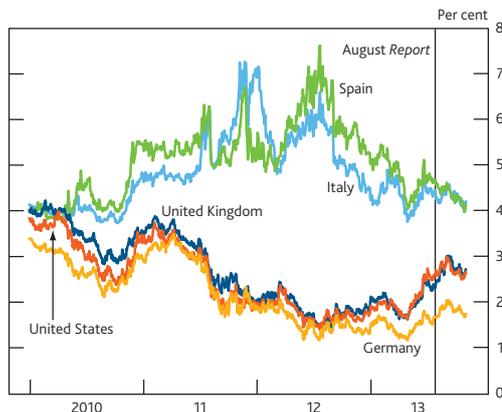
Chart 1.3 One-year OIS rates two years forward for selected countries



Sources: Bloomberg and Bank calculations.

- (a) August 2013 *Inflation Report* published.
 (b) August 2013 MPC minutes published.
 (c) Second estimate of UK GDP in 2013 Q2 published.
 (d) September 2013 FOMC meeting and September 2013 MPC minutes published.
 (e) UK unemployment rate in the three months to August 2013 published.
 (f) US September non-farm payrolls data published.
 (g) UK October services PMI published.

Chart 1.4 Selected ten-year government bond yields^(a)



Source: Bloomberg.

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

zero lower bound, OIS rates, which are likely to capture mean expectations, will tend to be above market participants' view of the modal (or most likely) path of Bank Rate (see the box on page 10 of the *August Report*). The median expectation among economists polled by Reuters in late October was for no change in Bank Rate until 2015 Q4, compared with 2015 Q2 in the run-up to the *August Report* (Chart 1.2).

UK short-term forward interest rates have been volatile, but were higher in the run-up to the *November Report* than three months earlier.⁽¹⁾ This probably, in part, reflects domestic factors. For example, some of the rise since August may have reflected the market response to the MPC's policy guidance: some market contacts had expected a lower rate than 7% for the unemployment threshold and less emphasis on the risks to price and financial stability. Recent unexpectedly strong UK data have also played a role (Chart 1.3), although associated rises in short-term rates might have been more pronounced in the absence of the MPC's policy guidance.

Movements in UK short-term forward market interest rates probably also reflect international factors. For example, short-term market interest rates in some advanced economies appear to have responded to developments in the United States and, in particular, to changes in market expectations of FOMC policy (Chart 1.3). Although these interest rates have tended to move together in the past, this relationship appears to have strengthened since the spring. It is hard to explain the high degree of correlation in short-term interest rates, but it is possible that, despite significant differences in recent years, market participants expect developments in the advanced economies to be synchronised during their recoveries.

At longer maturities, safe-haven sovereign bond yields have also exhibited a high degree of correlation and, despite falls since mid-September, remain higher than in May — particularly in the United Kingdom and the United States (Chart 1.4). These longer-term yields often move together, in part because investors see advanced-economy bonds with similar risk characteristics as close substitutes.

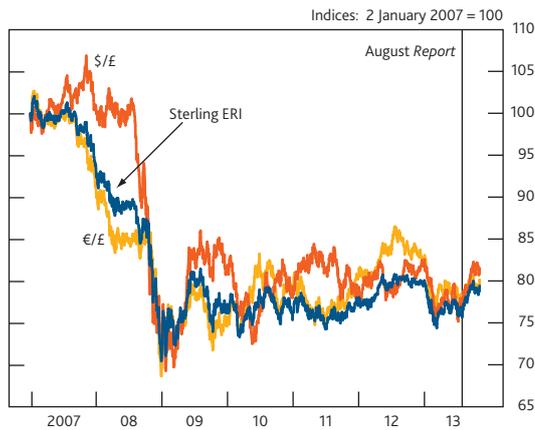
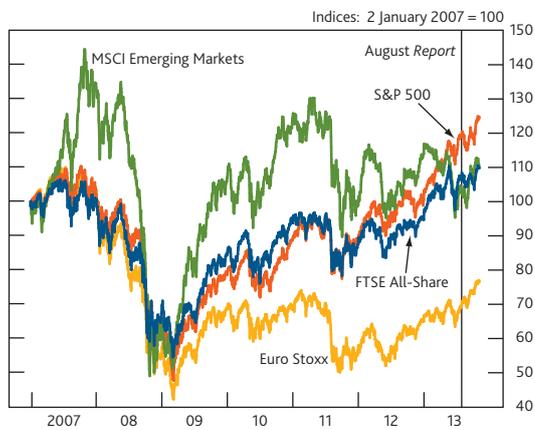
Euro-area periphery sovereign bond yields have generally fallen further since the *August Report* (Chart 1.4). In part, this reflects a continuation of the trend seen since the ECB's announcement in mid-2012 of Outright Monetary Transactions. Some signs of improvement in the euro-area periphery economies may also have eased investors' concerns.

Exchange rates

The sterling effective exchange rate (ERI) has appreciated by 3.3% since the *August Report* (Chart 1.5). Sterling appreciated against the US dollar and, to a lesser extent,

(1) Recent movements in interest rates are discussed in Bean, C (2013), 'The UK economic outlook', available at www.bankofengland.co.uk/publications/Documents/speeches/2013/speech689.pdf.

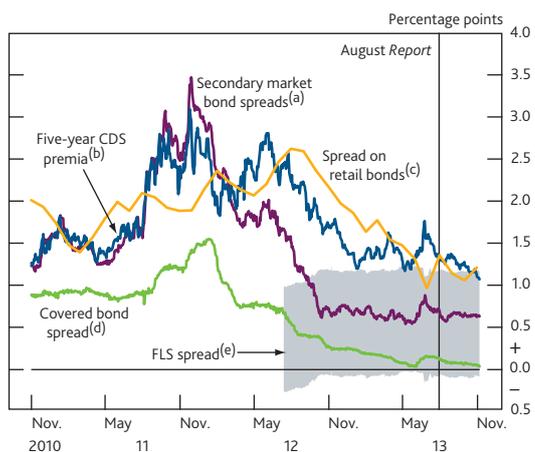
Chart 1.5 Sterling exchange rates

Chart 1.6 International equity prices^(a)

Sources: Bloomberg and Thomson Reuters Datastream.

(a) In local currency terms, except for MSCI Emerging Markets, which is in US dollar terms.

Chart 1.7 UK banks' indicative longer-term funding spreads



Sources: Bank of England, Bloomberg, Markit Group Limited and Bank calculations.

- (a) Constant-maturity unweighted average of secondary market spreads to swaps for the major UK lenders' five-year euro senior unsecured bonds, or, where not available, a suitable proxy.
- (b) Unweighted average of the five-year senior CDS premia for the major UK lenders.
- (c) Sterling only, average of two and three-year spreads on retail bonds. Spread over relevant swap rates.
- (d) Constant-maturity unweighted average of secondary market spreads to swaps for the major UK lenders' five-year euro-denominated covered bonds, or, where not available, a suitable proxy.
- (e) Shaded area provides an indication of the funding costs associated with the Funding for Lending Scheme (FLS). These costs will vary by participant, with non-deleveraging participants receiving more favourable terms than deleveraging participants. For more detail, see Churm et al (2012), 'The Funding for Lending Scheme', *Bank of England Quarterly Bulletin*, Vol. 52, No. 4, pages 306–20. Spread over four-year swap rates.

the euro. These movements, which were broadly consistent with relative changes in market interest rates, may reflect a perception that the UK economic outlook has improved by more than those of its main trading partners.

A proportion of the appreciation in sterling has reflected a weakening in some emerging-economy currencies since the spring. Expectations that the FOMC would reduce the pace of its asset purchases in September contributed to large capital outflows from some emerging economies. Actions taken by central banks in these economies, as well as the FOMC's decision not to reduce the pace of its asset purchases, subsequently led to a partial recovery of these currencies.

Equities

The FTSE All-Share index was 2.4% higher in the run-up to the November *Report* than at the time of the August *Report*. Over the year to date, UK, US and euro-area equity indices have risen, although emerging-economy equity prices remain lower than at the start of the year (Chart 1.6).

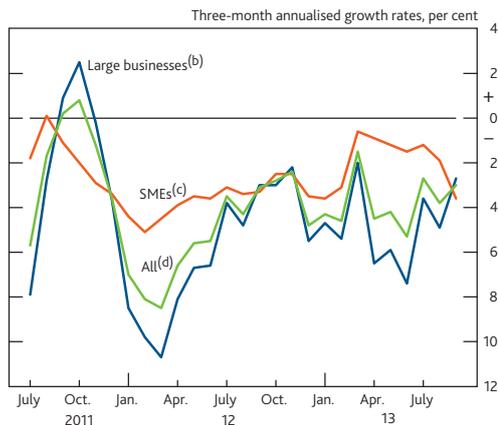
Higher advanced-economy equity prices since the start of the year are likely to have reflected increased investor optimism regarding the economic outlook. This, in turn, is likely to have driven expectations of higher future earnings, as well as a reduction in the compensation investors require for taking on risk. These effects have, however, been partially offset by the associated rises in market interest rates, which raises the rate at which investors discount future returns and, other things equal, depresses equity prices.

1.2 The banking sector

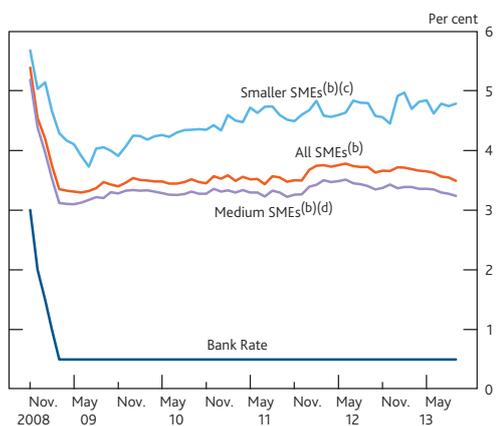
Banks' access to funds affects their ability to lend to the real economy and the terms under which credit is provided. Financial regulation, such as capital and liquidity policy, can also influence the supply of credit.

Bank funding spreads have been little changed since the August *Report*, following significant falls over the preceding twelve months (Chart 1.7). In part, those falls reflected international developments as concerns about euro-area prospects lessened, as well as actions taken by UK banks to strengthen their balance sheets.

Supply and demand factors in the wholesale debt issuance market have also played a role in reducing UK bank funding costs. Banks have issued very little wholesale debt, reflecting access to alternative funding sources, including the Funding for Lending Scheme. In addition, the volume of retail funding raised by banks has risen considerably over the past year — the *Bank Liabilities Survey (BLS)* suggests that this predominantly reflects an increase in the supply of deposits from households and businesses. The limited issuance of bank debt, coupled with continued investor demand, is likely to have made investors more willing to accept a lower return, reducing funding spreads.

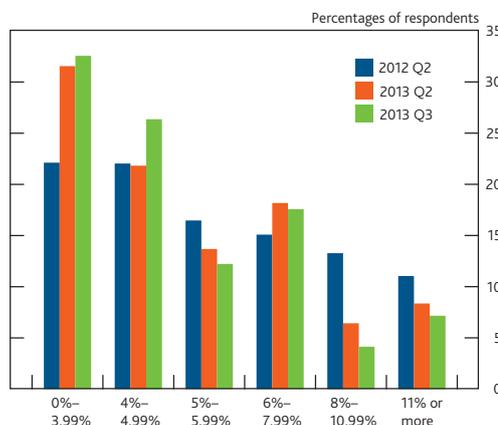
Chart 1.8 Lending to non-financial businesses, by size^(a)

- (a) Sterling and foreign currency lending, expressed in sterling, by UK monetary financial institutions (MFIs) to UK non-financial businesses, excluding overdrafts. Non seasonally adjusted.
 (b) Annual debit account turnover on the main business account of more than £25 million.
 (c) Annual debit account turnover on the main business account of less than £25 million.
 (d) All non-financial businesses are the sum of large businesses and SMEs.

Chart 1.9 Indicative interest rates on lending to SMEs^(a)

Sources: Bank of England, Department for Business, Innovation and Skills and Bank calculations.

- (a) These indicative rates do not reflect the impact of cashback deals or fees. Data to end-September. Non seasonally adjusted.
 (b) Median by value of SME facilities (new loans, new and renewed overdrafts) priced at margins over base rates by four major UK lenders (Barclays, HSBC, Lloyds Banking Group and Royal Bank of Scotland). Sterling and foreign currency lending, expressed in sterling.
 (c) Annual debit account turnover on the main business account of less than £1 million.
 (d) Annual debit account turnover on the main business account between £1 million and £25 million.

Chart 1.10 Loan rates offered to small businesses^(a)

Source: FSB 'Voice of Small Business' Panel.

- (a) Interest rates that small businesses that successfully applied for bank credit reported that they had been offered. Results have been re-weighted to exclude 'unsure' responses. For further details on survey methodology, see www.fsb.org.uk/frontpage/assets/q3%20vosb.pdf.

While funding spreads remained broadly stable, the rise in market interest rates since the August *Report* has raised banks' overall wholesale funding costs a little. According to the *BLS*, banks' and building societies' cost of funding new loans increased in 2013 Q3, but was expected to change little in Q4.

Changes in regulation may also influence the supply of credit. In late August, the Prudential Regulation Authority (PRA) announced amendments to its current liquidity framework in response to a recommendation by the Financial Policy Committee (FPC).⁽¹⁾ Subject to meeting the PRA's 7% core equity capital standard, firms now need to hold highly liquid assets broadly equivalent to an 80% Liquidity Coverage Ratio until January 2015, rising only gradually thereafter to reach 100% by the start of 2018. This marks a relaxation in liquidity requirements and could, in conjunction with higher capital ratios, help support the flow of credit to the economy.

1.3 Corporate credit conditions

Consistent with past improvements in bank funding conditions, credit conditions for private non-financial corporations (PNFCs), including the commercial real estate sector, have continued to ease since the August *Report*. According to the *Credit Conditions Survey (CCS)*, this easing was driven by various factors including: competition among lenders for market share; competition from capital markets in the provision of finance; and the better economic outlook. After strong net bond issuance earlier in the year, PNFCs repaid more finance than they raised in Q3. Bank lending continued to contract, albeit at a slightly slower pace than in the previous quarter (**Chart 1.8**).

Improvements in credit conditions have been greatest for large PNFCs, which tend to have better access to non-bank finance than smaller companies. Indeed, some of the weakness in bank lending in recent years reflects large companies switching from bank to capital market finance. The cost of borrowing for large PNFCs has remained favourable: corporate bond spreads have been broadly stable and the *CCS* suggests that bank lending spreads continued to fall for large PNFCs in Q3.

Small and medium-sized enterprises (SMEs), however, frequently lack access to the capital markets and are therefore more dependent on banks for their external finance. Indicative median interest rates on new credit facilities to SMEs overall have fallen modestly since mid-2012 (**Chart 1.9**). These rates do not, however, capture the full cost of credit facing SMEs, as they do not include the impact of fees or cashback deals. Furthermore, as lenders become more willing to extend credit to a wider pool of borrowers, falls in interest rates for some SMEs may be offset by banks charging higher interest rates to riskier ones.⁽²⁾ Surveys of small businesses show more of an

(1) For full details, see Bank of England News Release, 'Prudential Regulation Authority Statement on liquidity', 28 August 2013, available at www.bankofengland.co.uk/publications/Pages/news/2013/099.aspx.

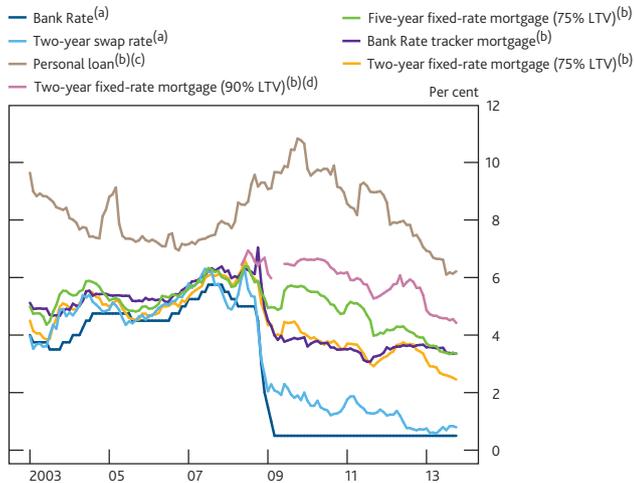
(2) For a fuller discussion, see *Trends in Lending*, July 2013.

Table 1.B Effective interest rates on outstanding loans^(a)

	2004–08	2009–11	2012	2013		
				Q1	Q2	Q3
Private non-financial corporations						
Floating-rate loans (53%)	6.36	2.42	2.79	2.74	2.77	2.81
Fixed-rate loans (47%)	6.48	3.55	3.60	3.50	3.50	3.48
Households						
Mortgages						
Floating-rate mortgages (62%)	5.74	2.66	2.86	2.93	2.94	2.95
Fixed-rate mortgages (28%)	5.20	5.29	4.62	4.39	4.26	4.10
Unsecured loans (9%)						
Personal loans (n.a.)	8.68	7.21	7.70	7.72	7.73	7.66
Credit cards (n.a.) ^(b)	11.46	12.00	10.85	10.74	10.47	10.33

(a) Averages of monthly data for sterling loans. Non seasonally adjusted. Compiled using data from 23 UK MFIs. Figures in parentheses show shares in September 2013 in the stock of loans to PNFCs or households respectively. Shares may not sum to 100 due to rounding.

(b) Effective interest rates on the stock of all outstanding credit card balances.

Chart 1.11 Quoted rates on household borrowing

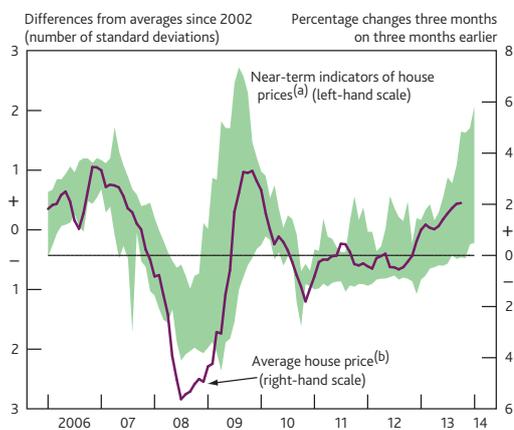
Sources: Bank of England and Bloomberg.

(a) End-month rates.

(b) End-month sterling quoted rates on different mortgage products and on unsecured personal loans. Weighted averages of rates from a sample of banks and building societies with products meeting specific criteria (see www.bankofengland.co.uk/statistics/Pages/iadb/notesiadb/household_int.aspx).

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

(d) The two-year 90% loan to value (LTV) series is only available on a consistent basis to May 2008 and is not published for March to May 2009 as fewer than three products were offered.

Chart 1.12 House prices and near-term indicators of house prices

Sources: Halifax, Nationwide, RICS, Rightmove.co.uk and Bank calculations.

(a) Includes the RICS house prices three months ahead net balance, the RICS new buyer enquiries less instructions to sell net balances, the RICS sales to stock ratio and the Rightmove index for asking prices posted on the Rightmove website. All series have been moved forward by three months. The Rightmove index has been seasonally adjusted by Bank staff.

(b) Average of Halifax and Nationwide measures. Latest observation is for October 2013.

improvement in the cost of credit to SMEs: for example, businesses responding to the Federation of Small Businesses (FSB) survey reported that, on average, their cost of credit fell between mid-2012 and 2013 Q2 and continued to edge lower in Q3 (**Chart 1.10**). Those surveys also suggest that the availability of credit has been improving over the past year or so, albeit from a low base.

The outlook for corporate lending also depends on developments in the commercial real estate (CRE) sector, which makes up around a third of lending to non-financial businesses. Credit availability to the CRE sector, according to the CCS, has been improving over the past year despite some banks gradually reducing their exposures. Respondents to the CCS also reported that the CRE sector contributed positively to PNFCs' credit demand in 2013 Q3 for the first time in three years. Consistent with improved credit supply and demand in this sector, IPD data suggest that CRE capital values haven't risen in London and in most regional markets.

1.4 Household credit conditions and the housing market

Household credit conditions

Household borrowing and spending decisions depend in part on the costs of servicing existing loans. Effective interest rates on existing loans and credit facilities fell or were little changed in Q3, and remain lower than before the crisis (**Table 1.B**).

Rates on new household lending have fallen markedly since mid-2012. Rates on both unsecured and secured loans to households continued to fall or were broadly stable in recent months (**Chart 1.11**). Lenders responding to the CCS expect further compression in most household lending spreads in Q4.

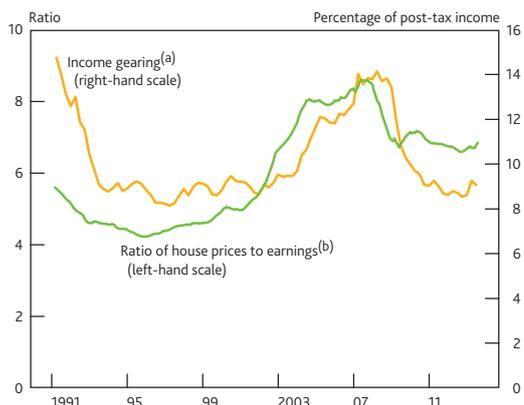
Since mid-2012, falls in unsecured loan rates have been accompanied by improvements in credit availability and, according to the CCS, a rise in demand for unsecured credit. These improvements have fed through to a strong pickup in unsecured lending, including car finance, over the past year.

According to the CCS, the availability of secured credit also increased in Q3, with significant increases in the demand for lending for house purchase and remortgaging. The number of approvals for house purchase rose to around 67,000 in September, a faster rise than expected by the MPC, with approvals for remortgaging also picking up (**Table 1** on page 20).

Housing market

Alongside higher mortgage approvals, other housing market activity indicators have continued to pick up since the *August Report*. Property transactions, which have been supported by a fairly steady number of cash buyers since the start of the crisis, continued to rise (**Table 1** on page 20).

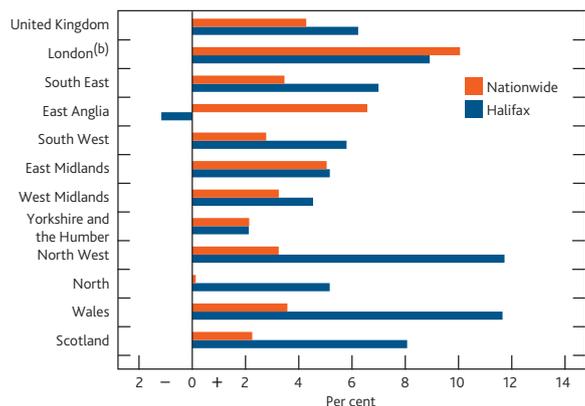
Chart 1.13 Indicators of housing affordability



Sources: Bank of England, Halifax, Nationwide, ONS and Bank calculations.

- (a) National Accounts measure of household interest payments (which excludes the impact of Mortgage Interest Relief at Source) plus regular repayments of mortgage principal, as a percentage of nominal household post-tax income. Interest payments and income have been adjusted to take into account the effects of financial intermediation services indirectly measured. Repayments data are non seasonally adjusted. Excludes payments associated with endowment policies. Latest observation is 2013 Q2.
- (b) Average of the Halifax and Nationwide measures of average house prices divided by average annual earnings, based on average weekly earnings from 2000 onwards and average earnings index prior to that. Data are three-month moving averages. Latest observation is for the three months to August 2013.

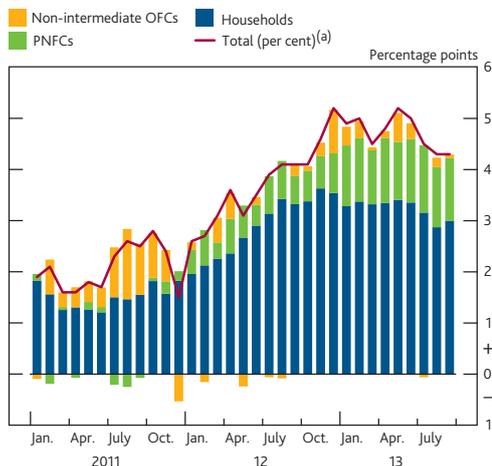
Chart 1.14 Regional house price inflation in the four quarters to 2013 Q3^(a)



Sources: Halifax and Nationwide.

- (a) Due to significant volatility in the series, Northern Ireland has been excluded. According to Nationwide, house prices in Northern Ireland rose by 1.0% in the four quarters to 2013 Q3. The Halifax measure suggests that house prices fell by 25.0% during that period.
- (b) Greater London for Halifax measure. London for Nationwide measure.

Chart 1.15 Contributions to twelve-month broad money growth



- (a) Growth in M4 excluding intermediate other financial corporations (OFCs). May not equal the sum of its components due to the method of calculation.

And estate agents expect stronger growth in sales in the next three months. There are some signs that the supply of properties for sale has picked up more slowly than demand. For example, the Royal Institution of Chartered Surveyors (RICS) survey suggests that growth in new buyer enquiries has outstripped that in new instructions to sell. Consistent with that, the RICS measure of the ratio of sales to stocks, an indicator of housing market tightness, rose a little.

Alongside the pickup in housing market activity, house prices have continued to rise. The Halifax and Nationwide house price indices, for example, rose by 8.1% and 5.8% respectively in the year to October. Several forward-looking indicators, such as the RICS price expectations measure, point to further increases over the next few months (Chart 1.12). National average house prices have risen slightly relative to earnings (Chart 1.13), suggesting a reduction in affordability. This ratio nevertheless remains well below the levels reached in 2007. And, reflecting the current low level of interest rates, income gearing (interest payments and regular repayments of mortgage principal as a proportion of disposable income) remains relatively low (Chart 1.13).

As discussed in the box on pages 20–21, the evolution of the housing market affects the level of domestic demand and hence the outlook for inflation in the medium term. To some extent, the effect of the pickup in the housing market depends on the degree to which it is confined to particular regions. House price inflation has been higher in regions, such as London, where house prices are above the national average. Most measures of regional house prices, however, suggest that house prices have also, to varying degrees, risen in other regions (Chart 1.14).

1.5 Money

Four-quarter broad money growth, at 4.3% in 2013 Q3 (Chart 1.15), remains well below pre-recession levels, but has been stronger than four-quarter growth in nominal GDP, which stood at 3.5% in Q2.

The bulk of aggregate money growth was accounted for by households (Chart 1.15), particularly flows into sight deposits. In principle, this could signal strong future spending growth. Flows into sight deposits may, however, simply reflect a low opportunity cost of holding these, given low deposit rates.

PNFC money has increasingly contributed to aggregate money growth (Chart 1.15). It is possible that corporates have been accumulating larger cash balances than in the past because they are concerned about the future availability of external funding. Some of these cash balances could be used to finance future spending, as companies become more confident about the economic outlook (Section 2).

Monetary policy since the August Report

The MPC's central projection in the *August Report*, under the assumptions that Bank Rate remained at 0.5% and that the stock of purchased assets financed by the issuance of central bank reserves remained at £375 billion, was for a sustained expansion in both demand and supply. Under the same assumptions, the MPC judged that CPI inflation was likely to remain close to 3% in the near term, before falling back to around the 2% target over the forecast period. In the *August Report*, the MPC announced its intention neither to raise Bank Rate from its current rate of 0.5%, nor to reduce the stock of asset purchases, at least until the LFS headline unemployment rate had fallen to 7%, subject to it not entailing material risks to price stability or financial stability.

There had been some notable developments in the month preceding the MPC's meeting on 3–4 September. For example, domestically, there had been increased signs that a recovery was taking hold. The GDP data for the second quarter had been revised up, and survey indicators of activity had been upbeat. That had been accompanied by higher sterling market interest rates. The Committee judged that the data represented upside news relative to the growth profile described in the *August Inflation Report*.

The LFS unemployment rate had remained at 7.8%, some way above the 7% threshold. All members agreed that none of the conditions that would override the Committee's guidance had been breached. Against the backdrop of indicators of stronger near-term growth than seemed likely a month earlier, there were tentative signs that the degree of spare capacity within companies might be beginning to diminish. But it remained too early to assess how likely it was that effective supply capacity would increase as demand recovered, thus moderating any additional inflationary impetus resulting from that extra demand. If sustained, the appreciation of sterling meant that CPI inflation was marginally less likely than a month ago to be above 2.5% in 18–24 months' time. There had been little news regarding medium-term inflation expectations and therefore little reason to shift the Committee's judgement that medium-term inflation expectations remained sufficiently anchored. The FPC had not met since the MPC's policy guidance had been announced, but were expected to comment on the financial stability consequences of the current monetary policy stance before the MPC's next meeting.

Against that backdrop, the MPC voted unanimously to maintain Bank Rate at 0.5% and maintain the stock of asset purchases at £375 billion.

At the time of its meeting on 8–9 October, the MPC judged that the news during the month had continued to suggest a

recovery in activity in the United Kingdom. Monetary stimulus remained considerable and confidence appeared to be rising. On their own, business surveys were pointing to an increase in output of around 2% over the second half of the year, although the Bank staff's latest projection was somewhat weaker. The revival of the housing market was likely to provide a fillip to both dwellings investment and consumer spending. Recent increases in market interest rates had been partially reversed and credit availability had continued to improve. Sterling had appreciated a little on the month, which would reduce the extent to which import prices were squeezing households' real incomes, and therefore the boost to consumption. But set against that, the exchange rate appreciation would support import growth and dampen export growth in the medium term.

The headline LFS unemployment rate had fallen but, at 7.7% in the three months to July, remained well above the Committee's 7% threshold. The recent reduction in the unemployment rate indicated that the slack in the economy was, as anticipated, diminishing as activity picked up. If anything, that was occurring a little faster than envisaged at the time of the *August Report*, although it remained unusually difficult to gauge the degree of slack in the economy.

All Committee members agreed that none of the conditions that would override the policy guidance provided in August had been breached. Sterling had appreciated a little on the month and there had been little news on domestically generated inflationary pressures. There had also been little news regarding medium-term inflation expectations. The FPC had agreed at its meeting on 18 September that the financial stability knockout had not been breached.

Against that backdrop, the MPC voted unanimously to maintain Bank Rate at 0.5% and to maintain the stock of asset purchases at £375 billion.

At its meeting on 6–7 November, the MPC voted to maintain Bank Rate at 0.5%. The Committee also voted to maintain the stock of asset purchases at £375 billion. The Committee reached its decisions in the context of the policy guidance announced in the *August Report*.

2 Demand

The UK recovery gathered pace in 2013 H1, as the headwinds to domestic demand from credit conditions and uncertainty eased. World demand growth also increased, and by more than was anticipated, largely reflecting a pickup in activity in the euro area. UK GDP is estimated to have risen by 0.8% in Q3, with indicators of household spending remaining firm.

Table 2.A Monitoring the MPC's key judgements

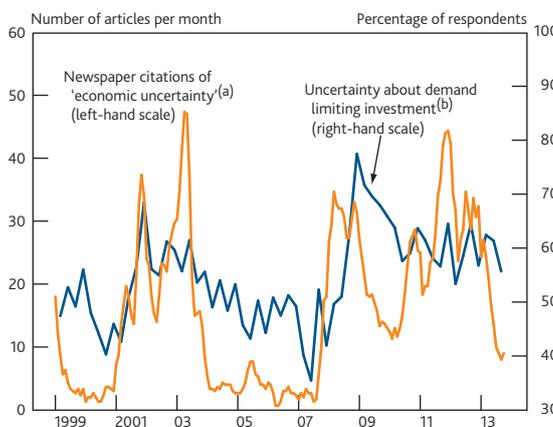
Developments anticipated if August Report judgements had evolved as expected	Developments since August
<p>Consumer spending</p> <ul style="list-style-type: none"> Quarterly consumer spending growth at around 0.5% in 2013 H2 and early 2014. 	<p>A little stronger than expected</p> <ul style="list-style-type: none"> Growth now expected to be around or a little above 0.5%.
<p>Investment</p> <ul style="list-style-type: none"> Positive, albeit relatively subdued, business investment growth. 	<p>Stronger than expected</p> <ul style="list-style-type: none"> Near-term outlook for business investment growth revised up. Upside news in housing investment.
<p>Advanced economies</p> <ul style="list-style-type: none"> Quarterly euro-area GDP growth gently rising in 2013 H2 and early 2014; improvements in confidence. US GDP growth rising to around 0.5% a quarter in 2013 H2. 	<p>A little stronger than expected</p> <ul style="list-style-type: none"> Near-term outlook stronger than anticipated, but medium-term outlook broadly unchanged. Broadly on track.
<p>Rest of world</p> <ul style="list-style-type: none"> Four-quarter GDP growth of around 7.5% in China, and around 5% in emerging economies more broadly. 	<p>A little weaker than expected</p> <ul style="list-style-type: none"> Outlook in some emerging economies weaker than previously expected.

UK output was broadly flat in 2011 and 2012, but growth has since picked up to around its historical average rate. The ONS provisionally estimated that GDP rose by 0.8% in Q3, with business surveys pointing to continued momentum in Q4 (Section 3). Nominal spending growth, however, remained subdued in H1 (**Table 2.B**), as stronger real activity was offset by lower growth in the GDP deflator.

World demand growth has also increased since the start of 2013, and by more than was anticipated at the time of the August Report. That primarily reflected slightly stronger growth in the euro area than expected. The outlook for some emerging economies has worsened over the past three months (**Table 2.A**).

The increase in UK growth since the start of 2013 reflects several interrelated developments. Over the past year, credit conditions have eased (Section 1), consumer and business confidence have risen and uncertainty has faded (**Chart 2.1**). Those developments are likely, in part, to reflect domestic factors, including the highly stimulative stance of monetary policy, the Funding for Lending Scheme, and steps taken by regulators to strengthen the resilience of the UK financial system. International factors — in particular a reduction in the likelihood of disorderly adjustment in the euro area — are also likely to have contributed to improved sentiment and credit conditions. That is consistent with the synchronisation of the increases in UK and euro-area growth.

Chart 2.1 Measures of economic uncertainty



Sources: CBI, CBI/PwC, Nexis, ONS, Times Newspapers and Bank calculations.

(a) Number of articles in the print editions of the *Financial Times*, *The Independent* and *The Times* that mention 'economic uncertainty'. Data show a three-month moving average. Latest observation is October 2013.

(b) Percentages of respondents to the CBI manufacturing, financial services and consumer/business/professional services surveys reporting that uncertainty about demand is likely to limit investment over the next twelve months, weighted by shares in real business investment. Data are quarterly. Latest observation is 2013 Q3.

2.1 Domestic demand

Household spending

Household spending has risen modestly over the past two years. That was almost entirely accounted for by spending on durable and semi-durable goods, in particular cars: spending on vehicles and spare parts accounts for around one third of the 3% increase in consumption since 2011 Q3.

Consumption growth slowed a little in Q2, to 0.3% (**Table 2.B**) — weaker than anticipated at the time of the August Report.

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

Percentage changes on a quarter earlier	Averages				2013	
	1998–2007	2008–09	2010	2011–12	Q1	Q2
Household consumption ^(b)	0.9	-0.7	0.3	0.1	0.5	0.3
Private sector investment	0.9	-4.6	2.0	-0.3	2.3	-1.3
<i>of which, business investment</i>	0.7	-1.6	1.0	-0.1	1.7	-2.7
<i>of which, private sector housing investment</i>	1.1	-8.8	6.2	-0.4	3.8	1.1
Private sector final domestic demand	0.9	-1.3	0.4	0.0	0.9	-0.1
Government consumption and investment	0.8	0.7	-0.2	0.0	-1.2	1.5
Final domestic demand	0.9	-0.8	0.2	0.0	0.4	0.3
Change in inventories ^{(c)(d)}	0.0	-0.2	0.3	0.0	-1.0	0.8
Alignment adjustment ^(d)	0.0	0.0	0.0	0.0	0.6	-0.6
Domestic demand	0.9	-1.1	0.5	0.1	0.0	0.6
'Economic' exports ^(e)	1.1	-0.7	1.8	0.3	0.1	3.0
'Economic' imports ^(e)	1.4	-1.4	2.1	0.1	-0.8	2.9
Net trade^{(d)(e)}	-0.1	0.2	-0.1	0.0	0.3	0.0
Real GDP at market prices	0.8	-0.9	0.4	0.1	0.4	0.7
Memo: nominal GDP at market prices	1.3	-0.1	1.1	0.6	1.1	0.4

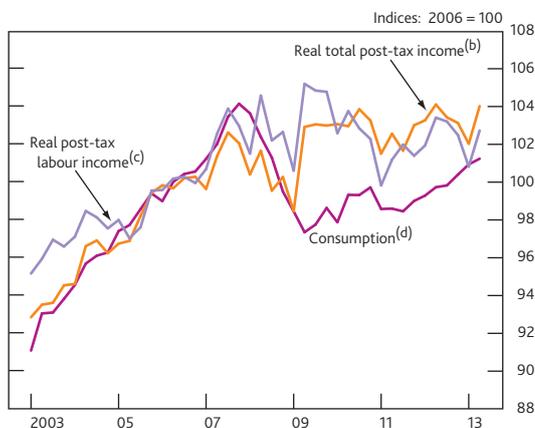
(a) Chained-volume measures.

(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. Official MTIC-adjusted data are not available for exports, so the headline exports data have been adjusted by Bank staff for MTIC fraud by an amount equal to the ONS import adjustment.

Chart 2.2 Household consumption and real income^(a)

(a) Includes non-profit institutions serving households.

(b) Total available household resources, deflated by the consumer expenditure deflator.

(c) 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.

(d) Chained-volume measure.

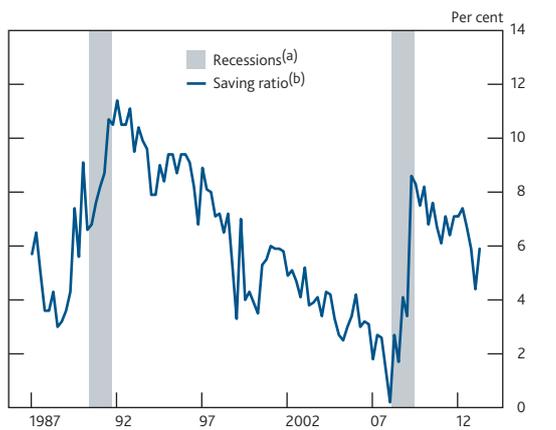
But some of that slowing is likely to prove erratic. Spending on food, drink and tobacco fell sharply in Q2, reducing growth by 0.3 percentage points. That fall looks unusual compared with retail sales data and is expected to have reversed in Q3. With other indicators suggesting that spending rose modestly in the past three months, overall consumption growth in Q3 is expected to have rebounded to a little above 0.5%.

The rise in consumer spending since 2011 Q3 has occurred despite little increase in household real income during that period (**Chart 2.2**). Instead, higher consumption, especially in recent quarters, has been associated with falls in the household saving ratio (**Chart 2.3**). Following the financial crisis, tight credit conditions, heightened uncertainty, and lower expected income encouraged households to save a greater proportion of their income. So the recent reductions in the saving ratio suggest the downward pressure on spending from these factors may be waning.

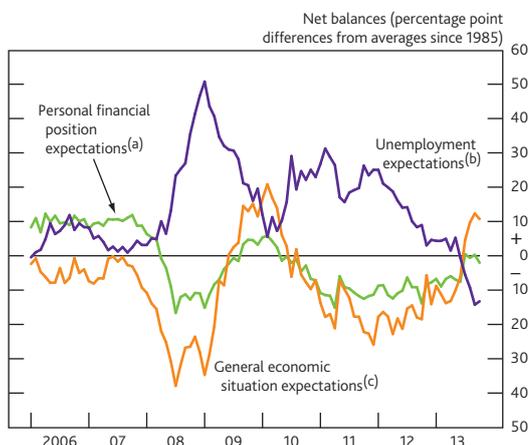
Surveys suggest that households' income expectations rose and they became less uncertain about the outlook during the past year. According to the GfK survey, households' expectations about their own financial position improved gradually during 2012 and 2013 Q1, and have risen markedly since mid-2013. The net balance of households expecting unemployment to rise over the next year mirrored that (**Chart 2.4**). Nonetheless, results from the 2013 NMG Consulting survey suggest that many households are still quite pessimistic about the outlook: around one fifth of respondents think it quite likely that their income will fall sharply over the next year, and a third think there is a small chance that will happen.⁽¹⁾ In the 2012 survey, almost two thirds of households thought there was at least some chance that their income would fall sharply in the next year.

There are also signs that looser credit conditions have stimulated consumption. For example, the net flow of unsecured lending to households has risen to around £0.6 billion per month since January, from a monthly average of close to zero between 2009 and 2012. That is likely to reflect substantial falls in personal loan rates over the past year (Section 1), as well as an increase in households' appetite to borrow as sentiment improved. In addition, the proportion of households reporting in the NMG Consulting survey that they had put off spending due to concerns about credit remains much higher than before the financial crisis. Increased spending on cars is also consistent with households responding to improved credit conditions, as car purchases are often financed through loans.

(1) The survey was conducted by NMG Consulting on behalf of the Bank between 12 and 30 September. The survey, which was undertaken online, covered around 6,000 British households and was designed and weighted to be a representative sample. A detailed analysis of the survey results will be published in the forthcoming 2013 Q4 *Quarterly Bulletin*.

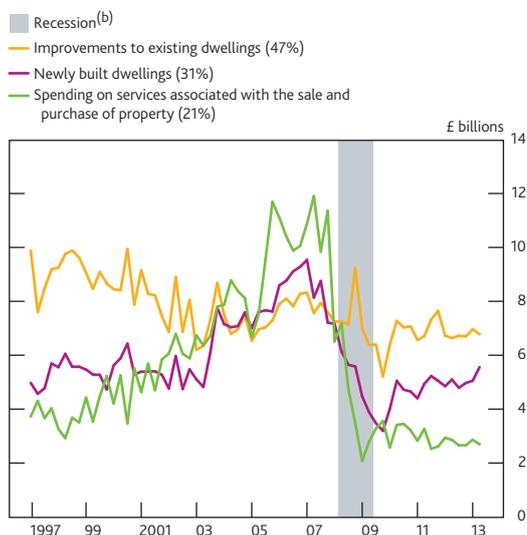
Chart 2.3 Household saving ratio

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

Chart 2.4 Survey measures of household expectations

Source: Research carried out by GfK NOP on behalf of the European Commission.

(a) Net balance of respondents reporting that they expect their personal financial position to get better over the next twelve months.
 (b) Net balance of respondents reporting that they expect the number of unemployed people to rise over the next twelve months.
 (c) Net balance of respondents reporting that they expect the general economic situation in the United Kingdom to get better over the next twelve months.

Chart 2.5 Private sector housing investment^(a)

(a) Chained-volume measures. Figures in parentheses are shares in total housing investment in 2010. Shares do not sum to 100 due to rounding.
 (b) Recessions are defined as in Chart 2.3.

The near-term outlook for household spending is a little stronger than anticipated at the time of the *August Report*, with growth now expected to average around 0.5% or a little more per quarter in early 2014 (Section 5). The drag from credit conditions and uncertainty appears to be waning more quickly than expected three months ago. And, as explained in the box on pages 20–21, the improving housing market is expected to provide an additional fillip to household spending. Nevertheless, it is likely that some households have not yet fully repaired their balance sheets in the wake of the crisis: in the 2013 NMG Consulting survey around 30% of households reported that concerns about debt were causing them to cut spending, only a little lower than the 35% or so who answered in this way in the 2012 survey. That continuing balance sheet adjustment, coupled with muted growth in real income is likely to restrain the pace of consumption growth in coming years to below historical rates.

Housing investment

Private sector housing investment — comprising new dwellings, improvements to existing dwellings and spending on services associated with property transactions — accounts for around one third of total private sector investment. Growth has picked up since the end of 2012 (Table 2.B), largely accounted for by newly built dwellings (Chart 2.5). That strengthening in housing investment is likely to have reflected an easing in credit conditions and a reduction in uncertainty. In addition, the Government's Help to Buy equity scheme, which provides equity loans for the purchase of new-build properties, is likely to have boosted house building and so investment in new dwellings.

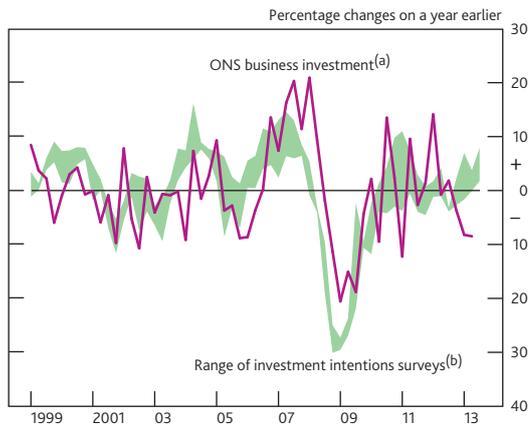
These factors should continue to support a revival in housing market activity in coming quarters. The Government's Help to Buy mortgage guarantee scheme — which aims to increase the availability of mortgages for buyers with relatively small deposits by providing lenders with partial insurance — is also likely to boost activity. As explained in the box on pages 20–21, further increases in housing market activity are likely to raise new dwellings investment; that would be consistent with the sharp pickup in housing starts over the past year. Increases in the number of property transactions are also likely to be associated with higher spending on services associated with property purchases. Consequently, the near-term outlook for housing investment is stronger than anticipated three months ago.

Business spending

Business investment is reported by the ONS to have contracted during Q2 (Table 2.B), a weaker outturn than expected at the time of the *August Report*. But methodological changes implemented in the 2013 *Blue Book* have made the data more volatile, and that weakening is not judged to contain much news.⁽¹⁾ The official data contrast with

(1) For more details on these changes, see the box on page 20 of the August 2013 *Report*.

Chart 2.6 Business investment and surveys of investment intentions



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

(a) Chained-volume measure. Data are to 2013 Q2.

(b) Data are to 2013 Q3. Includes survey measures of investment intentions from the Bank's Agents, BCC and CBI, scaled to match the mean and variance of four-quarter business investment growth since 1999. Measures weight together sectoral surveys using shares in real business investment. Bank's Agents' data cover the manufacturing and services sectors. BCC data are non seasonally adjusted and cover the non-services and services sectors. CBI data cover the manufacturing, distribution, financial services and consumer/business services sectors.

surveys of investment intentions, which suggest that investment recovered a little in the year to Q2 (**Chart 2.6**). These indicators picked up further in Q3.

The headwinds to investment growth from credit constraints have eased over the past year, as the cost and availability of bank credit and of capital market finance have improved (Section 1). And the recovery in demand growth may have increased the internal funds available to some companies for investment: analysis by Bank staff suggests that investment by many smaller, privately owned companies tends to be sensitive to variations in their internal funds — that is, their cash flow after operating expenses have been paid.

A recent survey by the Bank's Agents suggests that the drag on investment growth from uncertainty has lessened over the past year. The net balance of businesses reporting in the survey that uncertainty was discouraging investment was around 5%; in a similar survey conducted a year ago, it had been close to 50%. Over coming quarters, lower uncertainty may prompt larger companies that have built up substantial financial surpluses to begin spending those funds.

Companies' investment decisions also depend on their capacity utilisation and demand expectations. These factors may cause some businesses to invest more: surveys indicate that spare capacity within companies has narrowed since the end of 2012, while expectations of near-term growth have risen (Section 3). But given the persistent weakness in demand since the recession many other businesses are likely still to have ample spare capacity. And some may want to wait for more signs that the recovery is entrenched before increasing investment. On balance, business investment is expected to rise by around, or a little above, 2% per quarter in 2014 H1.

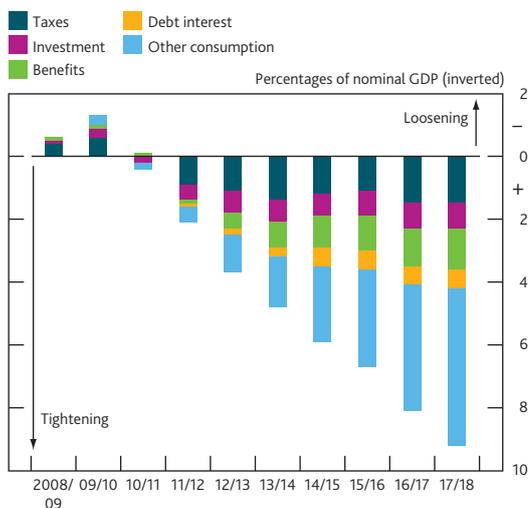
Business spending on stocks provided a substantial boost to growth in 2013 Q2 (**Table 2.B**). It is likely that some companies had to rebuild inventories, after running them down in Q1 when demand was stronger than expected. Indicators of stock adequacy in the CBI surveys were close to their long-run averages in Q3, suggesting that stockbuilding is unlikely to have provided a further significant boost to demand.

Government spending

The fiscal consolidation is set to continue. ONS data show that public sector net borrowing averaged 7.0% of nominal GDP in the year to 2013 Q2, down from 7.4% in 2012/13.⁽¹⁾

Estimates by the Institute for Fiscal Studies suggest that around 40% of the fiscal consolidation relative to the March 2008 *Budget* has so far taken place (**Chart 2.7**). The

Chart 2.7 Composition of the fiscal consolidation^(a)



Source: Institute for Fiscal Studies.

(a) Bars represent the planned fiscal tightening (reduction in government borrowing) relative to the March 2008 *Budget* projections, decomposed into tax increases and spending cuts, with the spending cuts further subdivided into benefit cuts, other current spending cuts and investment spending cuts. The calculations are based on all HM Treasury Budgets, Pre-Budget Reports and Autumn Statements between March 2008 and March 2013. See www.ifs.org.uk/publications/6683 for more detail.

(1) These figures exclude the temporary effects of financial interventions and the projected effect of the transfer into public sector ownership of the Royal Mail's existing pension liabilities and a share of its pension fund assets.

Macroeconomic implications of the housing market revival

Housing market activity and house prices have picked up since the start of 2013. For example, housing market transactions rose to above 90,000 in September, having averaged around 75,000 per month from 2010 to 2012. And indices of house prices have increased: the Nationwide and Halifax measures indicate that the average house price rose by around 2% in the past three months, although there was significant variation across regions. Survey indicators point to continued momentum in the housing market in the near term (Section 1).

The housing market affects the economy in various ways. It can affect the level of domestic demand and so the outlook for inflation in the medium term. And it can have implications for financial stability. Changes in the housing market will also affect the allocation of resources across companies and sectors, as well as debt levels in the economy. This box focuses on the first of these effects. The implications of recent housing market developments for financial stability will be discussed in the forthcoming November 2013 *Financial Stability Report*.

Links between the housing market and demand

A key link between the housing market and demand is housing investment (**Chart 2.5**).⁽¹⁾ Housing investment comprises investment in new dwellings, improvements to existing dwellings and spending on services associated with the sale and purchase of property — for example, fees and commission paid to lawyers and surveyors, and stamp duty. Although private sector housing investment accounts for only around 5% of GDP, it can still have substantial effects on aggregate demand: for example, the 40% fall during the 2008/09 recession accounted for about one quarter of the fall in GDP.

The revival in housing market activity is expected to raise housing investment. In part, that is because house building is likely to increase — indeed, the increase in transactions has already been associated with a rise in the number of housing starts (**Table 1**). A rise in the number of housing market transactions should also be associated with higher spending on services associated with home moves, such as conveyancing. Spending on home improvements is, however, less sensitive to changes in housing market activity: many of those who move home are likely to improve their new property; but, had they been unable to move, some might have made improvements to their existing home instead.

Past episodes of rising house prices have tended to be associated with increases in household consumption. In large part, that is because some of the factors that influence the housing market, such as credit conditions and income

Table 1 Mortgage approvals, housing transactions and house building

Thousands	Monthly averages					
	1997–	2010–	2012	2013		
	2007	11		Q1	Q2	Q3
Mortgage approvals for remortgaging	75	30	28	28	32	35
Mortgage approvals for house purchase	103	48	51	53	57	64
Housing market transactions ^(a)	119	73	78	82	85	91
Housing starts ^(b)	15.2	8.8	8.1	8.8	10.9	n.a.
Housing completions ^(c)	14.2	8.8	9.1	7.7	10.0	n.a.

Sources: Bank of England, Department for Communities and Local Government, HM Revenue and Customs (HMRC), ONS and Bank calculations.

- (a) Number of residential property transactions in the United Kingdom with a value of £40,000 or above per quarter from 2005 Q2. Prior to that date, the series has been assumed to grow in line with quarterly HMRC data on transactions in England and Wales.
- (b) Number of permanent dwellings in the United Kingdom started by private enterprises up to 2011 Q1. Data for 2011 Q2 to 2013 Q2 have been grown in line with permanent dwelling starts by private enterprises in England. Data are non seasonally adjusted.
- (c) Number of permanent dwellings in the United Kingdom completed by private enterprises up to 2012 Q4. Data for 2013 Q1 and Q2 have been grown in line with permanent dwelling completions by private enterprises in England. Data are non seasonally adjusted.

expectations, are likely to affect consumer spending too. But increased housing market activity and house prices may directly lead to higher spending in a number of ways.⁽²⁾

One reason why the housing market revival may directly boost consumption is because it increases spending on certain durable goods, such as washing machines and fridges. Bank staff estimate that households are two to three times more likely to purchase white goods when they move home.⁽³⁾ The effect on consumption through this channel is, however, likely to be limited, since these goods account for only a small proportion of total household spending; even a 10% increase in purchases of white goods would boost consumption growth by less than 1 percentage point. And the boost would be even smaller if households funded these purchases in part by spending less on other items.

The housing market might have an additional effect on spending by existing homeowners because a rise in house prices increases the value of housing collateral, thus allowing some of them to access credit on better terms. For example, higher house prices should enable some homeowners to remortgage at a lower loan to value ratio and so reduce their mortgage rate. Alternatively, these homeowners could remortgage and increase the amount borrowed. At present, remortgaging activity remains low relative to its pre-recession levels (**Table 1**). Higher house prices could also lead to higher spending by some existing homeowners if the increase in the value of their housing collateral means that they feel able to reduce their precautionary savings.

Changes in house prices may also lead to changes in consumer spending because they affect households' lifetime resources. The effect would differ depending on where households are in their life cycle. For those who expect to trade down, or sell up

completely, higher house prices translate into an increase in wealth, and so are likely to encourage higher spending. But for first-time buyers and those who expect to trade up, higher house prices are more likely to be associated with lower spending — for example, if they have to save more for a deposit or have to take out a larger mortgage and so have higher debt-servicing costs. Studies using data on individual households, however, do not provide convincing evidence that house prices affect consumption through such effects on household resources.⁽⁴⁾

Overall, the recent increases in housing market activity and house prices are expected to be associated with a somewhat stronger outlook for consumer spending than was expected three months ago. That largely reflects the fact that both the housing market and consumption are affected by credit conditions, sentiment and income expectations, and these appear to be improving more rapidly than anticipated at the time of the *August Report*.

The revival in the housing market could also affect the level of spending in the economy — and potential supply — through its effects on small and medium-sized businesses. As the owners of some smaller companies use their homes as collateral against business loans, higher house prices may increase the value of their collateral, and therefore allow them to access credit on better terms. As well as encouraging investment by existing businesses, collateral effects could also increase the flow of finance to newer companies.

Other macroeconomic implications

The increases in housing market activity and house prices could have broader macroeconomic effects than those discussed above. For example, rises in house prices will affect banks' balance sheets: mortgage debt accounts for three quarters of the stock of UK sterling loans to the domestic non-financial private sector. They could also affect the allocation of resources across companies and sectors, as well as debt levels in the economy. Such developments have implications for both price and financial stability.

The MPC will monitor closely these broader implications, in part because a period of financial instability could endanger medium-term price stability too. But potential risks to financial stability emanating from the housing market would be addressed in the first instance by the Financial Policy Committee, working with the Financial Conduct Authority and the Prudential Regulation Authority. These risks will be discussed in the forthcoming November 2013 *Financial Stability Report*.

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- (1) The links between housing market activity and dwellings investment are also discussed in the box on page 20 of the February 2012 *Report*.
 - (2) The common factors and causal links that lie behind the association between house prices and consumer spending are discussed in detail in Benito, A, Thompson, J, Waldron, M and Wood, R (2006), 'House prices and consumer spending', *Bank of England Quarterly Bulletin*, Summer, pages 142–54.
 - (3) Benito, A and Wood, R (2005), 'How important is housing market activity for durables spending?', *Bank of England Quarterly Bulletin*, Summer, pages 153–59.
 - (4) See, for example, Attanasio, O, Blow, L, Hamilton, R and Leicester, A (2009), 'Booms and busts: consumption, house prices and expectations', *Economica*, Vol. 76, Issue 301, pages 20–50.

amount of tightening in any year does not map directly into its effect on GDP growth. In part, that is because different types of consolidation — for example, lowering benefits or cutting government spending — will affect demand differently. In addition, the effects of these measures are likely to take time to work through, with different lags for each type of measure. The direct drag on GDP growth from the consolidation is expected to persist throughout 2013/14 — although it is uncertain what would have happened in its absence.

2.2 External demand and UK trade

World demand growth has increased since the start of 2013, primarily reflecting slightly stronger growth than expected in the euro area. In part reflecting the rise in euro-area activity, UK-weighted world trade growth picked up in Q2. The outlook for world demand is similar to that anticipated at the time of the *August Report*. But, within that, near-term growth in the euro area is expected to be a little stronger than previously projected, while prospects for some emerging economies have deteriorated (Table 2.A).

Table 2.C GDP in selected countries and regions^(a)

	Percentage changes on a quarter earlier, annualised ^(b)					
	Averages	2012		2013		
	1998–2007	H1	H2	Q1	Q2	Q3
United Kingdom	3.1	-1.0	0.6	1.6	2.8	3.2
Euro area (40%)	2.3	-0.8	-1.3	-0.9	1.1	n.a.
United States (17%)	3.0	2.5	1.5	1.1	2.5	n.a.
Japan (2%)	1.1	1.9	-1.2	4.1	3.8	n.a.
China (3%)	10.0	7.9	7.7	7.7	7.5	7.8
India (1%)	9.5	4.3	3.3	3.0	2.4	n.a.
Brazil (1%)	3.0	0.6	2.3	2.6	6.0	n.a.
UK-weighted world GDP ^(c)	3.0	1.5	1.0	1.2	2.4	n.a.

Sources: Eurostat, IMF *World Economic Outlook (WEO)* October 2013, Indian Central Statistical Organisation, Instituto Brasileiro de Geografia e Estatística, Japanese Cabinet Office, National Bureau of Statistics of China, OECD, ONS, Thomson Reuters Datastream, US Bureau of Economic Analysis and Bank calculations.

- (a) Real GDP measures. Figures in parentheses are shares in UK goods and services exports in 2012 from the 2013 *Pink Book*.
 (b) Chinese and Indian data are four-quarter growth, because data on quarterly Chinese growth are only available from 2010 Q4, and seasonally adjusted Indian GDP data are not available. The earliest observation for China is 2000 Q1 and for India is 2005 Q2.
 (c) Constructed using data for the real GDP growth rates of 143 countries weighted according to their shares in UK exports. The observation for 2013 Q2 is an estimate: for those countries where national accounts data for 2013 Q2 are not yet available, data are assumed to be consistent with projections in the IMF *WEO* October 2013.

Table 2.D Euro-area and US household and business interest rates and survey indicators of confidence

	Averages ^(a)						
	2003–07	2012		2013			Oct.
		H1	H2	Q1	Q2	Q3	
Euro area							
<i>Confidence</i> ^(b)							
Consumer	-12	-20	-25	-24	-21	-16	-15
Business	2	-8	-15	-12	-13	-9	-6
<i>Interest rates on bank loans</i>							
New mortgage loans ^(c)	4.23	3.60	3.23	3.12	3.05	3.03	n.a.
New business loans ^(d)	3.93	3.06	2.71	2.63	2.66	2.63	n.a.
United States							
<i>Confidence</i>							
Consumer ^(e)	89	76	77	77	82	82	73
Business ^(f)	56	55	44	54	62	54	n.a.
<i>Interest rates on bank loans</i>							
New mortgage loans ^(g)	6.06	3.86	3.46	3.50	3.69	4.44	4.19
Business loans ^(h)	5.02	2.40	2.25	2.28	2.20	2.15	n.a.

Sources: Board of Governors of the Federal Reserve System, ECB, European Commission, Primary Mortgage Market Survey® data provided by Freddie Mac, The Conference Board and Thomson Reuters Datastream.

- (a) Based on monthly, non seasonally adjusted data unless stated otherwise.
 (b) European Commission seasonally adjusted measures. The business confidence indicator is the weighted average of the industrial confidence indicator, the services confidence indicator, the retail confidence indicator and the construction confidence indicator, based on the weights of those indicators in the economic sentiment indicator.
 (c) New loans to households for house purchase, excluding revolving loans and overdrafts, convenience and extended credit card debt.
 (d) New loans to non-financial companies, excluding revolving loans and overdrafts, convenience and extended credit card debt.
 (e) University of Michigan consumer sentiment index.
 (f) The Conference Board measure of CEO confidence. Data are quarterly.
 (g) Contract rate on 30-year fixed-rate conventional home mortgage commitments.
 (h) Weighted average effective loan rate on all commercial and industrial loans made by all commercial banks. Data are quarterly.

The euro area

Euro-area GDP increased by 0.3% in Q2, having contracted slightly in the previous quarter (Table 2.C). Part of that pickup reflected a rebound in German GDP after it was depressed by cold weather in Q1. Indicators such as business surveys and industrial production data suggest that euro-area output rose further in Q3, albeit by less than in Q2. The return to growth is likely to have been supported by increased consumer and business confidence, as the likelihood of disorderly adjustment in the euro area has receded. Spending may have been boosted by an easing in credit conditions too: for example, average interest rates on new mortgages and business loans have fallen by around 0.5 percentage points since the first half of 2012 (Table 2.D). While credit conditions have improved across the euro area, they remain tighter in periphery countries.

The adjustments needed to raise competitiveness and reduce indebtedness in the periphery are, nevertheless, still substantial and are likely to occur slowly. As a result, euro-area growth is expected to average around a quarter of a percentage point in 2013 H2 and 2014 H1, and the medium-term outlook remains fragile.

The United States

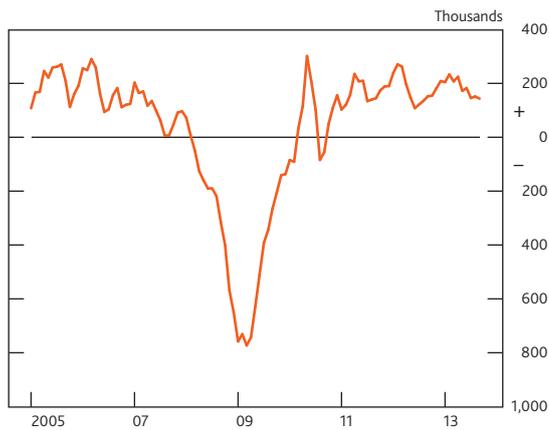
US GDP grew by 0.6% in 2013 Q2 (Table 2.C), stronger than in the previous two quarters. But there are signs that the recovery has moderated recently. For example, the pace of employment growth has eased in the past six months (Chart 2.8). In addition, interest rates on new mortgage lending rose by close to 1 percentage point over Q2 and Q3 (Table 2.D); possibly as a result of that tightening in credit conditions, activity in the housing market has softened. Reflecting those developments, the FOMC has maintained the pace of its asset purchases (Section 1).

The near-term outlook is little changed from three months ago. Although the temporary government shutdown will have reduced government output in Q4, that is likely to result in only a small reduction in GDP. There is, however, a risk that the political uncertainty, if it re-escalates, damages consumer and business confidence, so reducing domestic spending.

Rest of the world

Japanese GDP growth was much stronger in 2013 H1 than in 2012 H2 (Table 2.C), largely reflecting a pickup in consumption growth and a larger contribution from net trade. And output indicators suggest that growth remained robust in Q3. That strength is likely to have been associated with recent fiscal stimulus and reforms, alongside the monetary stimulus launched in April 2013.⁽¹⁾ The announcement of an increase in the consumption tax planned for April 2014 could encourage

(1) For more details, see the box on page 10 of the May 2013 Report.

Chart 2.8 Monthly changes in US employment^(a)

Source: Bureau of Labor Statistics.

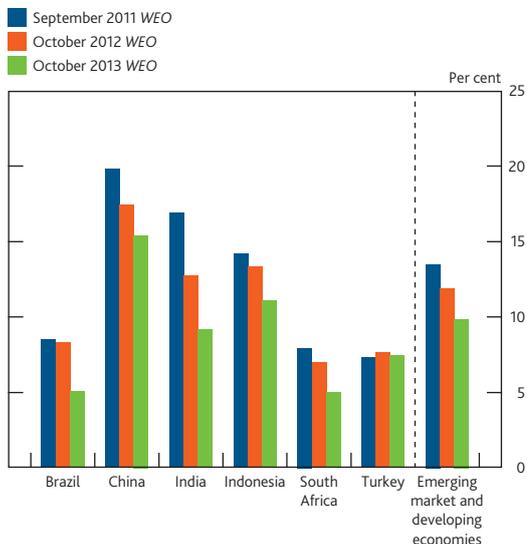
(a) Total non-farm payroll employment. Three-month moving average.

Table 2.E Summary statistics for selected emerging economies

	Brazil	India	Indonesia	South Africa	Turkey
Current account in 2013 ^(a) (percentage of nominal GDP)	-3.4	-4.4	-3.4	-6.1	-7.4
Consumer price inflation in 2013 ^(a) (per cent)	6.3	10.9	7.3	5.9	6.6
Share in UK exports ^(b) (per cent)	0.8	1.4	0.2	1.0	1.0

Sources: IMF WEO October 2013 and ONS.

(a) Projections for 2013 from the IMF WEO October 2013.

(b) Shares in UK goods and services exports in 2012 from the 2013 *Pink Book*.**Chart 2.9** Successive IMF projections for growth over 2013–14 in selected emerging economies^(a)

Source: IMF WEOs.

(a) Growth over 2013–14 is calculated by compounding the growth rates for 2013 and 2014.

some households to bring forward spending and boost growth temporarily, but growth would then be expected to weaken in the latter part of 2014.

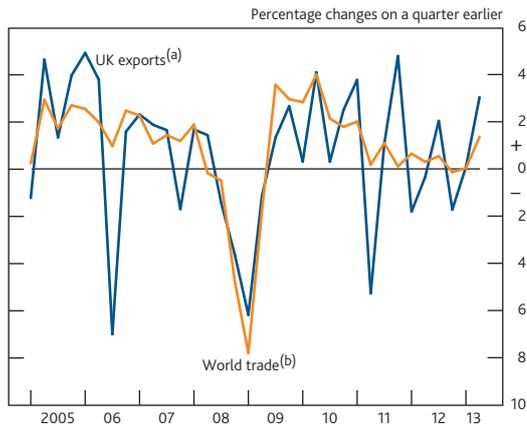
Chinese GDP rose by 7.8% in the year to Q3 (Table 2.C), broadly in line with the government's announced target. But prospects for some other emerging economies, such as India and Indonesia (Table 2.E), appear more fragile. Expectations that the FOMC might begin to reduce the pace of its asset purchases, alongside downward revisions to near-term outlooks and projections for potential growth in the longer term, were associated with large capital outflows from some emerging economies between May and September, alongside sharp falls in equity prices and their exchange rates (Section 1). Those developments were particularly pronounced in countries with significant external imbalances and elevated consumer price inflation (Table 2.E). The FOMC's announcement that it would maintain the pace of asset purchases, and policy tightening by central banks in some of the affected economies, have been associated with improved financial market conditions since early September. The tighter monetary conditions may, however, mean that growth in these countries over 2013–14 will be weaker than previously expected (Chart 2.9).

Localised disruption in the most vulnerable emerging economies would probably have limited negative effects on the UK economy through direct trade linkages, since their weight in UK exports is small (Table 2.E). And there may be some downward effect on inflation from lower commodity prices. But more widespread disruption could have a material adverse impact: in total, emerging economies account for around one quarter of UK exports; and other advanced economies would also face weaker demand for their exports, which would then lower their demand for UK exports. There could also be adverse effects through financial linkages. For example, some UK banks have operations in emerging economies and any losses sustained on those loans may affect their ability to extend credit to UK borrowers.

UK trade and the current account

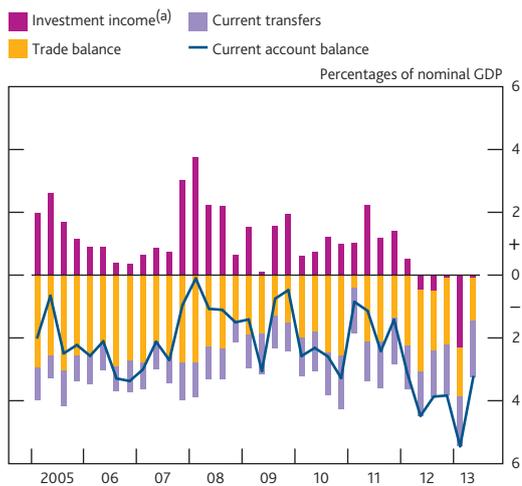
UK exports rose by just 0.4% on average each quarter between 2009 and 2013 Q1. That was well below the average growth rate in the decade prior to the recession (Table 2.B) despite the large depreciation of sterling in 2007–08. In part, that reflects the weakness of world trade growth during that period. But the share of world trade captured by UK exporters also continued to decline. That decline is largely accounted for by exports of services — in particular, business and financial services. In contrast, the export share for goods, which had been falling in the decade before the depreciation, has been broadly flat.⁽¹⁾

(1) Reasons for the United Kingdom's disappointing export performance are discussed in more detail in the box on pages 24–25 of the February 2013 *Report*.

Chart 2.10 UK-weighted world trade and UK exports

Sources: IMF WEO October 2013, OECD, ONS, Thomson Reuters Datastream and Bank calculations.

- (a) Chained-volume measure excluding the estimated impact of MTIC fraud. Official MTIC-adjusted data are not available, so the headline exports data have been adjusted by Bank staff for MTIC fraud by an amount equal to the ONS's imports adjustment.
- (b) Constructed using data for import volumes of 143 countries weighted according to their shares in UK exports. The observation for 2013 Q2 is an estimate. For those countries where national accounts data for 2013 Q2 are not yet available, data are assumed to be consistent with projections in the IMF WEO October 2013.

Chart 2.11 UK current account

(a) Includes compensation of employees.

Exports rose markedly in Q2 (**Chart 2.10**). Given the pickup in UK-weighted world trade, that left the UK export share little changed, as anticipated. More timely data show that UK goods exports fell by almost 5% in Q3. But these data are volatile and so may overestimate the extent to which UK export growth slowed. The recent appreciation of sterling (Section 1) could, however, hamper export growth in the future if sustained.

Despite stronger export growth, the trade deficit was broadly unchanged in Q2 (**Chart 2.11**), as imports also rose markedly, broadly in line with domestic demand (**Table 2.B**). More timely data indicate that the trade deficit widened substantially in Q3.

The current account remained in deficit in Q2, partly reflecting the trade deficit. But net investment income has also been in deficit since 2012 Q2, whereas it was in surplus for most of the decade before the crisis (**Chart 2.11**). That reversal was largely accounted for by a fall in the income earned by UK PNFCs resident abroad. The decline in UK PNFCs' foreign earnings appears to reflect a fall in average returns, rather than in the stock of assets. It is unclear whether those falls will persist.

3 Output and supply

Output is estimated to have risen by 0.8% in Q3 and recent indicators point to a continuation of strong growth in Q4. Both employment and productivity rose in Q2, and are likely to do so again in Q3. Reflecting unexpectedly strong labour demand, the headline LFS unemployment rate fell a touch more than anticipated to 7.7% in August.

Table 3.A Monitoring the MPC's key judgements

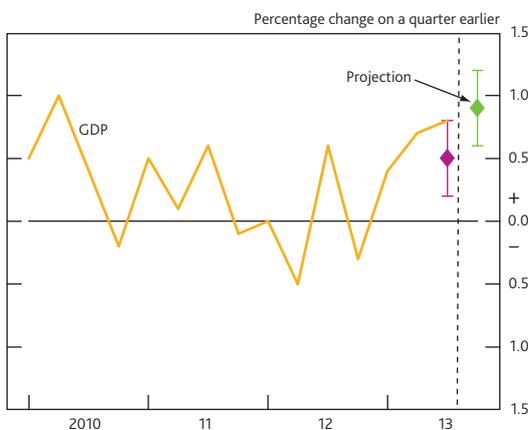
Developments anticipated if August Report judgements had evolved as expected	Developments since August
Unemployment	Lower than expected
<ul style="list-style-type: none"> Unemployment rate edging down, but likely to remain above 7.5% in 2013. 	<ul style="list-style-type: none"> Unemployment rate fallen by a little more than anticipated.
Employment	Stronger than expected
<ul style="list-style-type: none"> Whole-economy employment broadly stable in 2013 Q2, rising thereafter. 	<ul style="list-style-type: none"> Employment has picked up alongside higher-than-anticipated output; outlook revised up.
Participation rate	On track
<ul style="list-style-type: none"> The labour participation rate broadly stable. 	<ul style="list-style-type: none"> Stable as expected.
Productivity	Broadly on track
<ul style="list-style-type: none"> A steady rise in four-quarter growth in labour productivity to above 1% or so by the end of 2013. 	<ul style="list-style-type: none"> Private sector output per hour grew by 0.6% in Q2; outlook for H2 broadly in line with expectations.
Spare capacity	Less spare capacity than expected
<ul style="list-style-type: none"> Indicators of spare capacity continuing to point to a small margin of slack within companies. 	<ul style="list-style-type: none"> Indicators of spare capacity point to less slack.

A central question regarding the outlook is the extent to which productivity will recover alongside demand. In the August Report, the MPC expected the stronger demand outlook to be largely matched by an expansion in supply. Private sector output per hour grew by 0.6% in Q2, close to its pre-recession average. But unexpectedly strong output growth in Q3 (Section 3.1) was accompanied by greater rises than expected in both capacity utilisation and employment (Section 3.2). The headline unemployment rate has fallen a little more than expected at the time of the August Report (Table 3.A) (Section 3.3).

3.1 Output

Output is estimated to have risen by 0.8% in Q3. That was materially stronger than projected by Bank staff at the time of the August Report, with the outturn at the upper end of the range of expectations (Chart 3.1). A range of business surveys suggest that Q4 output growth will also be strong (Chart 3.2). The Bank staff projection for growth in Q4 is 0.9%, although the historical average error is high at 0.3 percentage points.

Chart 3.1 Bank staff projection for near-term output growth^(a)

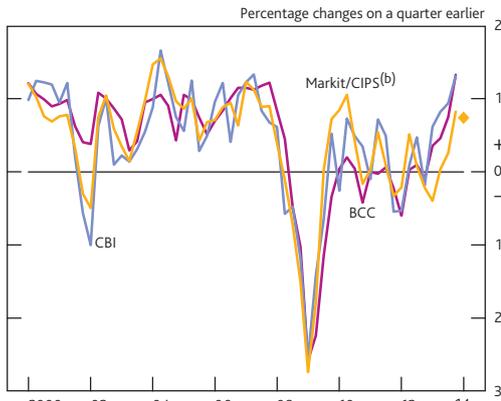


(a) Chained-volume measures. GDP is at market prices. The magenta diamond shows Bank staff's central projection for the preliminary estimate of GDP growth for Q3 at the time of the August Report. The green diamond shows the current staff projection for the preliminary estimate of GDP growth for Q4. The bands on either side of the diamonds show uncertainty around those projections based on staff estimates of the root mean squared errors of forecasts for quarterly GDP growth made since 2004. As the staff projections are for the preliminary estimates of GDP, they can differ from those used to construct the GDP fans, for example that shown in Chart 5.1, because those fans are based on the MPC's best collective judgement of the final estimate of GDP.

At a sectoral level, services output growth was solid at 0.7% in Q3, underpinned by strong growth in distribution as well as business and financial services output. It remains, however, below its pre-crisis trend rate. Manufacturing output growth of 0.9% in Q3 was strong compared both to 2012 rates (Chart 3.3) and its pre-recession average.

Construction was the fastest-growing sector, with growth of 2.5% in Q3, boosted by a sharp increase in house-building activity (Section 2). According to survey indicators, momentum in construction output growth is set to continue. Homebuilders have, however, reported marked increases in skill shortages as well as shortages of bricks and other building materials. Those shortages may pose a risk to the pace of growth in the near term, although the latter may gradually ease if materials manufacturers are able to bring mothballed capacity back into use.

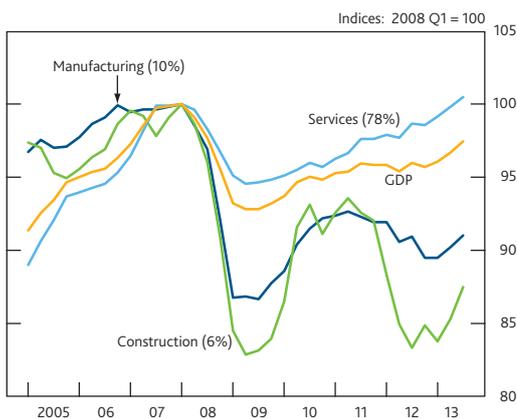
Chart 3.2 Survey indicators of expected near-term growth in manufacturing and services output^(a)



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

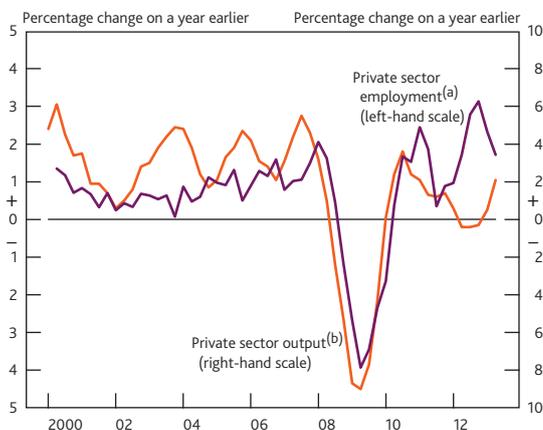
- (a) Aggregate measures of business expectations from the BCC, CBI and Markit/CIPS surveys have been produced by weighting together sectoral surveys using nominal shares in value added. The surveys used are: BCC turnover expectations (non-services and services), CBI expected volume of business (manufacturing, financial services, business/consumer services) and expected sales (distributive trades) and Markit/CIPS orders (manufacturing) and business expectations (services). The BCC data are non seasonally adjusted. The aggregate measures have been adjusted to have the same mean and variance as quarterly GDP growth over the period 1999–2013 Q3. Survey indicators have been moved forward one quarter.
- (b) The diamond shows an estimate based on CIPS indices for October.

Chart 3.3 GDP and sectoral output^(a)



- (a) Chained-volume measures. GDP is at market prices. Indices of sectoral output are at basic prices. The figures in parentheses show 2010 weights in gross value added.

Chart 3.4 Private sector output and employment



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

- (a) LFS private sector employment. Calculated as the difference between LFS whole-economy employment and total public sector employment excluding publicly owned English further education corporations and sixth-form college corporations from the ONS's public sector employment release, adjusted to be on a calendar-quarter basis. Data start in 2000 Q2.
- (b) Market sector gross value added. Chained-volume measure at market prices.

3.2 Productivity and capacity utilisation

Explaining the path of productivity over the past

Labour productivity growth has been unusually weak since 2008, such that output per hour worked is more than 15% below the level implied by an extrapolation of its pre-crisis trend. Based on the MPC's central GDP backcast,⁽¹⁾ output mismeasurement can explain around half a percentage point of this shortfall. And the pre-crisis trend may also be a misleading comparison, given structural changes in some industries, such as oil and gas extraction. But the bulk of the weakness reflects more fundamental causes. These can be divided into two broad categories: those directly related to the weakness of demand; and those where some other factor is at work, potentially affecting both demand and supply.

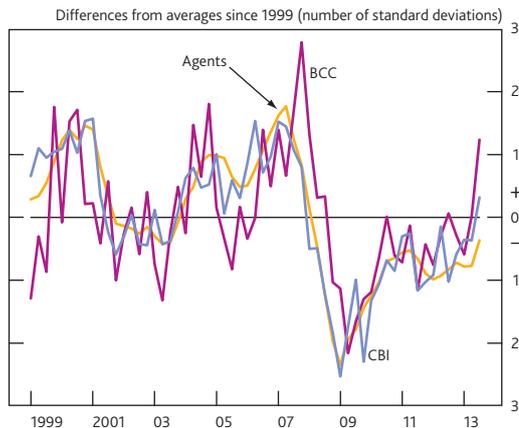
Companies' employment decisions, reflected in strong employment growth in the face of weak demand (**Chart 3.4**), have weighed on productivity. Some businesses are likely to have retained skilled employees because they would otherwise be costly to replace when demand recovers. Other businesses will have needed to retain a minimum number of staff to continue operating, so will have been limited in their ability to reduce their workforces. And in the face of weak demand, some companies may have found it necessary to refocus their employees' efforts towards winning business, rather than creating output directly. The weakness of wage growth — particularly since mid-2012 (Section 4) — is also likely to have encouraged companies to keep hold of employees.

Weak demand may have also affected productivity directly if companies have missed out on productivity advances they would have otherwise made through learning by doing. According to the Bank's Agency contacts, however, this effect has been offset by companies striving harder to make efficiency gains.

If the sluggishness of productivity growth primarily reflects the direct effects of weak demand, it could pick up strongly as demand recovers and companies use their existing workforces more effectively. But even in this case, the revival in productivity may still take time to come through. For example, businesses may need to retrain their staff in order to take advantage of stronger demand.

Weak labour productivity growth could also reflect factors other than weak demand, the effects of which may persist even as the economy recovers. One factor that may have impeded productivity is reduced reallocation of capital and labour from less productive businesses towards more productive ones. Indeed, around half of all productivity growth at the economy-wide level in the years prior to 2008 occurred through this channel, but reallocation appears to have made no contribution to productivity growth in 2010 and

(1) See the fan to the left of the dashed line in Chart 5.1.

Chart 3.5 Survey indicators of capacity utilisation^(a)

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

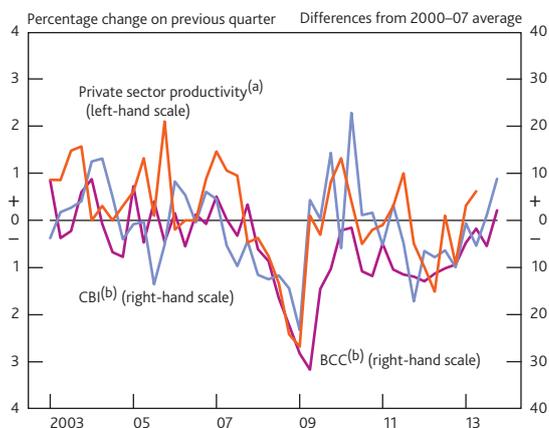
(a) These measures are produced by weighting together surveys from the Bank's Agents (manufacturing and services), the BCC (non-services and services) and the CBI (manufacturing, financial services, business/consumer services and distributive trades) using nominal shares in value added. The BCC data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

Table 3.B Employment and participation

	Averages ^(a)			2013		
	1998–2007 ^(b)	2011	2012	Q1	Q2	Aug. ^(c)
Employment ^(d)	69	7	151	-43	69	155
Full-time employment ^(d)	49	16	102	11	31	147
Part-time employment ^(d)	21	-9	49	-53	38	7
Private sector employment ^{(d)(e)}	52	40	227	44	114	n.a.
Average hours	32.4	31.6	31.9	32.0	32.0	32.1
Participation ^(f)	63.0	63.2	63.4	63.5	63.5	63.5

Source: ONS (including the Labour Force Survey).

- (a) Quarterly averages.
 (b) Unless otherwise stated.
 (c) Three months to August.
 (d) Quarterly changes, thousands, except for the final column, which shows changes in three months to August 2013 relative to previous three months.
 (e) Average is for 1999 Q2–2007.
 (f) Percentage of the 16+ population.

Chart 3.6 Productivity and business survey based indicators of near-term productivity growth

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

- (a) Market sector output per worker, data to 2013 Q2.
 (b) Aggregate measures of business survey based productivity expectations show differences between net balances for near-term output and employment expectations, relative to 2000–07 averages. The surveys used are: BCC turnover expectations and employment expectations (non-services and services), CBI expected volume of business/expected sales and employment expectations (manufacturing, financial services, business/consumer services and distributive trades). The BCC data are non seasonally adjusted. The aggregate BCC and CBI measures have been produced by weighting together sectoral surveys using nominal shares in value added. Survey indicators have been moved forward one quarter.

2011.⁽¹⁾ The low level of Bank Rate, as well as forbearance by both HMRC and banks, has supported businesses in the face of weak demand. Such support may have allowed some viable businesses to remain in operation through the downturn. But it may also have supported other less viable businesses, who may find it hard to make a profit even when demand recovers. In addition, tighter credit conditions and uncertainty may have held back expansion by more productive companies. If productivity growth has primarily been held back by such impediments, it could be quite slow to pick up and will depend in part on developments in credit and uncertainty.

Elevated uncertainty about the outlook for demand and tighter credit conditions since the financial crisis have also weighed on productivity by dampening investment. For example, uncertainty is likely to have encouraged some businesses to adopt more labour-intensive production techniques, because hiring is typically a more flexible way to increase capacity than investment. As a result, the capital stock, and as a consequence the capital-labour ratio, has risen by less than would otherwise have been the case, dragging on labour productivity growth. It will take some time for any pickup in investment growth to boost the capital stock materially.

Prospects for productivity

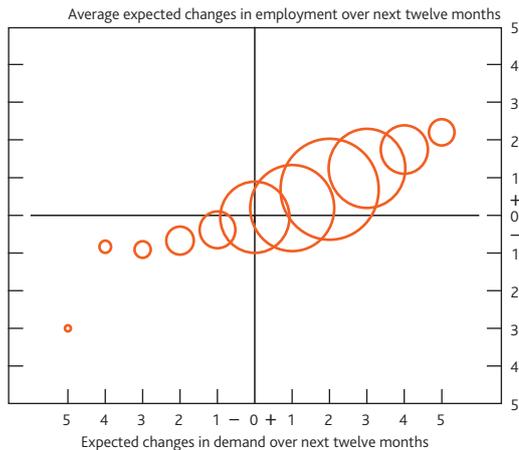
Private sector output per hour rose by 0.6% in Q2, which was just under the pre-crisis average growth rate. But the outlook for productivity remains uncertain. Companies' capacity utilisation and employment provide evidence on the likely evolution of productivity during 2013 H2.

In August the MPC judged that a small margin of slack would persist within companies. But surveys of capacity utilisation rose further in Q3, suggesting less spare capacity (Chart 3.5). It is not clear, however, how much weight to place on these measures in assessing the economy's longer-term supply capacity. Companies may have shorter-term notions of capacity in mind when responding to such surveys, ignoring, for example, mothballed capacity, which may require some spending to bring back into use. Furthermore, companies' interpretation of a normal level of capacity utilisation may have altered over time, as weak demand has persisted.

Companies' hiring decisions are another indicator of how productivity is evolving. Employment growth moderated in the first half of 2013 relative to the particularly strong rates observed last year (Table 3.B). But unexpectedly strong output growth in Q2 and Q3 has been associated with greater rises in whole-economy employment than expected in H2 so far, driven by permanent and full-time employment within the private sector.

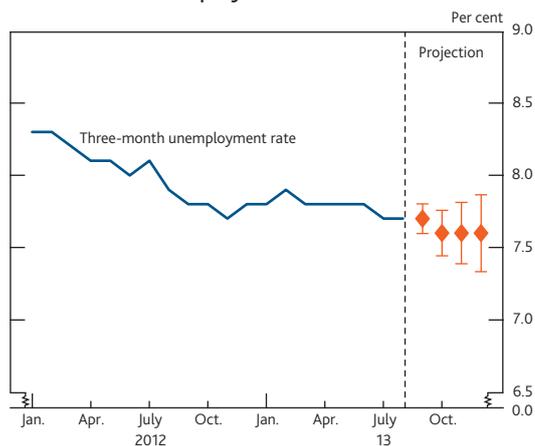
(1) See the August 2013 Report, Section 3.

Chart 3.7 Bank Agents' company visit scores: expected changes in employment versus expected changes in demand^(a)



(a) The Bank's Agents assign company visit scores on a regular basis. Scores of -5 and 5 represent down a lot and up a lot respectively, with zero representing no change. Data are for 2013 including scores recorded up to 30 October. The size of the bubbles corresponds to the proportion of respondents in each expected demand bucket (from -5 to 5).

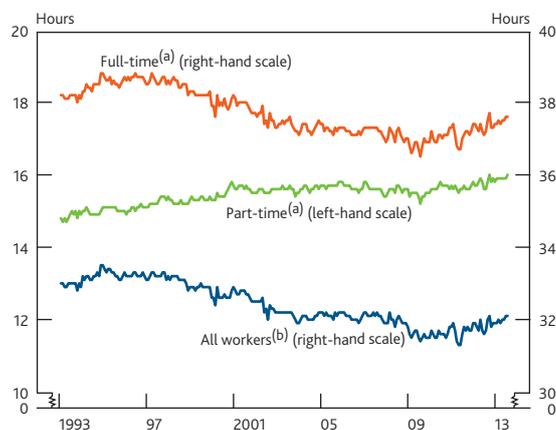
Chart 3.8 Bank staff projection for the near-term headline LFS unemployment rate^(a)



Sources: Labour Force Survey and Bank calculations.

(a) The diamonds show Bank staff's central projection for the headline unemployment rate in the three months to September, October, November and December 2013. The bands on each side of the diamonds show standard deviations around the projections consistent with the MPC's unemployment rate fan chart (Chart 5.8).

Chart 3.9 Average hours worked per week



Source: Labour Force Survey.

(a) Average weekly hours worked in main job only.
(b) Average weekly hours in main job and second job.

Taken together, data on output and employment in Q3 suggest a further rise in productivity, albeit at a slower rate than in Q2. Although both point to robust growth, output expectations from business surveys have picked up more strongly than equivalent employment balances for Q4, suggesting a further rise in productivity. The relationship between surveys and official data on productivity growth has not, however, been particularly stable (Chart 3.6). Looking further ahead, contacts of the Bank's Agents suggest that companies expecting stronger demand also anticipate hiring more people over the coming twelve months (Chart 3.7).

One reason that companies may have increased hiring is if they remain nervous about the durability of the recovery. Although uncertainty appears to be receding, companies may still put off the longer-term investment required to create more capacity, instead relying on increasing staff numbers to meet higher demand.

Based on evidence available, it is too soon to draw firm conclusions about the likely path of productivity. The MPC continues to judge that productivity will pick up as demand recovers, slowing the speed at which unemployment falls.

3.3 Slack in the labour market

Continued employment growth has been associated with a further fall in unemployment. The three-month LFS unemployment rate — the measure referenced in the MPC's policy guidance — was 7.7% in the three months to August. This was down from 7.8% in Q2, and below the central expectation at the time of the *August Report*. The claimant count, which is a more timely indicator, fell to 4% in September, its lowest rate since January 2009 (Table 3.C). Bank staff's near-term projection for the headline unemployment rate is 7.7% for Q3 and 7.6% for Q4 (Chart 3.8), a little lower than expected at the time of the *August Report*. The one-month unemployment rate, which has a smaller sample size and is more volatile than the headline measure, rose to 8% in August (see the box on page 29).

Changes in labour force participation — the number of people in work or actively seeking employment — can have a significant impact on the unemployment rate. Previous recessions were associated with falls in the participation rate, as high unemployment discouraged people from looking for work. This has not happened to the same extent in this downturn. Instead, the participation rate has been steady, despite downward pressure from a rise in the proportion of the population close to normal retirement age. In part, that reflects people choosing to stay in employment or seek work in response to the recent squeeze on household incomes. And changes to government benefits in recent years have encouraged more people to look for work.⁽¹⁾ In line with the MPC's judgement in the *August Report*,

(1) Developments in the participation rate since the recession are discussed in more detail in the box on page 27 of the May 2013 *Report*.

The one-month unemployment measure

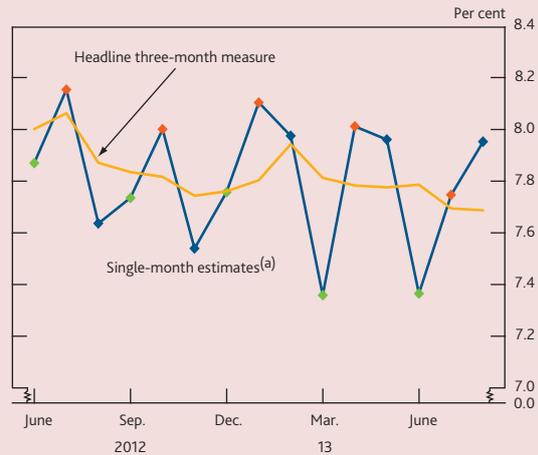
The MPC policy guidance references the headline LFS unemployment measure. The ONS also produces a one-month measure, not designated as a National Statistic, which averages to the three-month measure.⁽¹⁾ This box explains why the one-month data are volatile and why they provide a limited signal about developments in the headline measure.

The headline three-month measure is based on a survey of around 45,000 households. Each household in the survey is only interviewed once every three months, meaning that the single-month data are based on a smaller sample of around 15,000 households. So the households interviewed in August 2012 (the first blue diamond in **Chart A**), for example, are completely different to those interviewed in the preceding months (the first green and orange diamonds).

The 15,000-strong monthly sample also changes over time. In particular, each monthly panel is made up of five cohorts. Each time the monthly panel is interviewed, one cohort leaves and a new cohort of households enters. That means that the panel of households interviewed in August 2012 and November 2012 will be very similar (80% of the panel will be the same) but by August 2013, only 20% of the August 2012 panel will remain.

In general, the bigger the sample of any survey, the more likely it is to be representative of the population, although weighting methods can be used to correct for some likely biases. For the LFS survey, the monthly sample is relatively small, and the weighting methodology applied to the one-month series is less robust than that used in the headline

Chart A LFS unemployment rates



Source: Labour Force Survey.

(a) Different coloured diamonds represent different monthly groups of households surveyed.

data. These factors mean that the monthly profile can be very sensitive to the characteristics of the households sampled. In particular, some cohorts exhibit notably higher or lower-than-average unemployment rates, and, until these households drop out of the sample, these single-month unemployment rates are likely to be outliers from the three-month average.

That effect can be seen in the most recent data. The cohort that entered the sample in March 2013 appears to have had a very low unemployment rate — that is why the March and June data, shown in the most recent green diamonds — are much lower than the headline data. But that does not necessarily presage sharp falls in the headline data.

(1) For further details see www.ons.gov.uk/ons/rel/lmac/labour-force-survey-single-month-estimates/index.html.

Table 3.C Selected indicators of labour market slack

	Averages			2013		
	1998–2007 ^(a)	2011	2012	Q1	Q2	Q3 ^(b)
LFS unemployment rate	5.3	8.1	8.0	7.8	7.8	7.7
Long-term unemployment rate ^(c)	1.3	2.7	2.8	2.8	2.8	2.8
Claimant count unemployment rate	3.2	4.7	4.8	4.6	4.5	4.2
Weighted non-employment rate ^(d)	7.6	9.5	9.3	9.2	9.2	9.2
Part-time workers who could not find full-time work ^(e)	2.2	4.3	4.8	4.7	4.8	4.8
Bell and Blanchflower measure of underemployment ^(f)	5.0	9.8	9.9	9.8	9.7	n.a.
Vacancies/unemployed ratio ^(g)	0.41	0.18	0.19	0.20	0.21	0.22

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

(a) Unless otherwise stated.

(b) Except for the claimant count, the figures for Q3 show data for the three months to August.

(c) Those unemployed for more than twelve months as a percentage of the economically active population.

(d) Percentage of the 16–64 population. This measure weights together different types of non-employed by the 1998–2007 averages of quarterly transition rates of each group into employment derived from the LFS.

(e) Number of people reporting to the LFS that they are working part-time because they could not find a full-time job, as a percentage of LFS total employment.

(f) Unemployment adjusted for the difference between actual and desired working hours of those in work. Based on Bell, D and Blanchflower, D (2013), 'How to measure underemployment?', *Peterson Institute for International Economics Working Paper No. 13-7*, estimates provided by authors. Average since 2001 Q2.

(g) Number of vacancies (excluding agriculture, forestry and fishing) divided by LFS unemployment. Average is since 2001 Q2. A higher value typically implies less slack.

the participation rate remained broadly stable in the three months to August.

Alongside the steady participation rate, average hours worked have been robust (**Chart 3.9**). This in part reflects the shift from public to private sector employment, where hours worked tend to be higher. It also may reflect an increase in the number of hours people want to work on average. For example, the proportion of the workforce working part-time but wishing to work full-time has approximately doubled to just under 5% since 2007 (**Table 3.C**). More generally, many employees say that they would like to work longer hours than they currently do. As a result, average hours will probably continue to rise, as companies respond to improved demand by increasing the hours of their existing staff. Consequently, higher labour demand may feed through to unemployment more gradually than otherwise.

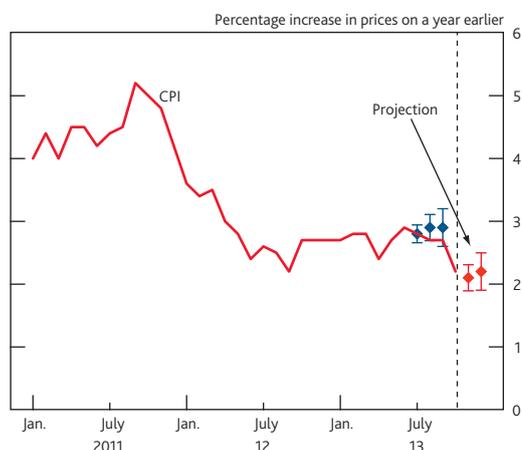
4 Costs and prices

CPI inflation fell to 2.2% in October from 2.9% in June. Inflation is expected to remain around this level in the near term despite larger increases in utility prices than anticipated. Underlying wage growth remains weak. Companies' margins still appear squeezed. Medium-term inflation expectations remain consistent with meeting the 2% target.

Table 4.A Monitoring the MPC's key judgements

Inflation expectations	On track
<ul style="list-style-type: none"> Medium-term inflation expectations consistent with the 2% target. 	<ul style="list-style-type: none"> Medium-term inflation expectations judged to remain consistent with the 2% CPI target; mixed news in some survey measures, possibly reflecting announced utility price rises.
Earnings growth	On track
<ul style="list-style-type: none"> Four-quarter AWE growth to average around 1% in 2013 H2. 	<ul style="list-style-type: none"> Four-quarter whole-economy AWE growth of 1.4% in H1, and 0.7% in the three months to August.
Unit labour costs	Broadly on track
<ul style="list-style-type: none"> Four-quarter unit labour cost growth to be zero to modestly negative in 2013 H2. 	<ul style="list-style-type: none"> Four-quarter unit labour cost growth around its historical average rate in H1; expected to slow in Q3.
Commodity prices	Broadly on track
<ul style="list-style-type: none"> Commodity prices to evolve roughly in line with paths implied by futures markets. 	<ul style="list-style-type: none"> Gas futures prices a little lower, US dollar oil futures a little higher.
Utility prices	Higher than expected
<ul style="list-style-type: none"> Increases in household energy prices of around 5% a year. 	<ul style="list-style-type: none"> Household energy prices set to rise by around 9% by early 2014.

Chart 4.1 Bank staff projection for near-term CPI inflation^(a)



(a) The blue diamonds show Bank staff's central projection for CPI inflation at the time of the August Inflation Report. The red diamonds show the current staff projection for November and December. The bands on each side of the diamonds show the root mean squared error of projections for CPI inflation made since 2004 at appropriate horizons.

CPI inflation fell back in the four months to October 2013, and by more than anticipated at the time of the August Report (Section 4.1). The near-term outlook for inflation is lower than expected three months ago, and inflation is likely to fall a little further during 2014. The path of inflation will be influenced by the evolution of global and import prices (Section 4.2), labour costs (Section 4.3), and inflation expectations (see the box on pages 34–35).

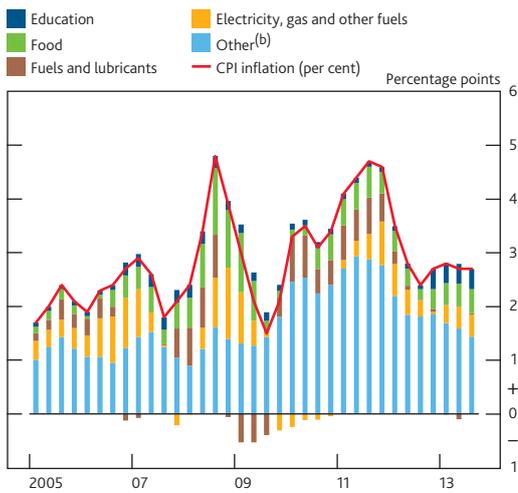
4.1 Consumer prices

CPI inflation fell from 2.9% in June to 2.2% in October (Chart 4.1), 0.6 percentage points lower than expected at the time of the August Report. That unexpectedly large fall reflects both recent broad-based weakness in goods and services price inflation, together with a number of specific factors including: the impact of recent falls in oil prices on petrol prices; utility price increases occurring later than expected; and a smaller contribution from university tuition fees this year.

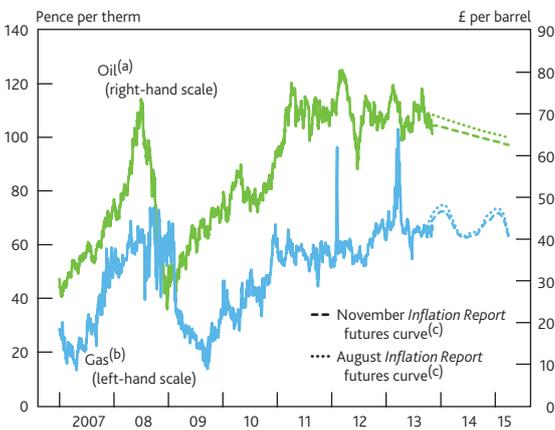
University tuition fees continue to add to CPI inflation, as the increase in fees that first took effect in 2012 affected a second cohort of students from October. The exact contribution of fees from year to year depends on the size and composition of the student body, as well as on the extent to which other fees — such as those for part-time courses — rise; the contribution of education fell from 0.4 percentage points in September to 0.2 percentage points in October. More generally, administered and regulated prices continue to make an unusually large contribution to CPI inflation, as do past rises in import prices (Section 4.2).⁽¹⁾

The near-term outlook for CPI inflation is lower than three months ago, reflecting the impact of unexpectedly low outturns. That is despite larger-than-anticipated price rises by energy companies (Table 4.A); four of the six major suppliers have announced price rises of 9% on average this autumn. The MPC's projections assume that the other two major suppliers

(1) For more on administered and regulated prices, see the box on pages 36–37 of the February 2013 Report.

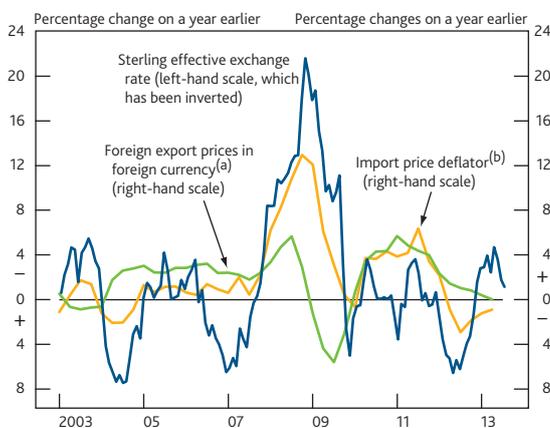
Chart 4.2 Contributions to CPI inflation^(a)

(a) Quarterly contributions to annual CPI inflation. Data are non seasonally adjusted.
 (b) Calculated as a residual. Includes a rounding residual.

Chart 4.3 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 31 July (dotted lines) and 6 November 2013 (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 4.4 Sterling effective exchange rate, UK import prices and foreign export prices excluding energy

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

(a) Domestic currency export prices of goods and services of 52 countries weighted according to their shares in UK imports. The sample does not include any major oil exporters. The observation for 2013 Q2 is an estimate. In 2013 Q2, export prices for Croatia, Pakistan, the Philippines and Turkey are assumed to grow at the same rate as export prices in the rest of the world.
 (b) Goods and services excluding fuels deflator, excluding the impact of MTIC fraud.

will raise domestic energy prices by a similar amount by early 2014. In total, that suggests that price rises will be around 3 percentage points greater than expected at the time of the *August Report*, raising inflation by 0.15 percentage points more than assumed. Once those price rises have come into effect, the contribution of electricity, gas and other fuels to CPI will be around 0.4 percentage points, similar to its contribution over the past two years (**Chart 4.2**) but substantially above the contribution seen in the decade prior to the crisis. The contribution could fall back temporarily in the very near term, however, reflecting the relative timing of price rises this year and last.

Utility prices are determined by a number of factors, including commodity prices (Section 4.2), the sterling exchange rate (Section 1) and suppliers' non-energy costs, such as the amount they have to pay towards the maintenance of distribution networks. The MPC's projections maintain the assumption of increases in utility prices of 6% in each of the next three years, predominantly reflecting these non-energy costs.

Overall, CPI inflation is projected to remain around its current level of 2.2% in the near term (**Chart 4.1**) and fall back a little further during 2014, aided by the recent appreciation of sterling (Section 5).

4.2 Global and import prices

Energy prices

Energy costs have had a substantial impact on consumer prices in recent years, and will continue to be an important influence on inflation. Energy prices affect CPI inflation directly, through fuel prices and household energy bills, and indirectly, through businesses' costs.

Gas futures prices, a key influence on domestic energy bills (Section 4.1), have fallen slightly since the *August Report* (**Chart 4.3**). Oil futures prices in US dollar terms were slightly higher, but spot prices were a touch lower. In sterling terms, both spot and futures prices were lower than at the time of the *August Report* (**Chart 4.3**), reflecting the rise in the sterling-dollar exchange rate.

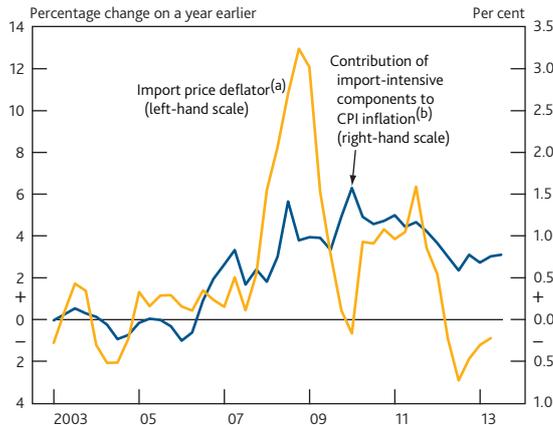
Non-energy commodity prices

Agricultural commodity prices fell during the first half of 2013 in anticipation of a bumper global harvest. As that materialised, prices stabilised and have been broadly flat since the *August Report*. Industrial metals prices have picked up by around 3% since the *August Report*, but remain around 30% below their 2011 peak, reflecting lower demand from emerging economies (Section 2).

Non-energy import prices

Import prices reflect both foreign export prices and the sterling exchange rate. Sterling's depreciation in 2007–08 led to a

Chart 4.5 UK non-energy import prices and contribution of import-intensive components to CPI inflation



Sources: ONS and Bank calculations.

- (a) Goods and services deflator excluding fuels and the impact of MTIC fraud.
 (b) Quarterly contribution of the 17 most import-intensive components relative to their 2003–06 average, excluding tobacco (because of the impact of duties), and operation of personal transport equipment (which includes petrol prices). The contribution from clothing and footwear has been adjusted by a total of 0.3 percentage points to reflect a change in methodology in 2010. The import intensities of CPI components have been estimated using ONS Supply and Use tables.

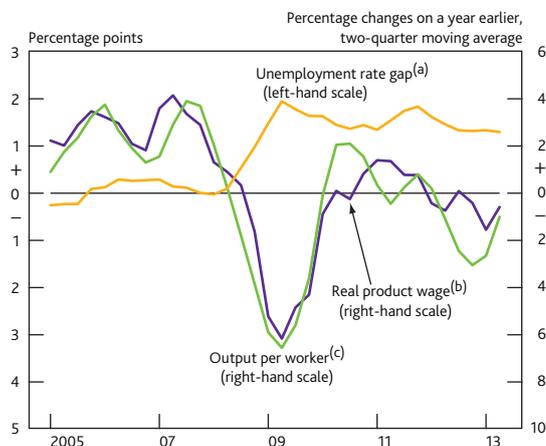
Table 4.B Private sector earnings^(a)

	Averages			2013		
	2001–07	2008 Q3–2010 Q2	2010 Q3–2012	Q1	Q2	Aug. ^(b)
(1) Total AWE	4.3	0.7	1.9	0.1	2.8	1.0
(2) Regular pay ^(c)	3.9	1.6	2.0	0.8	1.2	1.2
(1)–(2) Bonus contribution ^(d)	0.4	-0.9	0.0	-0.7	1.6	-0.2
Pay settlements ^(e)	3.3	2.5	2.1	2.0	2.0	2.1

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

- (a) Based on quarterly data unless otherwise stated.
 (b) Data in the two months to August.
 (c) Total pay excluding bonuses and arrears of pay.
 (d) Percentage points. The bonus contribution does not always equal the difference between total average weekly earnings (AWE) growth and AWE regular pay growth due to rounding.
 (e) Average over the past twelve months, based on monthly data.

Chart 4.6 Real product wages, labour market slack and productivity



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

- (a) Headline unemployment rate less the central Bank staff estimate of the medium-term equilibrium unemployment rate. For details, see the box on pages 28–29 of the August 2013 Report.
 (b) Private sector AWE total pay deflated by the market sector gross value added deflator.
 (c) Market sector output per worker.

sharp increase in import prices (Chart 4.4). And over 2010–11, large increases in foreign export prices caused further rises in import costs.

Over time, higher import prices will tend to be passed through into higher shop prices. But the timing of that pass-through is uncertain. The prices of some items, such as fresh food, tend to react quickly to changes in the exchange rate; prices of some other items will change only slowly, for example, if it takes time for import costs to get passed through their supply chains. More generally, the dynamics of exchange rate pass-through depend on broader macroeconomic conditions.

One way of judging the impact of higher import prices is to look at the contribution to inflation of the more import-intensive CPI components. This contribution rose sharply following the 2007–08 depreciation, and has subsequently remained elevated (Chart 4.5). That contrasts with other, less import-intensive, components of the CPI basket, where inflation rates are typically not elevated compared with their pre-2007 norms. It therefore suggests a significant role for import prices in the above-target CPI outturns that have characterised the post-crisis period.

Overall, estimates by Bank staff suggest that import prices continued to contribute materially to CPI inflation in Q3. That reflects the persistent effect of past rises in import prices, as well as the depreciation of sterling at the start of 2013 (Chart 4.4). The 3.3% rise in sterling since the August Report has largely reversed that depreciation. Together with the easing in world export price inflation over the past year, that means the contribution to CPI inflation from import prices is likely to fade over the next year or so (Section 5).

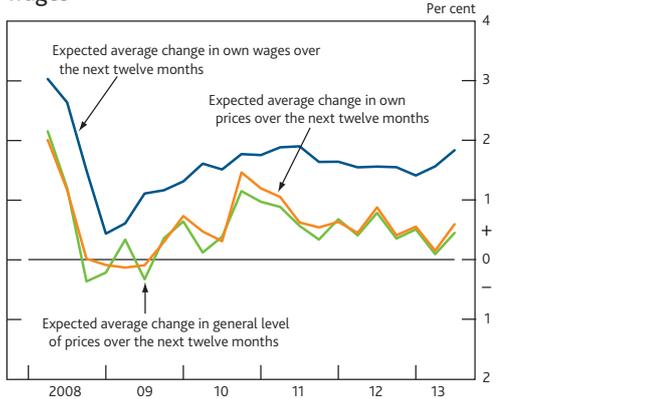
4.3 Labour costs, company profits and wage and price-setting behaviour

The path of inflation depends on companies' pricing behaviour, which will reflect developments in their costs, including commodity and other import prices as well as labour costs. The path of inflation also depends on both companies' and households' inflation expectations.

Labour costs

Average weekly earnings (AWE) growth was volatile in 2013 H1, rising from 0.1% in Q1 to 2.8% in Q2 (Table 4.B). That largely reflected some people taking advantage of the reduction in the top rate of UK income tax in April 2013, and deferring bonus payments and earnings they would have received in 2013 Q1. Averaging across H1, annual private sector regular pay growth was 1%. Regular pay grew by 1.2% in the three months to August, well below the pre-recession average growth rate of around 4%.

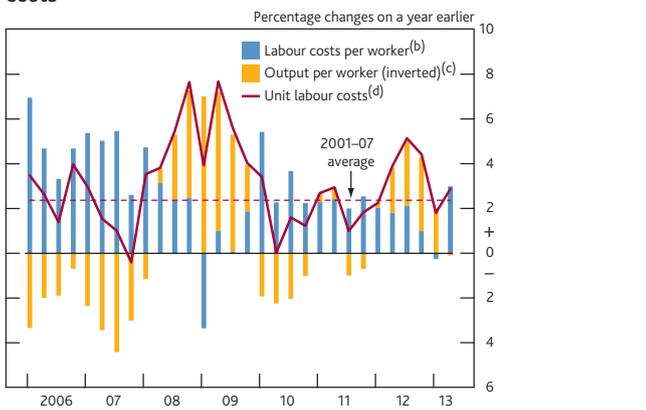
Chart 4.7 Companies' expected changes in prices and wages^(a)



Sources: CBI (all rights reserved) and ONS.

(a) CBI data for the manufacturing, business/consumer services and distribution sectors, weighted together using nominal shares in value added. Companies are asked for their expected percentage changes over the next twelve months for: their firm's wage/salary cost per person employed (including overtime and bonuses); their own average output price for goods sold into UK markets; and the general level of prices in the markets in which they compete.

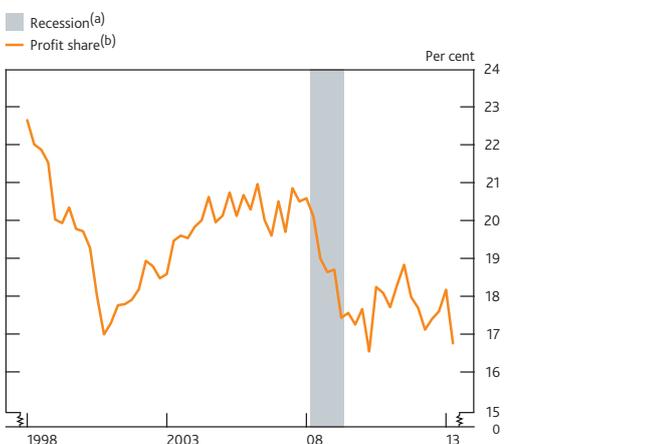
Chart 4.8 Contributions to private sector unit labour costs^(a)



Sources: ONS and Bank calculations.

(a) Contributions do not sum to total due to the method of calculation.
 (b) Calculated using private sector AWE data adjusted using the ratio of private sector employee compensation to wages and salaries.
 (c) Quarterly growth in market sector output per worker, inverted.
 (d) Estimated labour costs per worker as defined in footnote (b) divided by market sector output per worker.

Chart 4.9 Private sector corporate profit share



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) Private sector corporates' gross trading profits (excluding the alignment adjustment), divided by nominal gross value added at basic prices, excluding general government gross operating surplus and central government and local authority compensation of employees. Central government and local authority compensation have been seasonally adjusted by Bank staff.

The extent to which wage growth picks up as demand recovers depends in part on the causes of the past weakness in wages. Real product wages — a measure of wages relative to the prices that companies charge for their output — generally grow broadly in line with productivity (Chart 4.6). So it is likely that wage growth will recover once productivity growth does. But companies may wait until the recovery is entrenched before awarding higher pay rises. Continuing labour market slack may also limit the extent to which wage growth picks up (Chart 4.6). Nominal wages will also depend on inflation expectations. If households expect higher inflation they may try to bid for larger pay rises. And companies may be more inclined to agree to higher pay awards if they think that these can be recouped through higher prices. But medium-term inflation expectations remain sufficiently well anchored.

There are few signs of wage pressures increasing in the near term. For example, companies responding to the CBI surveys, on average, expect to raise employees' wages at a broadly similar rate to that seen over the past two years (Chart 4.7). In October the KPMG/REC permanent salaries index, however, rose at its fastest rate since December 2007, pointing to some upward pressure on wages. Overall, the MPC's projections are consistent with subdued four-quarter regular pay growth of around 1% on average in 2013 H2 (Section 5).

The measure of labour costs that has most bearing on companies' pricing decisions is the cost of each unit of output produced — the unit labour cost. The erratic pattern of earnings growth has translated into volatility in quarterly unit labour cost growth, which fell in Q1 and picked up sharply in Q2. Looking through this volatility, annual unit labour cost growth was close to its pre-crisis average (Chart 4.8). The MPC expects unit labour costs to decline in Q3 (Section 5).

Company profits and business pricing intentions

In aggregate, companies' profit margins have been squeezed since the financial crisis. The private sector profit share fell in Q2, and remains below its pre-recession average (Chart 4.9). But the evolution of profit margins will have varied across companies and sectors. According to contacts of the Bank's Agents, export-facing companies were able to increase their profit margins more than domestic-facing companies after sterling's depreciation in 2007–08 (Chart 4.10).⁽¹⁾ But over the past year, both export-facing and domestic-facing companies report similar changes.

Companies' profitability may need to rise to deliver sufficiently attractive returns to investors. Some of the increase in margins could occur through a reallocation of resources across companies, from less to more profitable businesses. But it

(1) For more on company visit scores, see Copple *et al* (2013), 'The Agents' company visit scores', *Bank of England Quarterly Bulletin*, Vol. 53, No. 1, pages 59–67.

Monitoring inflation expectations

In August, the MPC set out its policy guidance, linking Bank Rate and asset sales to an unemployment threshold of 7%. This guidance will cease to hold if any of three knockouts are breached. One of these knockouts relates to whether medium-term expectations remain sufficiently well anchored.

The MPC has three main metrics for monitoring the risks to inflation expectations: the level of inflation expectations relative to the target; uncertainty about inflation; and the sensitivity of expectations to unexpected economic developments.

A box on pages 36–37 of the *August Report* concluded that the level of inflation expectations was consistent with the 2% target and uncertainty about the inflation outlook had not increased, although there was tentative evidence that expectations derived from financial markets had been more sensitive to news about the economy over the previous year than they had been before the financial crisis. This box shows that there has been little recent evidence to alter these conclusions. Overall, the MPC judges that medium-term inflation expectations remain sufficiently well anchored.

The level of inflation expectations

Since Q2, several indicators of households' and companies' inflation expectations one year and five to ten years ahead have picked up, but those at the two and three-year horizon have been broadly stable (Table 1). Most household measures remain close to past averages, with the exception of YouGov/Citigroup, which saw very sharp rises in October in both the one year and five to ten year measures (Table 1). It is possible that these rises reflect households' response to announcements of higher utility prices: the survey was carried out around the time that several companies announced higher prices (Section 4.1). Although such news should not directly affect expectations beyond the near term, similar announcements in the past were also associated with rises in the five to ten year ahead measure. The majority of these proved short-lived (Chart A). The MPC will continue to monitor these data closely.

Indicators of inflation expectations derived from financial instruments that reference RPI inflation — such as inflation swaps — have changed little since the *August Report*, although some remain slightly higher than their post-crisis average. These indicators will reflect not only expected CPI inflation, but also market participants' views about the future wedge between RPI and CPI, together with a risk premium to compensate for uncertainty about future inflation. Bank staff estimate the long-run RPI-CPI wedge to be around 1.3 percentage points, similar to the Office for Budget

Table 1 Indicators of inflation expectations^(a)

Per cent	2000 (or start of series) to 2007 averages ^(b)	Averages since 2008	2011	2012	2013				
					Q1	Q2	Q3	Q4 ^(c)	
One year ahead inflation expectations									
Households^(d)									
Bank/NOP	2.3	3.4	4.1	3.5	3.6	3.6	3.2	n.a.	
Barclays Basix	2.8	3.2	4.0	3.1	3.1	2.6	2.8	n.a.	
YouGov/Citigroup (Mar. 2006)	2.5	2.8	3.4	2.7	2.8	2.5	2.6	3.2	
Companies (June 2008)^(e)	n.a.	0.5	0.7	0.6	0.5	0.1	0.4	n.a.	
Financial markets (Oct. 2004)^(f)	2.4	2.4	3.2	2.5	3.0	2.7	2.9	2.9	
Two to three year ahead expectations									
Households^(d)									
Bank/NOP (Mar. 2009)	n.a.	2.9	3.4	3.1	3.4	3.3	3.0	n.a.	
Barclays Basix	3.2	3.4	4.0	3.3	3.5	2.8	3.1	n.a.	
Professional forecasters (June 2006)^(g)	2.0	2.0	2.2	2.1	2.1	2.2	2.1	2.2	
Financial markets (Oct. 2004)^(h)	2.6	2.7	3.1	2.6	3.1	3.0	3.0	3.0	
Five to ten year ahead expectations									
Households^(d)									
Bank/NOP (Mar. 2009)	n.a.	3.3	3.5	3.4	3.6	3.6	3.5	n.a.	
Barclays Basix (Sep. 2008)	n.a.	3.8	3.9	3.9	3.6	3.5	4.0	n.a.	
YouGov/Citigroup (Mar. 2006)	3.5	3.4	3.6	3.4	3.5	3.3	3.3	3.9	
Financial markets (Oct. 2004)⁽ⁱ⁾	3.0	3.5	3.3	3.1	3.4	3.5	3.5	3.5	
Memo: CPI inflation	1.6	3.2	4.5	2.9	2.8	2.7	2.7	n.a.	

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

Note: Footnote (f) was incorrectly labelled as 'Instantaneous RPI inflation one year ahead implied from swaps' in the printed version of the *Report*, and footnote (h) was incorrectly labelled as 'Instantaneous RPI inflation three years ahead implied from swaps'.

- (a) Data are non seasonally adjusted.
- (b) Dates in parentheses indicate start date of the data series.
- (c) Financial markets data are averages from 1 October–6 November. YouGov/Citigroup data are for October.
- (d) The household surveys ask about expected changes in prices but do not reference a specific price index, and the measures are based on the median estimated price change.
- (e) 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.
- (f) RPI inflation over the next year implied from swaps.
- (g) Bank's survey of external forecasters, inflation rate three years ahead.
- (h) RPI inflation over the next three years implied from swaps.
- (i) Five-year, five-year forward RPI inflation implied from swaps.

Responsibility's estimate of 1.3 to 1.5 percentage points.⁽¹⁾ Discussions with market contacts suggest that their estimates of the long-run wedge are a little lower.

Uncertainty

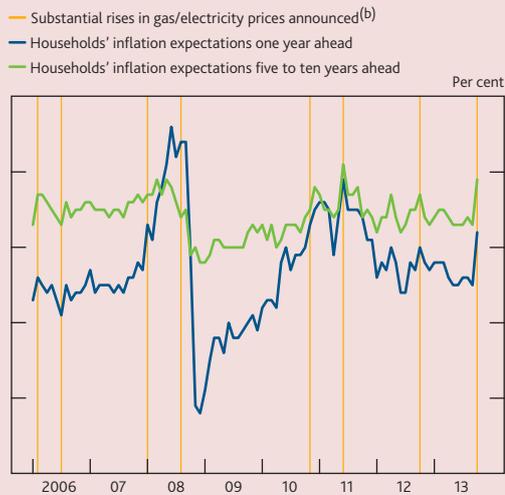
Market-based measures of uncertainty about expected inflation have fallen a little over the past three months. But they remain at a higher level than in 2008.

Sensitivity to news

There remains tentative evidence that inflation expectations derived from financial markets have been more sensitive to news than a few years ago. One way of assessing that sensitivity is to examine how these measures change in response to unexpected movements in CPI inflation on the day of publication.

The diamonds in **Chart B** show the change in expected inflation at different horizons following CPI data releases

Chart A Household inflation expectations and utility price rises^(a)



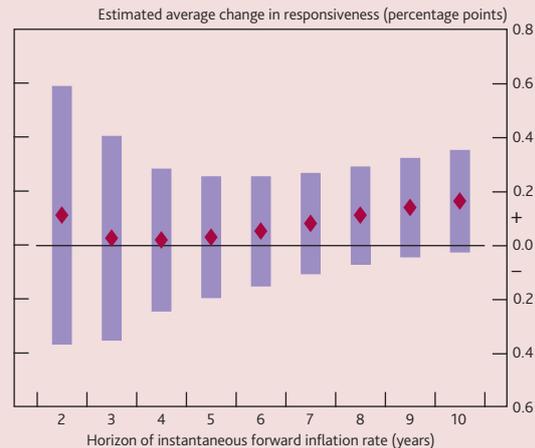
Sources: Company press releases, YouGov/Citigroup and Bank calculations.

- (a) Data are non seasonally adjusted.
 (b) Date of announcements of an increase in utility prices by a utility company that were followed by further announcements by other companies. Only episodes resulting in a rise in utility bills of more than 5% are included.

between October 2012 and September 2013, relative to the average changes in response to CPI news between 2004 and 2007. Over the past twelve months, inflation expectations appear to have been a little more responsive to CPI data news at the six to ten-year horizon than they were between 2004 and 2007 (**Chart B**). This could indicate an increase in the risks to inflation expectations, if, for example, market participants believe that the MPC has become more tolerant of deviations of inflation from the 2% target. But the change in

responsiveness of inflation expectations to CPI news over the past year is estimated from a small sample, especially since not all CPI releases contained news. And the observed changes may reflect market factors rather than inflation expectations. For example, it is not clear why inflation expectations at longer horizons should be more responsive to CPI news than at shorter ones.

Chart B Change in responsiveness of instantaneous forward inflation rates to CPI news relative to pre-crisis^(a)



Sources: Bloomberg, ONS and Bank calculations.

- (a) The diamonds show the estimated slope coefficients for the change in responsiveness of instantaneous forward inflation rates (derived from inflation swaps) to news in the CPI release over the past twelve months relative to the pre-crisis period (September 2004–07). The bars cover two standard errors either side of the estimated slope coefficients.

- (1) For more information, see Miller, R (2011), 'The long-run difference between RPI and CPI inflation', available at <http://cdn.budgetresponsibility.independent.gov.uk/Working-paper-No2-The-long-run-difference-between-RPI-and-CPI-inflation.pdf>.

Chart 4.10 Bank Agents' company visit scores: changes in profitability of exporters and domestic-facing companies^(a)



- (a) The Bank's Agents assign company visit scores on a regular basis. Scores of -5 and 5 represent 'down a lot' and 'up a lot', respectively, with zero representing 'no change'. Changes in profitability are measured over the latest three-month period, relative to the same three months a year earlier. Chart includes responses up to 30 October 2013.

could also happen by larger increases in prices, or by smaller increases in costs.

The rate at which companies raise prices partly depends on their inflation expectations. For example, if businesses expect stronger overall inflation, and higher price rises by their competitors as a result, they may be more inclined to make larger price increases themselves. Companies' near-term expectations for the change in their own prices, and prices in their industry more generally, have been broadly stable over the past year (**Chart 4.7**).

Inflation expectations

Some measures of household inflation expectations have picked up, possibly in response to imminent utility price increases, and so may prove temporary. Measures of medium-term expectations derived from financial markets and professional forecasters were little changed, although some were slightly higher than their post-crisis average. Overall, as discussed in a box on pages 34–35, the MPC judges that medium-term inflation expectations remain sufficiently well anchored, and that this price stability knockout has not been breached.

5 Prospects for inflation

Recovery has finally taken hold in the United Kingdom. The recent upswing in growth seems set to be sustained as the lifting of uncertainty and thawing of credit conditions start to unlock pent-up demand. However, the brightening outlook follows the most prolonged downturn on record. So it is likely to be some time before slack in the economy is materially eroded.

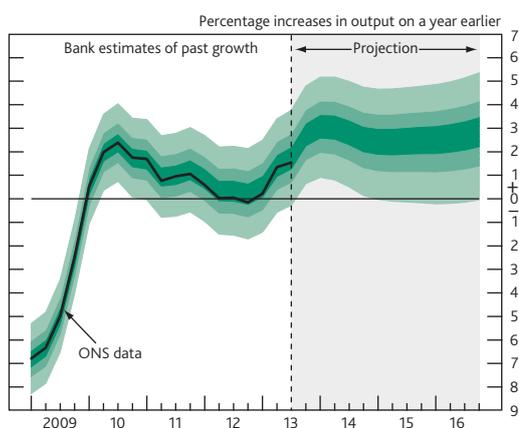
CPI inflation fell to 2.2% in October and is expected to fall further as the impetus from import prices fades. A gradual rise in productivity growth and a persistent margin of spare capacity should help to contain domestic cost pressures. Inflation therefore returns to 2% despite a continuing elevated contribution from domestic energy bills and tuition fees.

The United Kingdom is experiencing its strongest period of growth in five years. Nonetheless, the level of output remains 2.5% lower than in early 2008, and the number of unemployed nearly one million higher, reflecting the long-lasting legacy of the financial crisis. Despite its recent fall, CPI inflation is still above the 2% target. That is in part due to the lingering effect of past import price rises, as well as to a continuing impetus from domestic energy bills and tuition fees.

The MPC's latest projection for four-quarter GDP growth is shown in **Chart 5.1**. The profile in **Chart 5.1** is conditioned on the assumption that Bank Rate rises in line with a path implied by market yields, rather than the constant rate assumption used three months ago. That does not reflect the Committee's view of the most likely path of Bank Rate; it is simply a reversion to the convention of using the market curve now that financial markets have been able to absorb the policy guidance provided in August. In the near term, growth is set to pick up further, as dissipating uncertainty and thawing credit conditions help the recovery to gain momentum. Growth slows a little thereafter as some of that initial boost moderates. The rise in Bank Rate implied by the market curve dampens growth over the forecast period.

Chart 5.2 sets out the latest projection for CPI inflation. Inflation is projected to fall a little further as the impetus from past rises in import prices fades, and as productivity growth, together with a persistent margin of spare capacity, attenuates domestic price pressures. Compared with August (**Chart 5.3**), the near-term path for inflation is lower, reflecting both the unexpectedly low outturns and the recent appreciation of sterling. Medium-term inflationary pressures are little changed; as in August, the risks to inflation are broadly

Chart 5.1 GDP projection based on market interest rate expectations and £375 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 £375 billion throughout the forecast period. To the left of the 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 30 of those occasions. The fan chart is constructed so that outturns are also expected to lie within each pair of the lighter green areas on 30 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. See the box on page 39 of the November 2007 *Inflation Report* for a fuller description of the fan chart and what it represents.

Chart 5.2 CPI inflation projection based on market interest rate expectations and £375 billion asset purchases

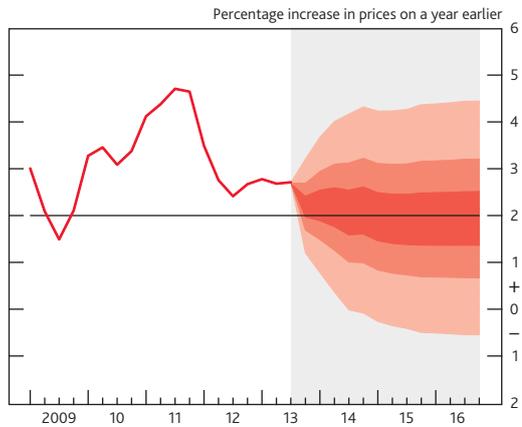
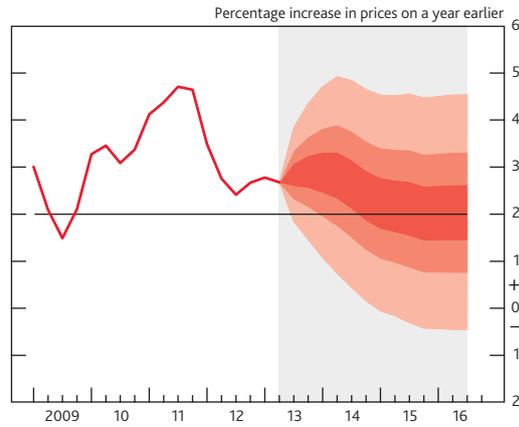
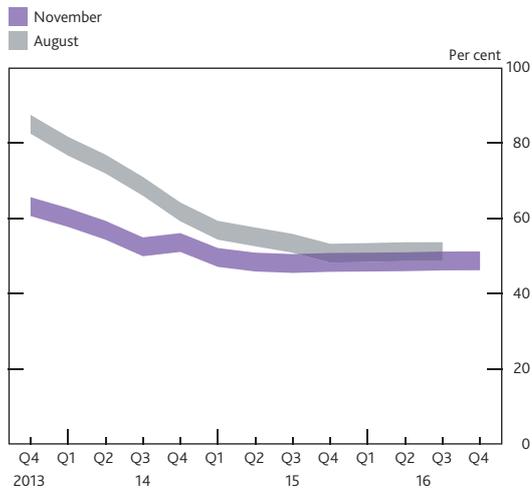


Chart 5.3 CPI inflation projection in August based on constant nominal interest rates at 0.5% and £375 billion asset purchases



Charts 5.2 and 5.3 depict the probability of various outcomes for CPI inflation in the future. They have been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 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 30 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 30 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. See the box on pages 48–49 of the May 2012 *Inflation Report* for a fuller description of the fan chart and what it represents.

Chart 5.4 Probability that inflation will be above the target



The November and August swathes in this chart are derived from the same distributions as Charts 5.2 and 5.3 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 swathes reflects the fact that there is uncertainty about the precise probability in any given quarter, but they should not be interpreted as confidence intervals.

balanced around the target two to three years ahead (Chart 5.4).

5.1 Key judgements and risks

The Committee's projections are underpinned by four judgements, set out below. Risks surround these judgements, and Table 5.A on page 38 provides a range of indicators for monitoring them in the near term. Sections 1 to 4 of the *Report* summarise developments in the corresponding indicators set out three months ago.

Key Judgement 1: global growth strengthens gradually, driven by the advanced economies

Three months ago the Committee's view was that international policy initiatives would facilitate a sustained, albeit gradual, global recovery. Since then overall world demand has turned out broadly as expected, although there has been some news in its composition (see Table 2.A on page 16). In particular, activity in the euro area has been a little stronger than expected, while developments in some emerging economies have been less favourable. The Committee's latest projections imply a gentle strengthening of global growth, but only to around its long-run average of 3% or so. That strengthening is largely driven by the advanced economies, as they gradually cast off the legacy of the financial crisis. The contribution to global growth from the emerging economies is assumed to be broadly stable.

In the euro area, some countries continue to face considerable challenges in improving competitiveness and reducing indebtedness. That is the main reason for the sluggish

Table 5.A Monitoring risks to the Committee's key judgements

The Committee's projections are underpinned by four key judgements. Risks surround all of these, and the MPC will monitor a broad range of indicators to assess the degree to

which the risks are crystallising. The table below provides guidance on the likely path for the indicators if the judgements underlying the MPC's central view evolve as expected.

Key judgement	Likely developments in late 2013/2014 H1 if judgements evolve as expected
1: global growth strengthens gradually, driven by the advanced economies	<ul style="list-style-type: none"> • Quarterly euro-area GDP growth averaging around a quarter of a percentage point in 2013 H2 and 2014 H1. • Quarterly US GDP growth to average around, or a little above, 0.5% in 2013 H2 and 2014 H1. • Indicators of activity consistent with four-quarter growth of around 7.5% in China, and around 4% in the other emerging economies, in 2013 H2 and 2014 H1. • Indicators of international bank funding costs broadly stable.
2: the domestic recovery becomes increasingly entrenched as the headwinds to demand lessen	<ul style="list-style-type: none"> • Quarterly consumer spending growth of around 0.5%, or a little stronger, in 2013 H2 and 2014 H1. • Indicators of business investment consistent with average growth rates of around, or a little above, 2% a quarter in 2013 H2 and 2014 H1; the MPC continues to put relatively little weight on the recent weakness suggested by the official data. • Further modest declines in the cost of credit to some households and smaller companies. Further increases in credit availability. • The pace of decline in four-quarter PNFC net lending continues to ease in 2013 Q4, before returning to growth from 2014 Q1 onwards. • A rise in mortgage approvals for home purchase to around 70,000 a month in 2013 Q4, and around 90,000 in 2014 Q2. • Housing investment growth to remain strong over the next year, averaging around 5% per quarter.
3: slack in the economy is eroded only gradually, despite the recovery in demand	<ul style="list-style-type: none"> • Headline LFS unemployment rate to reach 7.5% by early 2014. • Indicators of spare capacity consistent with no material intensification of capacity pressures. • Average hours continuing to rise gently in 2013 H2 and 2014 H1. • Four-quarter growth in labour productivity per hour to rise to above 1% by early 2014. • The labour market participation rate to remain broadly stable.
4: inflation returns to the target as the impetus from import prices abates, and a gradual rise in productivity growth attenuates domestic price pressures	<ul style="list-style-type: none"> • Medium-term indicators of household and financial market inflation expectations continuing to be consistent with the 2% target (see the box on pages 34–35). • Headline four-quarter AWE growth to be around 1% on average in 2013 H2, rising a little thereafter. • Declining unit labour costs in Q3, followed by gradually rising quarterly growth to around 0.5% by mid-2014. • Sterling ERI, domestic energy bills and commodity prices to evolve in line with the conditioning assumptions (see the box on page 42).

euro-area growth implicit in the Committee's projections; in the central view, growth is assumed to pick up gradually to around 1.5% by the end of the forecast period, somewhat below its historical average. This could prove to be too pessimistic, say if dissipating uncertainty provides a larger uplift to spending growth in the core euro-area countries. Set against that is the possibility that the continuing adjustment in the periphery acts as a greater drag on growth. There are also risks in both directions from the planned asset quality review and bank stress tests. As in previous *Reports*, the Committee's fan charts exclude extreme outturns related to disorderly euro-area adjustment.

In the United States, the highly stimulative stance of monetary policy combined with a reduced fiscal drag should help to support a strengthening of the recovery. But there are risks in both directions around the central view that US growth will return to about its long-term average of 3% by the end of the forecast period. Downside risks include renewed fiscal impasse; upside risks include a greater degree of private sector momentum.

US developments could pose wider risks to the world outlook. In particular, international capital flows to and from some emerging economies have recently exhibited heightened sensitivity to expectations of US monetary policy. In the Committee's central projection, emerging economies that are grappling with weak external positions and elevated domestic inflation — such as Brazil, India, Indonesia, South Africa and Turkey — are assumed to avoid serious disruption. But there are clear downside risks. And while direct trade links with the United Kingdom are relatively small, disorderly outcomes in these economies could still have a material impact, both through the indirect effects of trade with third parties, and through financial linkages.

Given this global backdrop, the MPC's central view assumes that UK exports recover alongside world demand, the recent modest appreciation in sterling notwithstanding. In the central view, the United Kingdom's share of world trade is assumed to revert to its declining pre-crisis trend. The degree to which exporters will be able to capitalise on the world recovery remains unclear, however. In part, the UK trade share depends upon the evolution of sterling. But it also depends upon the scope for services to support export growth — pronounced weakness in services exports, particularly in financial services, in part explains the United Kingdom's unexpectedly weak export performance in the post-crisis period (see the box on pages 47–49).

Key Judgement 2: the domestic recovery becomes increasingly entrenched as the headwinds to demand lessen

The UK recovery is gaining traction. Indicators of domestic activity have been stronger over the past three months than anticipated, particularly so in the housing market (see **Tables 1.A** and **2.A** on pages 9 and 16 respectively). That positive momentum looks set to be maintained, with dissipating uncertainty and thawing credit conditions starting to unlock pent-up demand. But the long-lasting legacy of the financial crisis, and the associated need for balance sheet repair in the private and public sectors, is still likely to cast a shadow over domestic spending. For example, although consumer spending growth is sustained in the central view, it is projected to be only around, or a little above, 0.5% a quarter; that is some way below its historical average of 0.9%. And the anticipated revival in business spending growth is concentrated in the latter part of the forecast period.

One downside risk is that continuing balance sheet repair drags on the recovery to a greater extent than assumed, such that the recent lift to demand from reduced uncertainty and improved credit conditions proves short-lived. For some households in particular, concerns about excessive indebtedness, or about prospects for future income, may mean that they are not prepared to reduce their savings rates to the degree implied by the central view. Set against that, however, is the possibility that domestic demand growth revives more quickly than anticipated, as a self-reinforcing dynamic develops whereby increased spending drives improvements in household and business optimism about incomes, and *vice versa*. Such a feedback loop could manifest itself in a variety of ways: in a faster rise in consumer spending; in an earlier resurgence in business investment; or in stronger activity in the housing market.

The Committee's central view assumes that the revival in housing activity boosts demand through much of the forecast period, and particularly so in the next 18 months. That largely comes through housing investment — the building of new homes, the improvement of existing homes, and services related to property transactions such as conveyancing — which contributes around 1 percentage point to four-quarter GDP growth over the next year or so. The direct link from house prices and housing activity to consumer spending is assumed to be quite modest in the central view, reflecting empirical evidence (see the box on pages 20–21). Uncertainties include the extent to which shortages of labour and materials act as a brake on housing investment. More generally, the housing market may provide a greater boost to consumer demand, particularly if a broader feedback loop emerges between confidence and spending. The central view may also understate the scope for rising property prices to ease collateral constraints for smaller companies. And there is uncertainty about the outlook for house prices more generally. Surveys suggest that the recent rate of increase in house prices will continue in the near term. In the longer run, property prices seem likely to rise broadly in line with nominal incomes, although the dynamics of future house price inflation are unclear.

In the near term, an unexpectedly strong housing market revival represents an upside risk to the growth projection. However, concerns about stability could emerge if stronger activity were accompanied by substantial and rapid increases in house prices and leverage. For that reason, the Bank remains vigilant to the potential for emerging vulnerabilities associated with the property market. Any potential risks to financial stability emanating from the property market would in the first instance be addressed by the Financial Policy Committee, working with the Financial Conduct Authority and the Prudential Regulation Authority. Such risks will be discussed in the forthcoming November 2013 *Financial Stability Report*.

Key Judgement 3: slack in the economy is eroded only gradually, despite the recovery in demand

The post-crisis period has been marked by persistent weakness in productivity, and the scope for productivity to pick up alongside the recovery in demand remains the key question for the Committee. In August, the central projection assumed that the upswing in demand was largely matched by an increase in supply, with unemployment projected to fall only gradually. Since then, productivity has risen broadly as expected (see **Table 3.A** on page 25). But unemployment has fallen faster than anticipated, reflecting unexpectedly strong output growth.

There is little in the recent data to alter materially the Committee's view about the prospects for productivity. The causes of the past weakness in productivity remain uncertain, and several factors may have been at work. Some of these are likely to recede as demand recovers — for example, labour productivity will have been depressed by the need for some companies to maintain minimum staffing levels during the downturn, and by a desire to retain skills and expertise (a form of labour hoarding). But other influences will dissipate only gradually. For example, the fragility of the banking sector is thought to have contributed to inefficiencies in the allocation of capital across companies and sectors, and this may take time to resolve.

The outlook for productivity depends on the balance between the ephemeral impediments to productivity growth, and the more persistent ones. In the central view that balance is such that productivity growth rises gradually to around its pre-crisis rate by the end of the forecast period, although there are sizable risks in both directions. The magnitude of the pickup in productivity will determine the eventual strength and durability of the recovery. It will also be a central influence on the margin of slack: the faster the rate of productivity growth, the greater the scope for the economy to expand without generating inflationary pressure.

In the central view, with productivity growth likely to rise as the recovery takes hold, a margin of slack is assumed to persist throughout the forecast period. In the labour market, slack will take time to erode as companies, in aggregate, are assumed to work existing resources more intensively before stepping up hiring. Persistent slack in the labour market also reflects the assumptions that average hours worked will continue to drift up, in contrast to their pre-crisis trend, and that the participation rate remains broadly stable. Both these assumptions are subject to considerable uncertainty.

Key Judgement 4: inflation returns to the target as the impetus from import prices abates, and as a gradual rise in productivity growth attenuates domestic price pressures

CPI inflation has been above the 2% target for most of the post-crisis period, primarily reflecting the impetus from past

Forecast conditioning assumptions

As a benchmark assumption, the projections for CPI inflation and GDP growth described in **Charts 5.2** and **5.1** are conditioned on a path for Bank Rate implied by market interest rates (**Table 1**). In the period leading up to the MPC's November decision, the path implied by forward market interest rates was for Bank Rate not to rise above 0.5%, the current level of Bank Rate, until early 2015, and to rise to around 1.7% by 2016 Q4. The path for Bank Rate at the time of the *November Report* was, on average, around 0.3 percentage points higher than that assumed in the *August Report*, which was conditioned on an assumption that Bank Rate remained at 0.5% throughout the forecast period.

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

Per cent	2013		2014				2015				2016			
	Q4 ^(b)	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
November	0.4	0.4	0.4	0.5	0.5	0.6	0.7	0.8	1.0	1.1	1.3	1.5	1.7	

(a) The data are fifteen working day averages of one-day forward rates to 6 November 2013. The curves are based on overnight index swap rates.

(b) November figure for 2013 Q4 is an average of realised spot rates to 6 November 2013, and forward rates thereafter.

The November projections are conditioned on an assumption that the total stock of asset purchases financed by the creation of central bank reserves remains at £375 billion throughout the forecast period, the same total scale of purchases assumed in the August projections.

The starting point for sterling's effective exchange rate index (ERI) in the MPC's projections was 82.6, the average for the fifteen working days to 6 November. That was 3.3% above the starting point for the August projections. Under the MPC's usual convention,⁽¹⁾ the exchange rate is broadly stable, and is higher throughout the forecast period than was assumed in August.

The starting point for UK equity prices in the MPC's projections was 3575 — the average of the FTSE All-Share for the fifteen

working days to 6 November. That was 2.4% above the starting point for the August 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 2% higher (in US dollar terms) than at the time of the *August Report*. Based on announcements by major energy suppliers, domestic energy prices are expected to rise by an average of around 9% by 2014 Q1. Wholesale gas futures prices were around 2% lower over the forecast period than at the time of the *August Report*. Major energy suppliers, however, anticipate that their non-energy costs — which were cited by most as part of the reason for the most recent price rises — will continue to increase in coming years. The central projection is therefore conditioned on a benchmark assumption of increases in domestic gas and electricity prices averaging 6% each year.

In line with the usual convention, the Committee's projections are conditioned on the Government's tax and spending plans. For this forecast, that means the plans set out in the 2013 March *Budget*, supplemented by the Office for Budget Responsibility's associated *Economic and Fiscal Outlook*. They also take account of the transfers of gilt coupons received by the Asset Purchase Facility, net of interest costs and other expenses, to the Exchequer. The subsequent use of these cash flows to pay down government debt will have an effect similar to the MPC purchasing gilts of the same value.

The Committee's projections are also conditioned on the recommendations of the Financial Policy Committee (as set out in the Record of its September meeting); and on the current regulatory plans of the Prudential Regulation Authority, including the transition to the Basel III regulatory standard.

(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.

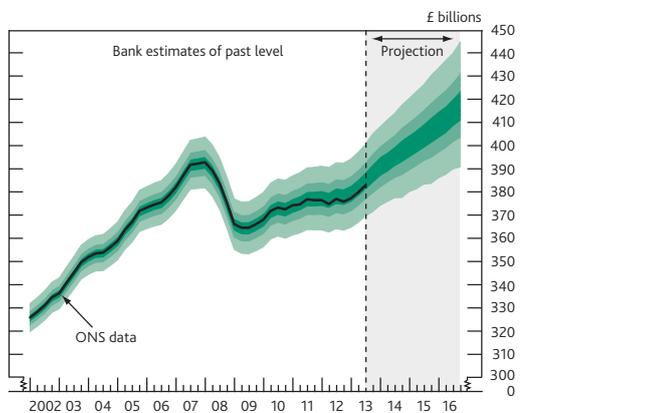
rises in import prices and the unusually large contribution from domestic energy bills and university tuition fees. In the *August Report* inflation was projected to fall back gradually towards the target as higher productivity growth attenuated domestic cost pressures and external price pressures faded. Over the past few months, inflation has fallen back more quickly than anticipated (see Section 4).

A key determinant of companies' costs, and therefore inflation, is unit labour cost growth — wage growth relative to productivity gains. Unit labour cost growth has slowed over

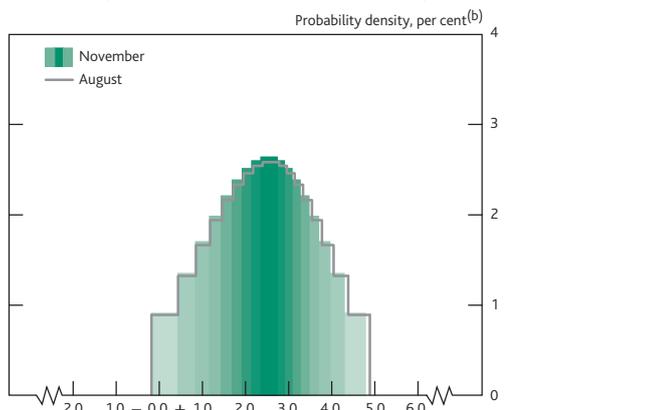
Table 5.B Calendar-year GDP growth rates of the modal, median and mean paths

	Mode	Median	Mean
2013	1.6 (1.5)	1.6 (1.4)	1.6 (1.4)
2014	2.9 (2.7)	2.8 (2.6)	2.8 (2.5)
2015	2.5 (2.5)	2.3 (2.3)	2.3 (2.3)
2016	2.7	2.5	2.5

The table shows projections for calendar-year growth of real GDP consistent with the respective modal, median and mean projections for four-quarter growth of real GDP. The numbers in parentheses show the corresponding projections in the August 2013 *Inflation Report*. The November projections have been conditioned on market interest rates, and the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 billion throughout the forecast period; the August 2013 projections were conditioned on constant interest rates and the same assumption about asset purchases. Where growth rates depend in part on the MPC's backcast, revisions to quarterly growth are assumed to be independent of the revisions to previous quarters.

Chart 5.5 Projection of the level of GDP based on market interest rate expectations and £375 billion asset purchases

Chained-volume measure (reference year 2010). 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.

Chart 5.6 Projected probabilities of GDP growth in 2015 Q4 (central 90% of the distribution)^(a)

(a) Chart 5.6 represents the cross-section of the GDP growth fan chart in 2015 Q4 for the market interest rate projection. It has been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 billion throughout the forecast period. The coloured bands in Chart 5.6 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 2015 Q4 would lie somewhere within the range covered by the histogram on 90 occasions. GDP growth would lie outside the range covered by the histogram on 10 out of 100 occasions. The grey outline represents the corresponding cross-section of the August 2013 *Inflation Report* fan chart, which was conditioned on constant interest rates and the same assumption about the stock of purchased assets financed by the issuance of central bank reserves.

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

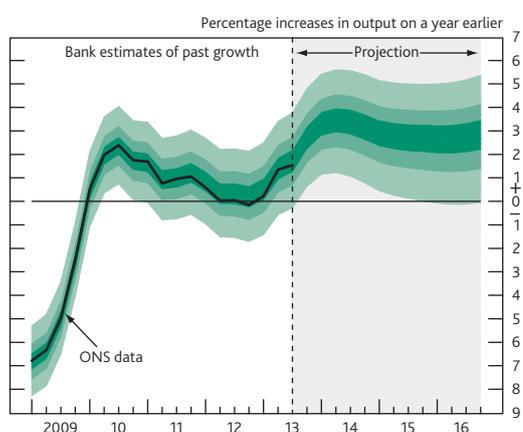
the past year, and may turn negative in the near term as growth in productivity outstrips that in wages. Further ahead, both productivity and wages are likely to pick up, but only at a gradual pace. Pay pressures are expected to be contained by elevated unemployment: in the central view, annual average earnings growth only rises to a little above 3%, below typical pre-crisis rates of 4.5% or so. Among the risks to wages are that companies become more inclined to grant higher pay awards, perhaps reflecting pockets of skill shortages, or broader concerns that continued pressure on real incomes could undermine employees' morale or efficiency. That risk may be particularly marked if companies believe that they can recoup higher wage costs through higher prices as the recovery develops.

Prospects for profit margins are another source of uncertainty. Margins have been squeezed since the financial crisis, and may need to rise in the longer term to provide investors with an adequate return. The Committee's central view is consistent with a gradual restoration of margins in the consumer sector, where the squeeze has been greatest in recent years. However, there is uncertainty about the pace, and the extent of, the rise in profitability, as well as the degree to which margin restoration comes through faster price increases rather than slower rises in costs.

Above-target outturns for CPI inflation over the past five years can be largely accounted for by external prices — oil prices have risen sharply, as have the prices of imports, in part reflecting the 2007–08 sterling depreciation. But these external price pressures have started to fade. That is expected to continue over the forecast: the Committee's projections assume that oil prices follow the gentle downward slope of the futures curve, and that non-oil commodity prices and the sterling ERI are broadly stable (see the box on page 42). There are uncertainties both about these external prices themselves and about their pass-through into consumer prices. For example, in the central view, the Committee's projections assume that only some of the fall in import prices associated with the recent rise in sterling is passed on to the consumer over the forecast period, with the remainder absorbed into company margins. But there is uncertainty about this assumption. Moreover, in general, pass-through may depend on the size and direction of the change in the exchange rate.

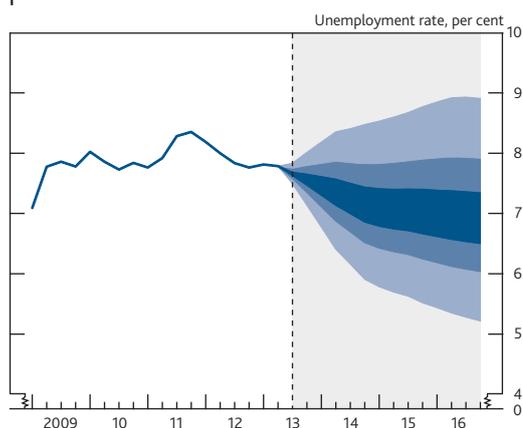
Since the last *Report*, energy suppliers have announced their intention to increase domestic energy prices by an average of 9% or so, 3 percentage points higher than assumed by the Committee in previous *Reports*, adding a further 0.15 percentage points to the near-term inflation rate. In the first part of the forecast period, energy bills are now assumed to contribute around 0.4 percentage points to inflation, substantially above the 0.1 percentage point contribution seen in the decade prior to the crisis. That contribution edges down

Chart 5.7 GDP projection based on constant nominal interest rates at 0.5% and £375 billion asset purchases



See footnote to Chart 5.1.

Chart 5.8 Unemployment projection based on market interest rate expectations and £375 billion asset purchases



The fan chart depicts the probability of various outcomes for LFS unemployment. It has been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 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 the mature estimate of unemployment would lie within the darkest central band on only 30 of those occasions. The fan chart is constructed so that outcomes are also expected to lie within each pair of the lighter blue areas on 30 occasions. In any particular quarter of the forecast period, unemployment is therefore expected to lie somewhere within the fan on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions unemployment can fall anywhere outside the blue area of the fan chart. Over the forecast period, this has been depicted by the light grey background. The calibration of this fan chart takes account of the likely path dependency of the economy, where, for example, it is judged that shocks to unemployment in one quarter will continue to have some effect on unemployment in successive quarters. The fan begins in 2013 Q3, a quarter earlier than the fan for CPI inflation. That is because Q3 is a staff projection for the unemployment rate, based in part on data for July and August. The unemployment rate was 7.7% in the three months to August, and is projected to remain at 7.7% in Q3 as a whole. In the corresponding chart in the August Report, the equivalent quarter (2013 Q2), was included in the solid line, rather than in the fan.

to around 0.3 percentage points from 2015 (see the box on page 42). Other administered and regulated prices — such as tuition fees — will also continue to exert upward pressure on inflation. Uncertainties surround not only the magnitude of future rises in domestic energy bills (and administered and regulated prices more generally), but also their broader impact on inflation.

5.2 The projections for demand, unemployment and inflation

GDP

Based on the judgements above, and the risks around them, four-quarter GDP growth is expected to pick up further in the near term as the lifting of uncertainty and the thawing of credit conditions continue to bolster demand growth. That near-term outlook is a little stronger than three months ago, (Table 5.B), primarily reflecting the increasingly positive tone of recent survey data. However, output is still more likely than not to remain below its pre-crisis peak until next spring (Chart 5.5).

Further ahead, the pace of growth is likely to ease back a little in the second and third years of the forecast as some of the initial boost provided by the lifting of uncertainty and easing of credit conditions moderates. By the end of 2015, GDP growth is likely to be broadly the same as that projected in August (Chart 5.6). The November GDP projection in Chart 5.1 assumes that Bank Rate evolves in line with the market curve, compared with the assumption of constant Bank Rate used three months ago. Chart 5.7 shows the November projection under the alternative conditioning path of constant Bank Rate: the level of GDP is just under 1 percentage point higher by the end of the forecast period than if Bank Rate had followed the market path.⁽¹⁾

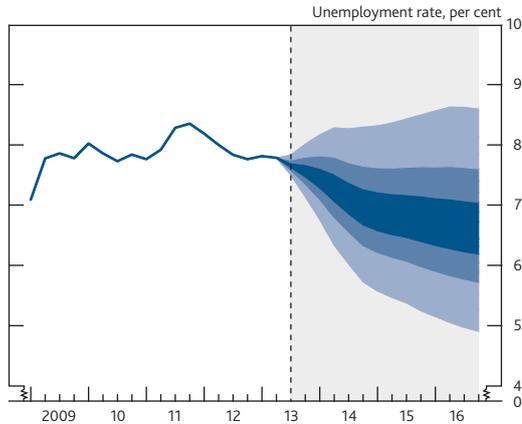
There is a range of views on the Committee about the risks to GDP growth. But, overall, the balance of risks is judged to be to the downside, as in August. That reflects the continuing challenges facing the euro area, as well as the risk that balance sheet repair proves to be a greater drag on growth in domestic spending.

Unemployment

Chart 5.8 shows the Committee's latest projections for unemployment. As the recovery in demand growth is expected to be accompanied by a gradual rise in productivity growth, only a gentle decline in the unemployment rate is in prospect. A broadly stable participation rate and a modest rise in average hours worked also slow the rate at which labour

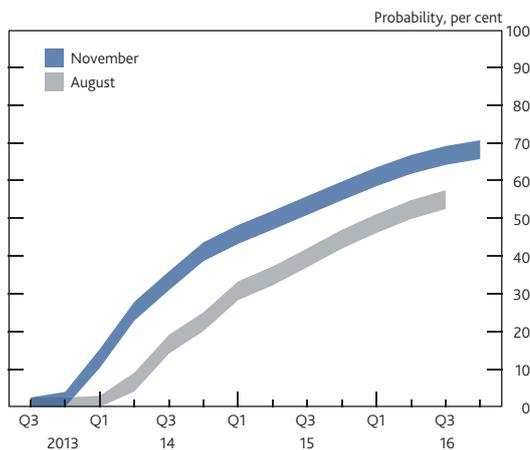
(1) In the August Report, the MPC's projections assumed that the marginal impact on growth and inflation of the assumed path for Bank Rate came through more quickly than had been the case in previous projections, reflecting the impact of its policy guidance on expectations and asset prices. The same approach has been taken in this Report.

Chart 5.9 Unemployment projection based on constant nominal interest rates at 0.5% and £375 billion asset purchases



See footnote to Chart 5.8.

Chart 5.10 Cumulative probability of unemployment having reached the 7% threshold



The November swathe in this chart is derived from the same distribution as Chart 5.8 and is conditioned on market interest rate expectations; the August swathe is that shown in Chart 5.11 of the August Report and is conditioned on constant interest rates. The swathes show the probability that unemployment has reached 7% by each quarter of the forecast period. The 5 percentage points width of the swathes reflects the fact that there is uncertainty about the precise probability in any given quarter, but it should not be interpreted as a confidence interval.

Table 5.C Q4 CPI inflation

	Mode	Median	Mean
2013 Q4	2.2 (2.9)	2.2 (2.9)	2.2 (2.9)
2014 Q4	2.1 (2.4)	2.1 (2.4)	2.1 (2.4)
2015 Q4	1.9 (2.0)	1.9 (2.0)	1.9 (2.0)
2016 Q4	1.9	1.9	1.9

The table shows projections for Q4 four-quarter CPI inflation. The numbers in parentheses show the corresponding projections in the August 2013 *Inflation Report*. The November projections have been conditioned on market interest rates, and the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 billion throughout the forecast period; the August 2013 projections were conditioned on constant interest rates and the same assumption about asset purchases.

market slack is eroded. The projected decline in the unemployment rate is a little faster than anticipated three months ago. This primarily reflects stronger near-term output growth rather than a change of view about the underlying prospects for productivity. Under the alternative assumption of constant Bank Rate, unemployment is projected to fall a little more quickly (Chart 5.9).

Considerable uncertainty surrounds the outlook for unemployment, in part reflecting uncertainty about productivity. Unemployment outturns are also sensitive to assumptions about labour market participation and average hours worked. Small changes can have sizable implications: for example, for a given GDP projection, if four-quarter growth in productivity per hour over the forecast period was 0.25 percentage points lower on average, this would mechanically be associated with a further fall in the unemployment rate of 0.7 percentage points or so. In part reflecting those uncertainties, the width of the fan chart has been increased a little compared with the August Report.

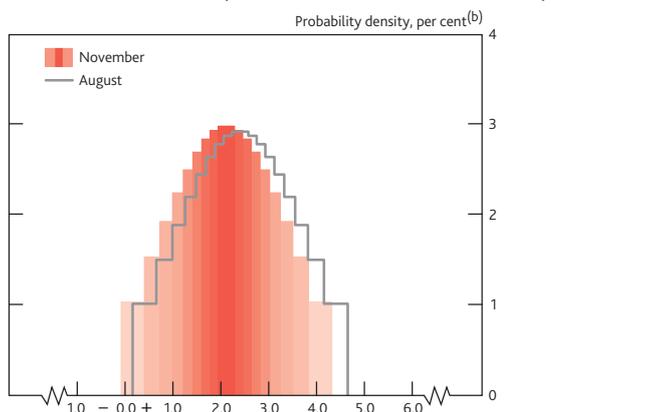
The risks around the central projection for unemployment are judged to be tilted to the upside, reflecting, as in August, both the balance of risks to demand and the possibility that there is more hidden slack in the economy than implied by the central view. The Committee's latest projections, assuming that Bank Rate rises in line with the market curve, imply around a two-in-five chance that the unemployment rate will have reached the 7% policy threshold by the end of 2014. The corresponding figures for the end of 2015 and 2016 are around three in five and two in three respectively (Chart 5.10).

CPI inflation

Under the assumption that Bank Rate rises in line with market yields, CPI inflation is projected to fall a little further in the near term, and remain around, or a little below, the 2% target thereafter. The impetus from import prices is assumed to fade and a gradual recovery in productivity growth, together with a persistent margin of spare capacity in the economy, is expected to curb domestic price pressures. Compared with August, inflation is lower, particularly so in the first half of the forecast period (Table 5.C and Chart 5.11). That lower profile reflects both the unexpectedly low inflation outturns and the recent appreciation of sterling.

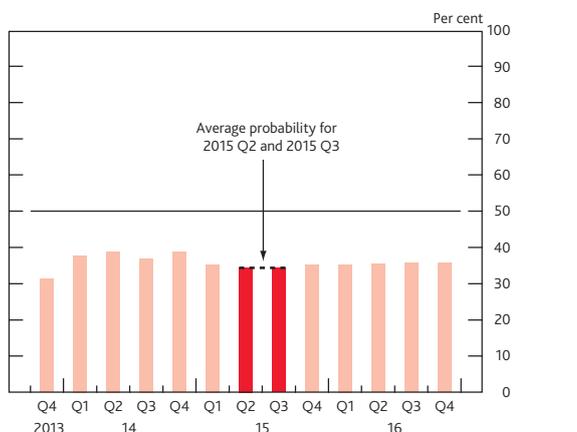
In August, the Committee agreed that its policy guidance would cease to hold either if medium-term inflation expectations were judged to be insufficiently well anchored, or if, in the MPC's view, inflation was more likely than not to be above 2.5% 18 to 24 months ahead. Recent developments in inflation expectations are discussed in the box on pages 34–35. And the Committee's latest projections imply a roughly one-in-three chance that inflation will be above 2.5% 18 to 24 months ahead (Chart 5.12). That compares with a figure of around two in five in the August Report.

Chart 5.11 Projected probabilities of CPI inflation outturns in 2014 Q4 (central 90% of the distribution)^(a)



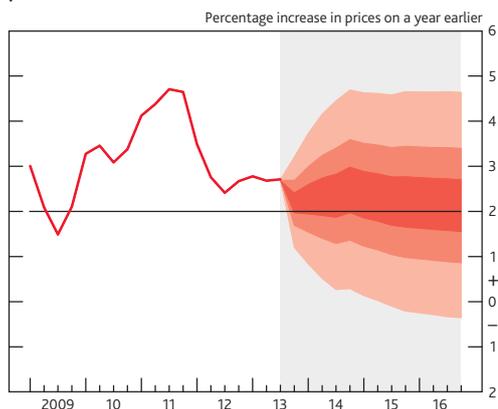
- (a) Chart 5.11 represents the cross-section of the CPI inflation fan chart in 2014 Q4 for the market interest rate projection. It has been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 billion throughout the forecast period. The coloured bands in Chart 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 2014 Q4 would lie somewhere within the range covered by the histogram on 90 occasions. Inflation would lie outside the range covered by the histogram on 10 out of 100 occasions. The grey outline represents the corresponding cross-section of the August 2013 Inflation Report fan chart, which was conditioned on constant interest rates and the same assumption about the stock of purchased assets.
- (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 5.12 Probability that CPI inflation will be at or above the 2.5% knockout



The bars in this chart are derived from the same distribution as Chart 5.2. The bars indicate the assessed probability of inflation being at or above 2.5% in each quarter of the forecast period. The dashed line shows the average of the probabilities in 2015 Q2 and 2015 Q3, consistent with the 18 to 24-month period in the MPC's price stability knockout.

Chart 5.13 CPI inflation projection based on constant nominal interest rates at 0.5% and £375 billion asset purchases



See footnote to Chart 5.2.

Under the alternative conditioning path of constant Bank Rate, CPI inflation is higher throughout the forecast period, reflecting the more accommodative stance of monetary policy, but only a little above 2% by the end (Chart 5.13). This reflects the assumption that the additional activity under constant Bank Rate is in part associated with higher productivity, thus moderating its inflationary impact. The constant rate projection, like the market rate projection, is predicated on inflation expectations remaining anchored.

5.3 The policy decision

A recovery appears to have finally taken hold; even so, a sustained period of strong growth is likely to be needed before slack is materially eroded. To that end, the Committee indicated in August that it intended to maintain the stance of policy at least until unemployment had reached 7%, provided that it did not entail material risks to price stability or financial stability.

At its November meeting, the Committee noted that the stronger near-term outlook for demand meant that, on the assumption that Bank Rate followed a path implied by market rates, unemployment was likely to fall more quickly than anticipated in August, while CPI inflation looked set to fall back to around the 2% target over the next year or so. The pace with which unemployment fell back would, however, depend heavily on the extent to which the recovery in demand was accompanied by higher productivity. The Committee judged that neither of its price stability knockouts had been breached, and noted that the FPC had concluded at its latest meeting that there had been no breach of the financial stability knockout. Its guidance therefore remained in place.

The Committee reiterated that reaching the unemployment threshold would not necessarily trigger an immediate policy response. Rather the setting of policy at that point would depend on the outlook for inflation relative to the target and on the need to provide continued support to output and employment. In that regard, the Committee noted that its projections conditioned on the assumption that Bank Rate remained at 0.5% implied that no policy action was taken when the unemployment threshold was reached. These projections suggested that inflation would be only a little above the target by the end of the forecast period, while growth was projected to be stronger, and unemployment to fall more rapidly, than in the case in which Bank Rate was assumed to rise in line with the market curve.

In the light of both the economic outlook and its policy guidance, the Committee voted to maintain Bank Rate at 0.5% and the stock of asset purchases at £375 billion.

The MPC's forecasting record

A forthcoming *Quarterly Bulletin* article will present a detailed assessment of the MPC's forecasting performance.⁽¹⁾ This box, which summarises part of that assessment, looks at how the economy has evolved relative to the projections in the August 2010 *Inflation Report*, which were typical of MPC forecasts around that time. And it discusses which of the assumptions that underlay that forecast proved to be misplaced.⁽²⁾

How has the economy evolved relative to the MPC's key judgements in the August 2010 Report?

In August 2010, the MPC expected inflation to fall back, and the UK economy to continue to recover from the 2008/09 recession as the effects of the financial crisis faded. In particular:

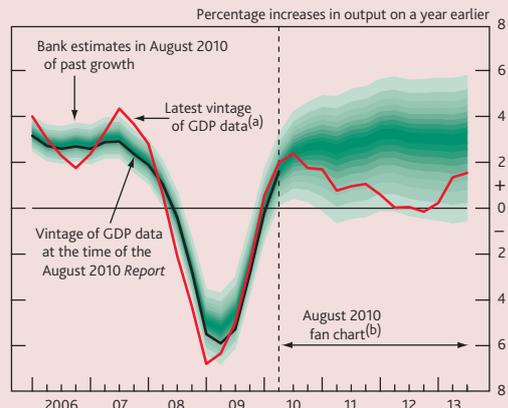
- UK trade was expected to benefit from a global recovery and improved competitiveness following the large depreciation of sterling in 2007–08, such that the UK export share would rise;
- an easing in credit conditions and uncertainty was thought likely to support domestic demand;
- a temporary boost to inflation from import and energy prices was expected to wane;
- rising demand was expected to be associated with rising labour productivity; and
- an increase in unemployment was expected to weigh on wages and prices.

Based on those judgements, the MPC's central projection was for four-quarter GDP growth to average around 3% from 2010 Q2 to 2013 Q2 and for CPI inflation to fall back to below the 2% target by 2012.

In fact, average growth has been closer to 1% (**Chart A**), leaving the level of GDP in 2013 Q2 almost 7% weaker than expected. Relative to their shares in GDP, that unexpected weakness was disproportionately accounted for by exports and business investment (**Chart B**), with consumption also playing a role. There was, however, a partial offset from lower imports. Despite weaker demand, inflation did not, as expected, fall back towards the target, but picked up sharply, reaching around 5% in 2011 Q3 (**Chart C**). That suggests that unexpected developments raised companies' costs, more than offsetting the effects of weaker demand.

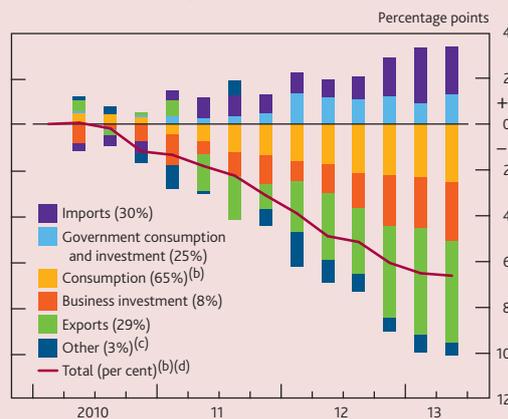
The MPC reacted as the outlook worsened by providing more stimulus: since August 2010, the stock of asset purchases has increased by £175 billion. In addition, Bank Rate has remained at 0.5% compared with an assumed rise to 2% implied by the market curve at that time. Were it not for that more stimulative policy stance, it is likely that GDP and inflation, as

Chart A GDP outturns and projection in the August 2010 Report



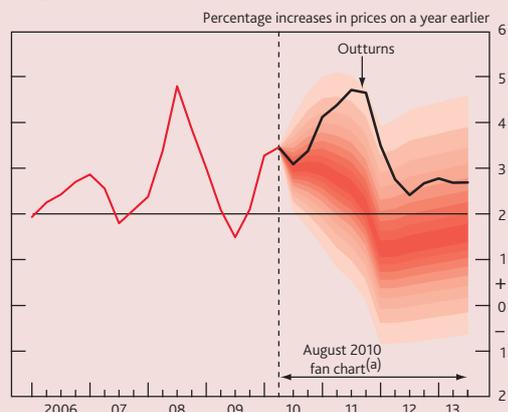
- (a) Revisions, including methodological changes, account for the gap between the red and black lines prior to the vertical dashed line.
 (b) Based on market interest rate expectations and the assumption that the stock of purchased assets remained at £200 billion throughout the forecast period. See footnote to Chart 5.1 in the August 2010 Report for information on how to interpret the fan chart. No adjustment has been made to the fan chart to reflect the effects of methodological changes implemented in the 2011 edition of the *Blue Book*.

Chart B Contributions to the news in the level of real GDP since the August 2010 Report^(a)



- (a) Chained-volume measures. News calculated between 2010 Q1 and 2013 Q2 based on Bank staff projections made in August 2010 that were consistent with the key judgements underlying the MPC's GDP and inflation forecasts. Those forecasts have been adjusted to be at 2010 prices. Figures in parentheses show 2009 weights in real GDP, which sum to more than 100% because imports detract from GDP.
 (b) August 2010 projection adjusted to reflect the effects of methodological changes implemented in the 2011 edition of the *Blue Book*.
 (c) Includes housing investment, stockbuilding, statistical adjustments and news from unexpected revisions to GDP.
 (d) News in the MPC's current GDP backcast relative to the August 2010 modal GDP projection.

Chart C CPI inflation outturns and projection in the August 2010 Report



- (a) Based on market interest rate expectations and the assumption that the stock of purchased assets remained at £200 billion throughout the forecast period. See footnote to Chart 5.6 in the August 2010 Report for information on how to interpret the fan chart.

well as money wages, would have been markedly weaker. The rest of this box examines the underlying drivers of the economy, relative to expectations, as summarised in **Table 1**.

Table 1 Assessing key judgements in the August 2010 Report

August 2010 key judgements	Indicators of key judgements	Cumulative changes from 2010 Q1 to 2013 Q2 (per cent unless otherwise stated)	
		August 2010 projections ^(a)	Current estimate
Consequences of the financial crisis gradually fade			
Sustained recovery in world demand growth.	UK-weighted world trade ^(b)	24.1	14.6
Uncertainty expected to dissipate and credit conditions to ease gradually.	Weighted average of household and corporate lending and deposit rates relative to reference rates (basis points) ^(c)	-175	-20
Limited further imported inflationary pressure			
Import prices expected to be fairly stable.	Import prices (excluding fuels)	0.2	3.9
Energy prices expected to move in line with futures curves.	Sterling oil prices ^(d)	13	36
Rising productivity			
Labour productivity expected to rise.	Whole-economy output per hour	10.4	-1.2

(a) Bank staff projections made in August 2010 that were consistent with the key judgements underlying the MPC's GDP and inflation forecasts.

(b) World trade is constructed using data for import volumes of 143 countries weighted according to their shares in UK exports.

(c) For a full description of this measure see Burgess *et al* (2013), 'The Bank of England's forecasting platform: COMPASS, MAPS, EASE and the suite of models', *Bank of England Working Paper* No. 471, pages 84–86.

(d) Brent forward prices for delivery in 10–21 days' time converted into sterling.

Headwinds to demand more persistent than expected: world demand, credit conditions and uncertainty

Since 2010 Q1, exports have grown by just over 10%, compared with an expectation of around 30%. Around half of that news can be attributed to an unexpectedly weak global recovery, reflecting in part the intensification of sovereign debt concerns and banking sector strains in several euro-area countries in mid-2011. As a result, UK-weighted world trade is estimated to have grown much less than anticipated (**Table 1**), with around two thirds of that news coming directly from the euro area.

The remaining news in exports reflects the fall in the share of world trade captured by UK companies since mid-2010; it had been expected to rise following sterling's depreciation. As discussed in previous *Reports*, although goods exporters seem to have benefited from the depreciation, services exports have fallen relative to world trade, in part reflecting both weaker demand for, and lower supply of, UK financial services.⁽³⁾

Global developments have also dragged on domestic spending. Weaker external demand is likely to have weighed on UK companies' investment. And the euro-area crisis meant

that UK bank funding costs and uncertainty rose again in mid-2011, rather than falling back as expected. The euro-area crisis is one reason why, even after recent improvements in funding costs, a weighted average of the spread of household and corporate lending and deposit rates over Bank Rate is only 20 basis points lower than in early 2010, 150 basis points or so higher than expected (**Table 1**). Uncertainty has probably also dissipated less rapidly than expected.

Headwinds to demand from world trade, credit conditions and uncertainty are key factors contributing to, though not fully explaining, the unexpected weakness in demand since mid-2010. Other things equal, these would have depressed inflation. The unexpected strength in inflation is therefore likely to reflect adverse cost developments. Two such developments discussed in previous *Reports* are rises in import and energy prices, and weak productivity.

Unanticipated rises in energy and import prices have pushed up on consumer prices

CPI inflation has been boosted since mid-2010 by unexpectedly large rises in energy costs. That reflects higher regulatory and distribution costs faced by energy suppliers as well as higher oil prices. Oil prices rose sharply through the latter part of 2010 and first half of 2011, and on average have been 25% above the August 2010 Report conditioning path (**Table 1**). Bank staff estimate that unexpected rises in energy prices can account for around half of a percentage point of the unexpected strength in CPI inflation, on average, over the past three years, with the largest impact in 2011 (**Table 2**).

Table 2 Contributions to the news in CPI inflation since the August 2010 Report

Percentage points	2011 Q2	2012 Q2	2013 Q2
Direct energy prices	+¾	+½	+¼
Import prices excluding fuels	+¾	+1	+¾
Other	Drag from unexpectedly weak demand largely offset by weaker productivity and/or inflation persistence		
<i>Memo: Total CPI inflation news (per cent)</i>	1.6	1.5	1.2

Other import prices have also played a role (**Table 2**). Since 2010 Q1, UK import prices (excluding fuels) have risen around 4% more than expected (**Table 1**), partly reflecting unanticipated rises in non-oil commodity prices. Bank staff estimate that news in UK import prices alone is likely to have added around half of a percentage point, on average, to twelve-month CPI inflation over the past three years. In addition, current estimates suggest that the import intensity of CPI and pass-through to consumer prices have been higher than assumed in August 2010, accounting for a further third of a percentage point of the news in inflation on average.

These estimates are inevitably uncertain and sensitive to the underlying assumptions, but it seems likely that import and energy price rises alone can account for much of the news in CPI inflation since mid-2010. These higher prices have also weighed on households' real income and spending growth.

Although it is possible to account for higher inflation with these higher imported costs, it is still surprising that CPI inflation has not been lower. Had the MPC known that the recovery in demand would falter, it would probably have built in a weaker inflation forecast. That suggests some other factor has counteracted the impact of weak demand on inflation. An obvious candidate, although not the only one, is unexpectedly weak productivity.

Other factors, including unexpectedly weak productivity, have offset the drag on inflation from weak demand

Surprisingly weak demand growth has been associated with weak productivity growth. In contrast to the above-average growth expected in August 2010 (Table 1), productivity has flatlined since mid-2010, such that the effective supply capacity of UK companies has not grown as expected.

There are several factors that are likely to have borne down on productivity, as discussed in Section 3.⁽⁴⁾ Some of the weakness in productivity has probably been directly related to the weakness in demand, so that weak demand has not been associated with much additional downward pressure on inflation. It is also possible that factors such as impaired credit markets have weighed on productivity growth, for example by impeding the efficient allocation of resources. These factors could therefore help account for the unexpected resilience of inflation in the face of weak demand. And they probably also account for some of the unexpected weakness in demand as well: if companies and households now expect productivity weakness to persist for longer than they did prior to mid-2010 then that may have weighed on spending.

In addition to unexpectedly weak productivity growth, other factors could have offset the disinflationary implications of weak demand growth, such as greater inflation persistence. For example, successive rises in inflation through 2010 and 2011 may have led some households and companies to expect inflation to stay high, despite those rises being driven largely by temporary rises in import and energy prices. One to three year ahead inflation expectations did rise through 2011, but fell back again thereafter as inflation moderated (see the box on pages 34–35). The precise relation between inflation expectations measures and actual inflation is, however, uncertain.

Conclusion

Relative to the August 2010 projection, GDP has been weaker than anticipated, and inflation higher. That seems to reflect a number of factors: weaker world growth; a more pervasive impact of tight credit conditions and uncertainty; and stronger import and energy prices. Other factors, such as unexpectedly weak productivity, are also likely to have played a role in offsetting the impact of weak demand growth on inflation.

The key judgements underpinning the MPC's current projections reflect the experience of the past few years. In particular, although the MPC's latest projections incorporate a gradual global recovery, some further easing in credit conditions and a recovery in productivity growth, the MPC now believes that the economy is taking longer to adjust to the repercussions of the financial crisis than was previously expected. Indeed, in its latest projections, GDP is judged likely to grow at around its historical average rate over the forecast period; in August 2010, the recovery was assumed to involve a period of above-trend growth.

(1) An enhanced forecast evaluation exercise is one aspect of the Bank's response to the 'Review of the Monetary Policy Committee's forecasting capability' by David Stockton.

(2) Given inherent uncertainty in economic forecasting, the MPC considers the whole distribution of possible outcomes when setting policy. Since 2010, outturns have lain disproportionately in the lower and upper quintiles of those probability distributions at the one-year and two-year horizons. A fuller analysis of the MPC's forecast errors in the context of their probability distributions will be included in the forthcoming *Quarterly Bulletin* article.

(3) For more information see the box on pages 24–25 of the February 2013 *Report*.

(4) For a discussion of the candidate explanations for the weakness in productivity growth in recent years, see Section 3 of the November 2012 *Report*.

Other forecasters' expectations

Every three months, the Bank asks a sample of external forecasters for their latest economic projections. This box reports the results of the most recent survey, carried out during October. On average, respondents expected annual CPI inflation to fall back steadily over the next three years from its current rate to 2.2% (Table 1). That was similar to average expectations three months ago. Four-quarter GDP growth was, on average, projected to recover gradually, but to remain below its historical average rate of 2.75% over the next three years (Table 1). Cumulative growth over the three years was around 1 percentage point higher than three months ago. In November, the survey also asked for expectations for the LFS unemployment rate: the unemployment rate was expected to fall gradually over the next three years to 6.7% (Table 1).

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

	2014 Q4	2015 Q4	2016 Q4
CPI inflation ^(b)	2.4	2.2	2.2
GDP growth ^(c)	2.1	2.4	2.4
LFS unemployment rate	7.3	7.0	6.7
Bank Rate (per cent)	0.6	0.9	1.5
Stock of purchased assets (£ billions) ^(d)	375	374	362
Sterling ERI	82.2	82.7	82.8

Source: Projections of outside forecasters as of 29 October 2013.

(a) For 2014 Q4, there were 25 forecasts for CPI inflation, GDP growth and Bank Rate, 21 for the unemployment rate, 23 for the stock of purchased assets and 18 for the sterling ERI. For 2015 Q4, there were 23 forecasts for CPI inflation and GDP growth, 20 for the unemployment rate, 24 for Bank Rate, 22 for the stock of purchased assets and 17 for the sterling ERI. For 2016 Q4, there were 21 forecasts for CPI inflation and GDP growth, 18 for the unemployment rate, 22 for Bank Rate, 20 for the stock of purchased assets and 16 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.

These forecasts assumed on average a slightly tighter monetary stance to those made three months ago. On average, Bank Rate was expected to be a touch higher. The stock of asset purchases financed by the issuance of central bank reserves was, on average, expected to be £25 billion lower by the three-year horizon. The sterling ERI was expected to be 2% higher on average at the one-year horizon, but similar in years two and three.

The Bank also asks forecasters for their assessment of the risks around their central projections for CPI inflation, GDP growth and the unemployment rate (Table 2). The average probability assigned to inflation being above the target at the two-year horizon fell back a little relative to the previous survey, but inflation was still judged a little more likely to be above the target than below it; in contrast, the MPC judges the risks around the target to be broadly balanced at that point (Chart A).

On average, respondents' views of the balance of risks to GDP growth over the next three years had shifted to the upside. The average probability attached to GDP growth being more than 3% has increased noticeably over the past three months, at all horizons.

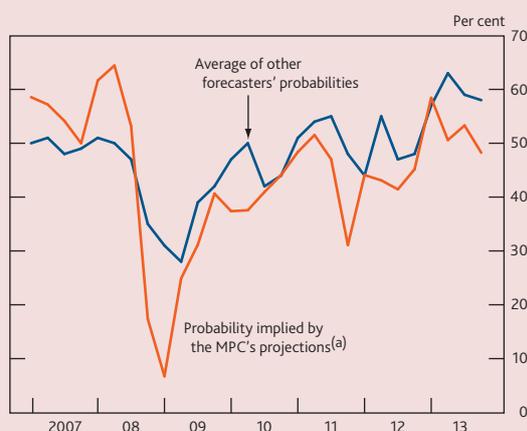
Table 2 Other forecasters' probability distributions for CPI inflation, GDP growth and the unemployment rate^(a)

CPI inflation								
Probability, per cent	Range:							
	<0%	0–1%	1–1.5%	1.5–2%	2–2.5%	2.5–3%	>3%	
2014 Q4	1	4	7	19	28	24	18	
2015 Q4	2	6	11	23	24	19	16	
2016 Q4	2	7	12	23	24	18	15	
GDP growth								
Probability, per cent	Range:							
	<-1%	-1–0%	0–1%	1–2%	2–3%	>3%		
2014 Q4		2	4	12	30	35	17	
2015 Q4		2	6	11	23	38	20	
2016 Q4		3	6	12	21	36	22	
LFS unemployment rate								
Probability, per cent	Range:							
	<5%	5–5.5%	5.5–6%	6–6.5%	6.5–7%	7–7.5%	7.5–8%	>8%
2014 Q4	1	1	4	8	19	36	23	9
2015 Q4	1	2	7	13	28	28	15	6
2016 Q4	2	6	11	16	31	19	10	5

Source: Projections of outside forecasters as of 29 October 2013.

(a) For 2014 Q4, 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, and 20 provided probabilities for the unemployment rate. For 2015 Q4, 22 provided probabilities for CPI and GDP growth, and 19 for the unemployment rate, and for 2016 Q4, 20 provided probabilities for CPI and GDP growth, and 17 for the unemployment rate. The table shows the average probabilities across respondents. Rows may not sum to 100 due to rounding.

Chart A Probabilities of inflation being above 2% two years ahead



Sources: Bank of England and projections of outside forecasters provided for *Inflation Reports* between February 2007 and November 2013.

(a) The probability implied by the MPC's projections is based on forecasts based on market rates with the exception of August 2013, which is based on constant rates.

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Text of Bank of England press notice of 5 September 2013

Bank of England maintains Bank Rate at 0.5% and the size of the Asset Purchase Programme at £375 billion

The Bank of England's Monetary Policy Committee at its meeting on 4 September 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 £375 billion.

The Committee reached its decisions in the context of the monetary policy forward guidance announced alongside the publication of the August 2013 *Inflation Report*.

Also in the context of that guidance, the Committee agreed to reinvest the £1.9 billion of cash flows associated with the redemption of the September 2013 gilt held in the Asset Purchase Facility.

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

Text of Bank of England press notice of 10 October 2013

Bank of England maintains Bank Rate at 0.5% and the size of the Asset Purchase Programme at £375 billion

The Bank of England's Monetary Policy Committee at its meeting on 9 October 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 £375 billion.

The Committee reached its decisions in the context of the monetary policy forward guidance announced alongside the publication of the August 2013 *Inflation Report*.

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

Text of Bank of England press notice of 7 November 2013

Bank of England maintains Bank Rate at 0.5% and the size of the Asset Purchase Programme at £375 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 £375 billion.

The Committee reached its decisions in the context of the monetary policy guidance announced alongside the publication of the August 2013 *Inflation Report*.

The Committee's latest economic projections will appear in the forthcoming *Inflation Report* to be published at 10.30 am on Wednesday 13 November.

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

Glossary and other information

Glossary of selected data and instruments

AWE – average weekly earnings.

CDS – credit default swap.

CPI – consumer prices index.

CPI inflation – inflation measured by the consumer prices index.

ERI – exchange rate index.

GDP – gross domestic product.

LFS – Labour Force Survey.

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.

PMI – purchasing managers' index.

RPI – retail prices index.

RPI inflation – inflation measured by the retail prices index.

Abbreviations

BCC – British Chambers of Commerce.

BLS – Bank Liabilities Survey.

CBI – Confederation of British Industry.

CCS – Credit Conditions Survey.

CEIC – CEIC Data Company Ltd.

CEO – chief executive officer.

CIPS – Chartered Institute of Purchasing and Supply.

CRE – commercial real estate.

ECB – European Central Bank.

FLS – Funding for Lending Scheme.

FOMC – Federal Open Market Committee.

FPC – Financial Policy Committee.

FSB – Federation of Small Businesses.

FTSE – Financial Times Stock Exchange.

GfK – Gesellschaft für Konsumforschung, Great Britain Ltd.

HMRC – Her Majesty's Revenue and Customs.

IMF – International Monetary Fund.

IPD – Investment Property Databank.

LTV – loan to value.

MFIs – monetary financial institutions.

MPC – Monetary Policy Committee.

MSCI – Morgan Stanley Capital International Inc.

MTIC – missing trader intra-community.

OECD – Organisation for Economic Co-operation and Development.

OFCs – other financial corporations.

ONS – Office for National Statistics.

PNFCs – private non-financial corporations.

PRA – Prudential Regulation Authority.

PwC – PricewaterhouseCoopers.

REC – Recruitment and Employment Confederation.

RICS – Royal Institution of Chartered Surveyors.

S&P – Standard & Poor's.

SMEs – small and medium-sized enterprises.

WEO – IMF *World Economic Outlook*.

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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