

# Inflation Report

August 2014



BANK OF ENGLAND







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

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The Overview of this *Inflation Report* is available in PDF at [www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14augo.pdf](http://www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14augo.pdf).

The entire *Report* is available in PDF at [www.bankofengland.co.uk/publications/Pages/inflationreport/2014/ir1403.aspx](http://www.bankofengland.co.uk/publications/Pages/inflationreport/2014/ir1403.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/2014/ir1403.aspx](http://www.bankofengland.co.uk/publications/Pages/inflationreport/2014/ir1403.aspx).



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# Overview

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Robust, broadly based, growth over the past year has taken output to above its pre-crisis peak and unemployment has fallen sharply. Spending should continue to be supported by reduced uncertainty and improved credit availability. Over time, a sustained revival in productivity and real household incomes is expected to underpin the expansion.

Inflation is close to the MPC's 2% target and is projected to remain close to the target in the period ahead. As slack has been absorbed, financial market expectations of the date of the first Bank Rate rise have moved forward. But when Bank Rate does begin to rise, the pace of rate increases is expected to be gradual, with rates probably remaining below average historical levels for some time.

## Recent economic developments

### Demand

The global recovery appears set to continue, despite stalling slightly during the first part of 2014.

In the euro area, growth continued to disappoint, net lending has been falling and inflation has stayed low. In response, the European Central Bank announced a package of measures to support activity and raise inflation. In the United States, GDP growth was volatile in 2014 H1, but lower on average than expected three months ago. Growth in the rest of the world has been largely as expected.

Financial market volatility has remained low, with continuing evidence of a search for yield across asset classes. Sterling has appreciated by around 14% from its March 2013 trough, reflecting in part the strength of UK demand relative to the rest of the world over the past year or so. The UK net trade balance improved slightly in 2014 Q1, despite this appreciation and weaker global growth in that quarter.

The domestic recovery has continued to broaden, with robust spending by businesses and households, supported by lower uncertainty and continuing improvements in credit conditions. Four-quarter growth in business investment reached 11% in 2014 Q1 and business surveys point to strength continuing. Household consumption has also remained strong, with consumer confidence high despite continued weakness in real wages.

House prices have risen by just under 1% a month on average since the *May Report*, although recent indicators have weakened somewhat. That follows signs of a moderation in housing activity since the start of the year. The implementation of the Mortgage Market Review has placed strains on banks' lending capacity.

Weaker housing activity may also have reflected fewer properties coming onto the market earlier in the year. More recently, secondary market supply has picked up while new buyer enquiries have softened, suggesting a closer alignment of supply and demand.

### Supply, costs and prices

The domestic recovery continues to be accompanied by a strengthening labour market. In the three months to May, employment rose by around 250,000, average hours worked rose strongly by 0.6%, and the headline LFS unemployment rate fell to 6.5%. That suggests that labour market slack is being used up at a faster pace than expected three months ago.

The strength in labour market quantities contrasts with continuing weakness in wage growth. Annual private sector regular pay growth probably rose by around 1% in Q2. Weakness in wages in part reflects productivity growth remaining very subdued. It is also possible that stronger quantities are taking time to feed through to wage growth: surveys suggest that the wages employers are paying to hire new recruits are rising faster than average pay. These could be reflected in average pay if more people start moving jobs and as new wage settlements are completed.

But the weakness in wages is also consistent with there having been higher labour supply, and hence more labour market slack, than previously thought. Reflecting that, the Committee has revised up its estimate of medium-term equilibrium labour force participation and revised down that for unemployment.

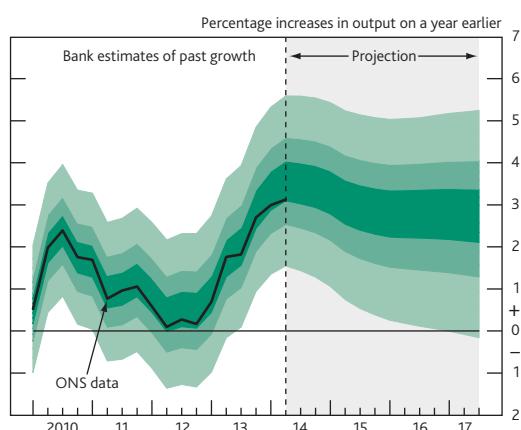
Not surprisingly, there is a wide range of views on the Committee about the likely degree of slack. Uncertainty about how much slack there is has increased in recent months, in part reflecting labour market outturns. In the Committee's best collective judgement, however, the degree of slack has narrowed somewhat, and the central estimate is now broadly in the region of 1% of GDP.

CPI inflation was a touch below the 2% target in June. The fall in inflation over the past year or so in part reflects lower contributions from food and energy prices. In the light of sterling's recent appreciation, import prices, which have been pushing up inflation in recent years, are now falling.

### The outlook for GDP growth and inflation

Chart 1 shows the Committee's best collective judgement for the outlook for four-quarter GDP growth, assuming that Bank Rate rises gradually in line with the path implied by market interest rates and the stock of purchased assets stays at £375 billion. The final estimate of four-quarter growth, taking into account expected future revisions, is projected to ease back from around 3½% in 2014 to around its pre-crisis historical average rate. The risks around that central projection are skewed a little to the downside. Improved sentiment and credit conditions continue to

**Chart 1** GDP projection based on market interest rate expectations and £375 billion purchased assets



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.



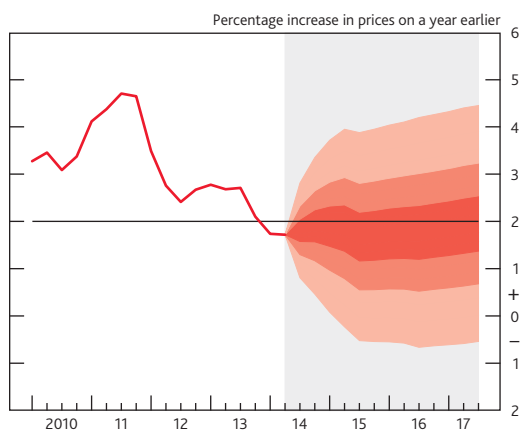
support spending, while a gradual revival in productivity growth underpins strengthening real household incomes. Housing and business investment support growth, albeit to a lesser extent than judged likely three months ago.

The projection assumes that global growth remains steady in the face of continuing economic and financial challenges. In the euro area there are downside risks, associated with a prolonged period of weak inflation and low growth in the periphery, which could re-awaken concerns about debt sustainability. Globally, marked rises in financial market volatility and corrections in asset prices, perhaps associated with a normalisation in US monetary policy, pose significant downside risks.

Domestically, output is sensitive to the assumption that a gradual revival in productivity and real household incomes help to underpin a sustained expansion. Productivity growth has shown few signs yet of a recovery and is now projected to pick up more slowly than anticipated in May. Actions taken by the Bank's Financial Policy Committee in June have reduced the risks related to household indebtedness from the housing market. But there is more uncertainty about the path for the housing market in the near term than three months ago. The outlook will also depend on how easily households and businesses are able to absorb the gradual rises in interest rates embodied in the market interest rate path.

As output growth moderates and productivity growth recovers, the rate at which unemployment falls slows. Remaining labour market slack is absorbed gradually, and is eliminated by the end of the forecast period. But conflicting indicators from the labour market mean that uncertainties about the level of slack, and its future path, are considerable. In recent years, increases in the number of people who are willing and able to compete for jobs, and in the desired hours of those in employment, have boosted labour supply and employment. These positive supply-side trends could continue. Equally, there is a risk that they could abate as real pay recovers.

**Chart 2** CPI inflation projection based on market interest rate expectations and £375 billion purchased assets



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 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 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 2** summarises the MPC's best collective judgement of the outlook for CPI inflation on the same basis as **Chart 1**. In the central case, inflation falls back a little in the near term as the appreciation of sterling bears down on import prices and, in turn, prices in the shops. By the end of the forecast horizon, the drag from slack has lessened and the associated recovery in wage growth is consistent with inflation being at the target.

There are risks on either side of this projection, in particular stemming from labour costs. As labour market slack diminishes and productivity growth picks up, wage growth is expected to rise slowly. But wage growth could pick up more sharply than expected, particularly if recruitment pressures broaden and intensify. Against that, it is also possible that wage pressures could remain weaker for longer if labour supply growth remains strong.

The experience of recent years has shown that inflation can also be pushed materially away from the target by external cost shocks. Global energy prices remain a key risk, especially if they become more sensitive to geopolitical events. The outlook for import prices more generally depends on the evolution of the exchange rate. Its impact on inflation will be lower if companies do not fully pass lower import prices through to customers and instead take the opportunity to expand margins.

### The policy decision

Robust growth over the past year has taken output to above its pre-crisis peak. Strong output growth has yet to be matched by a material pickup in productivity, however. Instead employment gains have been exceptionally strong and unemployment has fallen sharply. The strength in labour market quantities has contrasted with the weakness of wage growth, increasing the uncertainty about the current degree of spare capacity. It seems likely that slack over the past year or two has been greater than previously thought; it also seems likely that slack is being used up at a faster rate than expected. In light of the heightened uncertainty about the current degree of slack, the Committee noted the importance of monitoring the expected path of costs, particularly wages, in assessing inflationary pressures.

At its August meeting, the Committee noted that, conditioned on the path of Bank Rate implied by market yields, four-quarter output growth was expected to be close to its historical average rates for the next few years. The pace at which slack was being absorbed was projected to slow, reflecting a gentle expansion of supply, thereby limiting the build-up of domestic inflationary pressures. Import prices were likely to weigh on inflation. Overall, CPI inflation was thought likely to remain close to, or a little below, 2%, before reaching the target at the end of the forecast period.

The Committee sets monetary policy to meet the 2% target in the medium term and in a way that helps to sustain growth and employment. The Committee gave guidance in its February *Report* on how it would seek to achieve the inflation target over the policy horizon. At its August meeting, the Committee noted that the central message of that guidance remained relevant: given the likely persistence of the headwinds weighing on the economy, when Bank Rate did begin to rise, it was expected to do so only gradually. Together with the legacy of the financial crisis and broader global forces, this meant that Bank Rate was expected to remain below average historical levels for some time to come. It remained the case, however, that the actual path for monetary policy, even after the first rise in Bank Rate, would remain dependent on economic conditions. In other words, the Committee's guidance on the likely pace and extent of interest rate rises was an expectation, not a promise.

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

# 1 Money and asset prices

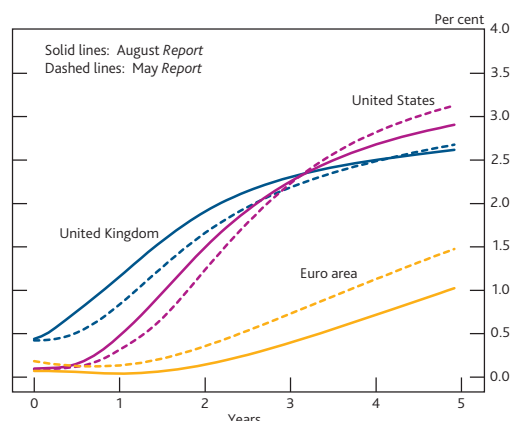
Official interest rates in the United Kingdom and other advanced economies remained at historically low levels. The ECB introduced a number of new policy measures. Market expectations for short-term interest rates rose in the United Kingdom, and fell in the euro area. The sterling exchange rate appreciated a little further. Credit conditions for companies continued to improve, and lending to corporates and households picked up in Q2. Housing market activity and, in particular, mortgage approvals were weaker than expected, while house prices continued to rise.

**Table 1.A** Monitoring the MPC's key judgements

Developments anticipated in May	Developments since May
<b>Cost of credit</b>	<b>On track</b>
• Credit spreads to continue to decline over 2014.	• Credit spreads continued to decline in 2014 H1.
<b>Mortgage approvals</b>	<b>Weaker than expected</b>
• Mortgage approvals for house purchase to remain at around 70,000 a month in 2014 Q2, reaching around 85,000 by 2014 Q4.	• Mortgage approvals averaged 64,000 a month in Q2. Now expected to rise to around 75,000 a month, on average, in 2014 Q4.
<b>House prices</b>	<b>On track</b>
• Rises in the main indices of national house prices to average around 1% a month in 2014 Q2.	• Rises in main indices of national house prices averaged around 1% a month in Q2.
<b>PNFC lending</b>	<b>Stronger than expected</b>
• PNFC net lending to be around zero in 2014 Q2, and to pick up in subsequent quarters.	• PNFC loan growth was 0.7% in 2014 Q2.
<b>Evolution of sterling</b>	<b>Higher than expected</b>
• Sterling to evolve in line with conditioning assumptions.	• Sterling appreciated 2%.

**Chart 1.1** Market expectations for UK, US and euro-area rates diverged further

International forward interest rates<sup>(a)</sup>



Sources: Bank of England and Bloomberg.

(a) The May 2014 and August 2014 curves are estimated using instantaneous forward overnight index swap rates in the fifteen working days to 7 May 2014 and 6 August 2014 respectively.

## 1.1 Monetary policy and financial markets

### Monetary policy and market interest rates

In the United Kingdom, the Monetary Policy Committee (MPC) maintained Bank Rate at 0.5% and the stock of purchased assets at £375 billion. As set out in the February 2014 *Report*, when the Committee does start to raise Bank Rate, it expects to do so gradually, and probably to a level materially below its pre-crisis average. Short-term market interest rates have risen a little since the May *Report*, and imply that market participants expect Bank Rate to rise gently, from around 2015 Q1, to 2¼% or so in three years' time (**Chart 1.1**). Expectations for Bank Rate in five years' time are little changed (**Chart 1.1**).

In the United States, the Federal Open Market Committee (FOMC) continued its policy of asset purchases, but slowed the monthly pace of purchases further, in line with market expectations. The FOMC restated that it would probably be appropriate to maintain the policy rate at an exceptionally low level for a considerable time after the asset purchase programme had ended. Market prices imply a slightly earlier rise in interest rates than three months ago, but rates are expected to remain below those in the United Kingdom for the next three years or so (**Chart 1.1**).

The European Central Bank's (ECB's) Governing Council, by contrast, loosened policy further. At its June meeting, the ECB announced a number of new policy measures, set out in a box on page 10, which are designed to return inflation from its current low rates to its target of below, but close to, 2%. Short-term market interest rates in the euro area have fallen since the May *Report*, and to further below those in the United Kingdom and the United States (**Chart 1.1**).

The ECB loosening, alongside low inflation across the region, is likely to have borne down on longer-term interest rates in many euro-area countries (**Chart 1.2**). Continued risk appetite

## ECB monetary stimulus

Against a backdrop of low inflation and weak bank lending to companies (Section 2), on 5 June 2014, the European Central Bank (ECB) announced a monetary stimulus package to help return inflation to a rate consistent with its objective for price stability.<sup>(1)</sup>

The ECB sets three policy rates: the main refinancing rate, the deposit rate and the lending rate.<sup>(2)</sup> These were all lowered: the refinancing and deposit rates by 10 basis points each, and the lending rate by 35 basis points. The deposit rate is now negative, at -0.10%. This means that banks will be charged for holding excess reserves in the ECB's deposit facility. The ECB also reaffirmed its guidance that interest rates will remain at present levels for an extended period of time.

In addition to the reduction in policy rates, the following measures were announced:

- A series of operations to support bank lending to the real economy. These targeted longer-term refinancing operations (TLTROs) will offer participating banks a cheaper source of funding than that available in markets. Banks will initially be able to borrow up to 7% of the total amount of their loans to the non-financial private sector, excluding residential mortgages. The interest rate will be fixed at the ECB's main refinancing operations rate prevailing at the time the loan is undertaken, plus a small spread. Provisions are in place to ensure that the funds support the real economy.<sup>(3)</sup>
- The suspension of the sterilisation of the Securities Market Programme. The weekly sterilisation operation had drained around €160 billion of liquidity injected by the ECB's euro-area government bond purchase programme.
- The extension of fixed-rate tender procedures with full allotment at least up to 2016, to support liquidity in the

system. This means that the ECB's main refinancing operations will continue to lend banks all the funds they demand at a fixed interest rate, against adequate collateral.

- Plans to intensify preparatory work related to outright purchases of asset-backed securities. While trading in asset-backed securities is currently at a low level, recent work by the ECB and the Bank of England suggests that supporting the revitalisation of the market may maximise the broader benefits of well-functioning securitisation.<sup>(4)</sup>

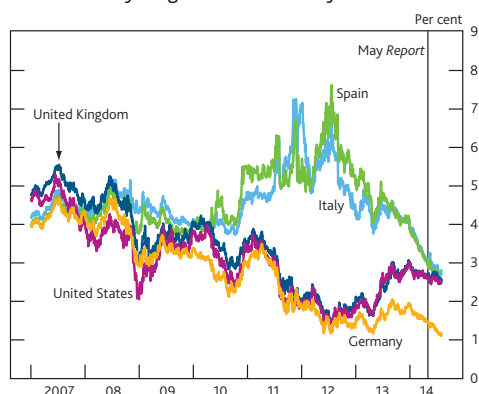
The measures are intended to ease the monetary stance and to improve the transmission of that stance. The announcement also signalled that policy would continue to be accommodative.

The precise impact of the ECB measures will depend upon a range of economic factors. A key influence will be the response of bank lending — which is currently very weak — to cheaper funding costs. Bank lending may also be influenced by the publication, later this year, of the ECB's asset quality review and bank stress-test results.

The MPC's central projections are consistent with the ECB's policy measures boosting output and inflation by reducing bank funding costs and so improving credit conditions. Section 5 discusses the outlook for the euro area, and the associated risks.

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- (1) For more details, see the ECB's press releases: [www.ecb.europa.eu/press/pr/date/2014/html/index.en.html](http://www.ecb.europa.eu/press/pr/date/2014/html/index.en.html). Further details of the TLTROs were announced on 3 July 2014.
- (2) The main refinancing rate remunerates banks on reserves up to the ECB's minimum monthly requirement. Reserves held in excess of that minimum can either be lent in the market, or deposited at the ECB's marginal deposit facility and usually remunerated at the deposit rate. Banks that borrow from the ECB's marginal lending facility are charged at the lending rate. See *The monetary policy of the ECB 2011*, available at [www.ecb.europa.eu/pub/pdf/other/monetarypolicy2011en.pdf](http://www.ecb.europa.eu/pub/pdf/other/monetarypolicy2011en.pdf).
- (3) Banks that do not improve net lending relative to a benchmark will be asked to repay their loans after two years, instead of four.
- (4) For further details, see Bank of England and ECB (2014), 'The case for a better functioning securitisation market in the European Union: A Discussion Paper', May; [www.bankofengland.co.uk/publications/Documents/news/2014/paper300514.pdf](http://www.bankofengland.co.uk/publications/Documents/news/2014/paper300514.pdf).

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



Source: Bloomberg.

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

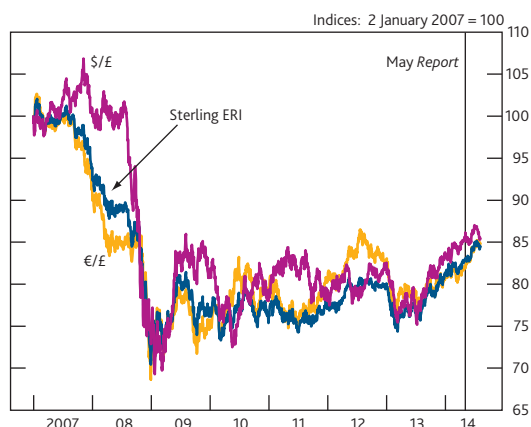
among investors (see below) may also have weighed on the spreads of euro-area periphery bonds — such as those in Spain and Italy — relative to German yields. Following large falls over the past year, Portuguese and Greek spreads have been broadly flat over the past three months, but have been sensitive to developments such as uncertainty around the downgrading and subsequent restructuring of a major Portuguese bank.

Sovereign bond yields in the United Kingdom and the United States have continued to move closely together, and have changed little over the past three months (Chart 1.2).

## Exchange rates

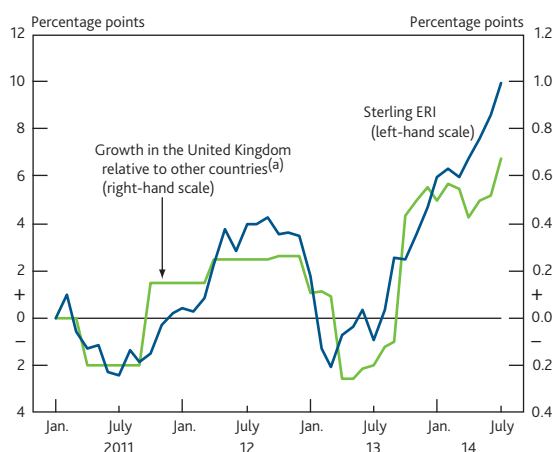
The sterling effective exchange rate (ERI) has appreciated by around 2% since the *May Report*, and by 14% since its March 2013 trough (Chart 1.3), reflecting rises against a range

**Chart 1.3 Sterling appreciated further**  
Sterling exchange rates



**Chart 1.4 Sterling supported by improving UK growth prospects**

Relative revisions to Consensus domestic demand growth forecasts for 2014–16 and sterling ERI



Sources: Bank of England, Bureau of Economic Analysis, Consensus Economics, Eurostat, ONS and Bank calculations.

(a) Revisions since January 2011 to Consensus expectations for the weighted sum of investment and private consumption growth in the United Kingdom less that in the United States, euro area and Japan. Average of projections for end-2014, end-2015 and end-2016.

of currencies. That leaves sterling a little above the band in which it has been trading following the 2007–08 depreciation.

The rise in sterling may reflect the perceived strength of the economic outlook in the United Kingdom relative to its trading partners. In recent years, movements in sterling have tended to correlate well with revisions to forecasts for UK domestic demand growth relative to that for the United States, euro area and Japan (**Chart 1.4**). The extent of the most recent rise in sterling is perhaps a little larger than revisions to published forecasts might suggest, but may reflect the strength of UK activity in the first half of 2014 relative to that in the United States and the euro area.

Another indicator of how much the rise in sterling reflects the relative performance of the UK economy is changes in relative interest rates: exchange rates should move to equalise the expected risk-adjusted returns on assets denominated in different currencies. Such changes tend to match movements in exchange rates only imperfectly, but changes to UK real interest rates relative to those abroad can account for around half of sterling's appreciation since March 2013, an unusually large proportion. The implications of sterling's appreciation are discussed in Sections 2 and 4.

### Corporate capital markets

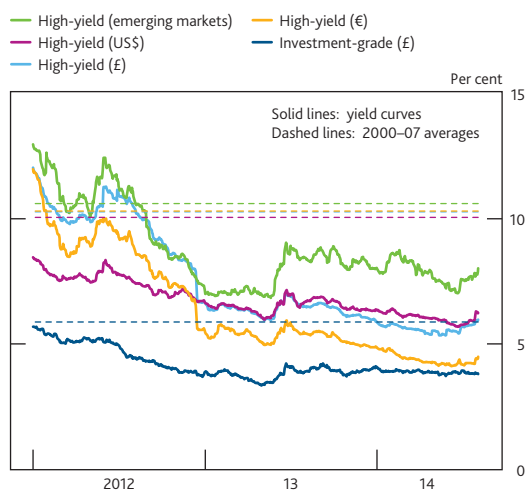
A general feature of global financial markets over the past year or so has been continued low levels of short-term implied volatilities — a gauge of financial market uncertainty (Section 5). Over the past three months, implied volatilities at short horizons remained at or below pre-crisis levels in equities, currency and interest rate markets, although they temporarily picked up in response to geopolitical tensions, in particular in equity and exchange rate markets. At longer horizons, however, implied volatilities are around pre-crisis levels.

Another feature has been continued signs of a 'search for yield', as investors seek to bolster the nominal returns from their portfolios by investing in relatively riskier assets.<sup>(1)</sup> As set out in the June 2014 *Financial Stability Report*, 'search for yield' seems to be apparent in price and non-price terms in a number of markets.<sup>(2)</sup> For high-yield corporate bonds, for example, despite some rises recently, spreads remain close to pre-crisis levels in US dollar, euro and sterling markets. Both liquidity risk premia — the compensation demanded by investors for bearing the risk that it will be difficult to sell an asset in the future — and credit risk premia appear to be relatively low. Yields on these assets remain below their pre-crisis averages (**Chart 1.5**).

(1) For more details, see the June 2014 *Financial Stability Report*; [www.bankofengland.co.uk/publications/Documents/fsr/2014/fsrfull1406.pdf](http://www.bankofengland.co.uk/publications/Documents/fsr/2014/fsrfull1406.pdf).

(2) For more details, see Table 1.A on page 12 of the June 2014 *Financial Stability Report*; [www.bankofengland.co.uk/publications/Documents/fsr/2014/fsr35sec1.pdf](http://www.bankofengland.co.uk/publications/Documents/fsr/2014/fsr35sec1.pdf).



**Chart 1.5 Bond yields remain compressed**International corporate bond yields<sup>(a)</sup>

Source: BofA Merrill Lynch Global Research.

(a) Investment-grade bond yields are calculated using an index of bonds with a rating of BBB3 or above. High-yield corporate bond yields are calculated using aggregate indices of bonds rated lower than BBB3. Due to monthly index rebalancing, movements in yields at the end of each month might reflect changes in the population of securities composing the indices.

Non-price evidence for the continued 'search for yield' includes weakening investor protection on high-yield bonds — for example, issuers having the right to redeem a bond early — particularly in the United States. In addition, underwriting standards on leveraged loans, which are primarily used to finance private equity-sponsored acquisitions, have been loosening.

For UK non-financial companies, spreads and yields on investment-grade corporate bonds have been broadly unchanged since the start of the year; spreads for these assets remain above their pre-crisis levels. Private non-financial corporations' (PNFCs') net corporate bond issuance — which has been buoyant in recent years — increased a little in 2014 Q2 (Section 1.3). It is possible that bond issuance is still being supported by the MPC's asset purchases.

Equity prices in the United Kingdom, United States and euro area fell in the period immediately prior to the *August Report*. Despite those falls, equity prices in the United States and Japan were 5% and 9% higher respectively in the fifteen working days to 6 August than in the run-up to the *May Report*. The FTSE All-Share index was broadly unchanged over that period, but that underperformance relative to equity benchmarks elsewhere seems largely related to idiosyncratic factors in the mining and energy, and financial sectors. Euro-area equity prices, however, were below the levels seen in the run-up to the *May Report*.

## 1.2 The banking sector

### Bank funding costs

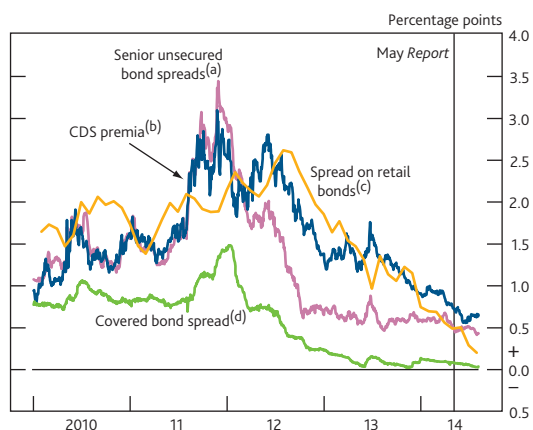
The amount of lending that banks can provide to the real economy, and the terms on which they provide that credit, depends on their own ability to access funds. Banks access funding through several channels. Over the past two years, UK banks have been able to obtain funds through the Funding for Lending Scheme (FLS). In addition, they have seen substantial rises in customer deposits over the past year: for example, deposits by PNFCs rose around 13%. This increase in deposits has reduced banks' need to access funding through other channels. In the Bank of England's *Bank Liabilities Survey* (BLS), lenders reported a significant reduction in volumes of other (non-retail) funding, including wholesale debt issuance, leaving overall funding volumes broadly unchanged in Q2.

Bank funding spreads have fallen a little further since the *May Report*, following a significant fall over the previous year (Chart 1.6). That was partly offset by an increase in reference rates, such as swap rates, as short-term market interest rates rose (Section 1.1). Overall, the cost of funding new loans fell slightly in Q2 according to lenders responding to the BLS.

Banks' funding costs will be influenced by their capital positions, which have been strengthened since the financial

**Chart 1.6 UK banks' funding spreads fell further**

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 average of two and three-year spreads on retail bonds, 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.

**Table 1.B Total net external finance increased in Q2, following weak Q1**

Net external finance raised by PNFCs<sup>(a)</sup>

£ billions

	Averages			2014 Q1	2014 Q2
	2003–08	2009–12	2013		
Loans	11.5	-6.2	-2.2	-4.5	0.0
Bonds <sup>(b)(c)</sup>	3.4	3.2	3.1	-0.9	0.7
Equities <sup>(b)</sup>	-2.1	1.4	-1.2	1.1	3.3
Commercial paper <sup>(b)</sup>	0.0	-0.4	0.0	-1.2	-2.4
Total <sup>(d)</sup>	12.8	-2.0	-0.3	-5.9	0.3
Memo: Quarterly PNFC loan growth <sup>(e)</sup>	2.8	-0.7	-0.1	-2.2	0.7

(a) Includes sterling and foreign currency funds.

(b) Non seasonally adjusted.

(c) Includes stand-alone and programme bonds.

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

(e) Sterling net lending excluding the effects of securitisations, per cent.

**Table 1.C Credit conditions continue to improve, particularly for larger companies**

Credit Conditions Survey: corporate credit conditions<sup>(a)</sup>

	Quarterly averages					2014 Q3 <sup>(b)</sup>
	2007 Q2–2009	2010–11	2012	2013	2014 H1	
<b>Credit availability</b>						
Small businesses	n.a.	7	1	6	6	-9
Medium PNFCs	n.a.	6	4	6	2	10
Large PNFCs	n.a.	4	3	13	9	6
<b>Loan spreads</b>						
Small businesses	n.a.	-6	-5	6	3	-5
Medium PNFCs	-30	9	-12	24	25	29
Large PNFCs	-35	26	-2	32	48	30
<b>Fees and commissions</b>						
Small businesses	n.a.	-4	-3	2	0	0
Medium PNFCs	-29	9	-6	10	16	11
Large PNFCs	-30	21	-4	15	36	28

(a) Weighted response of lenders. A positive (negative) balance indicates that more (less) credit was available, or that spreads or fees and commissions had fallen (risen) over the previous three months. Questions on small businesses were not asked prior to 2009 Q4 and questions on credit availability for medium and large PNFCs separately were not asked prior to 2009 Q3.

(b) Lenders' expectations for the following three months reported in the 2014 Q2 survey.

crisis. UK banks' capital ratios rose after they implemented plans to rectify capital shortfalls identified in response to an interim Financial Policy Committee (FPC) recommendation.<sup>(1)</sup> And lenders responding to the BLS expect a significant further increase in capital levels in Q3, quoting regulatory change as a key driver. This increased capital resilience should, over time, support the flow of credit to the real economy.

## 1.3 Credit conditions

### Corporate credit conditions

The four-quarter rate of growth in PNFCs' M4 lending turned positive in Q2, for the first time since 2009. That was despite a further weakening in net lending to the real estate sector.<sup>(2)</sup> PNFC net lending in Q2 was stronger than expected at the time of the *May Report*.

Net external finance raised by companies, including from issuance of bonds and equities, fell in 2014 H1 (**Table 1.B**).

The weakness of net corporate bond issuance in the early part of the year largely reflected a small number of large transactions, including Vodafone's sale of its stake in Verizon Wireless and the subsequent redemptions to bondholders. Excluding these effects, net corporate bond issuance appears to have been positive. Since the financial crisis, large PNFCs in aggregate have relied primarily on capital market issuance for their external funding, while repaying bank debt.

Credit conditions appear to be increasingly supportive of loan growth. In the Bank's 2014 Q2 *Credit Conditions Survey* (CCS), lenders reported no change to corporate credit availability, following six consecutive quarters of improvement, but expected a renewed expansion in Q3. PNFC loan growth is expected to remain positive in 2014 H2 (Section 5), although still considerably weaker than before the financial crisis.

Generally, the improvement in credit availability appears to have been greater for larger PNFCs than for small and medium-sized enterprises (SMEs), continuing recent trends. Spreads on loans and bonds have fallen much more sharply for large companies than smaller ones over the past two years. And non-price terms, such as fees and commissions charged, have also improved more for large companies (**Table 1.C**). The terms of the FLS were changed at the end of 2013 to refocus it towards supporting lending to small and medium-sized companies.

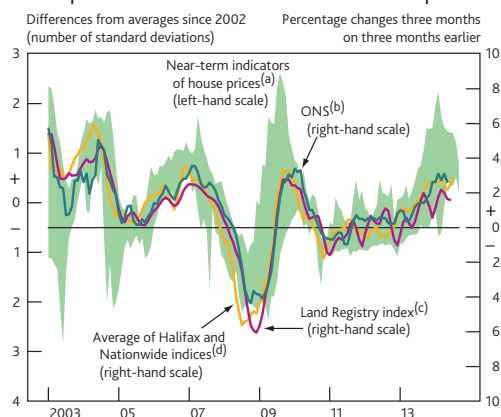
The weakness in bank lending to small companies is likely to reflect not only weaker supply than before the financial crisis,

(1) For more detail see 'Progress on previous macroprudential policy decisions' in the June 2014 *Financial Stability Report*; [www.bankofengland.co.uk/publications/Documents/fsr/2014/fsrfull1406.pdf](http://www.bankofengland.co.uk/publications/Documents/fsr/2014/fsrfull1406.pdf).

(2) For more detail see 'Trends in lending and capital market issuance, by major industrial sector' in July 2014 *Trends in Lending*; [www.bankofengland.co.uk/publications/Documents/other/monetary/trendsjuly14.pdf](http://www.bankofengland.co.uk/publications/Documents/other/monetary/trendsjuly14.pdf).

### Chart 1.7 House prices continue to rise

#### House prices and near-term indicators of house prices



Sources: Halifax, Land Registry, Nationwide, ONS, Rightmove.co.uk, Royal Institution of Chartered Surveyors (RICS) and Bank calculations.

(a) Includes the RICS expected 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 three months on three months earlier growth rate of the Rightmove index of the average asking price trend. All series have been moved forward by three months. The Rightmove index has been seasonally adjusted by Bank staff.

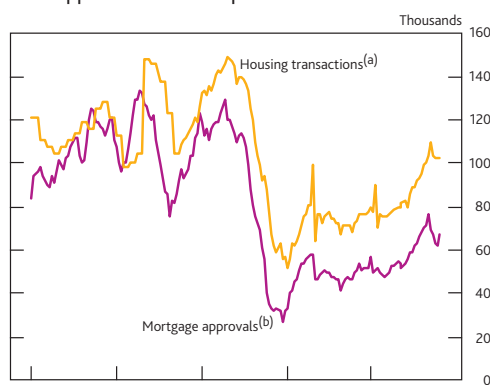
(b) Latest observation is for May 2014.

(c) Data are for England and Wales. Latest observation is for June 2014.

(d) Latest observation is for July 2014.

### Chart 1.8 Housing market activity has fallen back a little

#### Loan approvals for house purchase and HMRC transactions



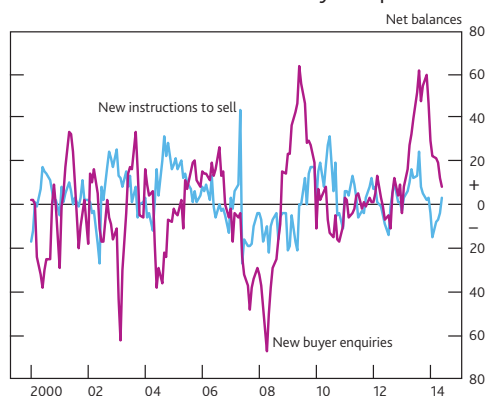
Sources: Bank of England and HM Revenue and Customs (HMRC).

(a) Number of residential property transactions for values of £40,000 or above from April 2005. Prior to that date, the number of transactions per quarter has been assumed to grow in line with quarterly HMRC data on transactions in England and Wales, and the monthly data are estimated by assuming that the number of transactions is spread evenly throughout each quarter.

(b) Loan approvals for house purchase.

### Chart 1.9 Demand and supply of housing may be realigning

#### New instructions to sell and new buyer enquiries<sup>(a)</sup>



Source: RICS.

(a) Data are for England and Wales, and show the percentage balance reporting an increase in new instructions to sell/new buyer enquiries over the past month since March 2002 (and over the past three months prior to March 2002) less the percentage reporting reduced instructions/enquiries.

but also weaker demand. The *SME Finance Monitor* indicates that while applications for credit by small companies remain low, that reflects a large and growing majority of 'happy non-seekers'. Low applications could also reflect SMEs seeking out alternative sources of finance: contacts of the Bank's Agents report small but growing use of non-bank finance by SMEs, including peer-to-peer lending, crowdfunding and venture capital funds.

### Household lending and the housing market

House prices continued to rise in Q2, as expected at the time of the *May Report* (Table 1.A). Nationally, the average of the Halifax and Nationwide house price indices rose by 10% over the year to 2014 Q2 (Chart 1.7). But in July, the Nationwide index showed markedly smaller rises. The Royal Institution of Chartered Surveyors (RICS) reported that the slowing was particularly marked in London. Indicators continue to point to further rises in house prices, but at a slightly slower rate than three months ago (Chart 1.7).

Approvals for house purchases have fallen since the start of the year, and were weaker than expected three months ago (Table 1.A). Housing transactions have been more resilient (Chart 1.8), possibly reflecting purchases by cash buyers. In June mortgage approvals for house purchases picked up a little, to around 67,000 (Chart 1.8). The number of mortgage approvals is expected to rise to around 75,000 a month, on average, in 2014 Q4.

A number of factors may account for weak mortgage approvals in the early part of the year. The Mortgage Market Review (MMR) — which was carried out by the Financial Conduct Authority to improve the functioning of the mortgage market — could have weighed on approvals as banks introduced new processes or trained staff. Those temporary constraints may now have started to ease, but the MMR could also have more persistent effects, if it affects the availability or terms of credit for some borrowers. In that case, it could take time for those borrowers to adjust their expectations and to find a property that they can afford.

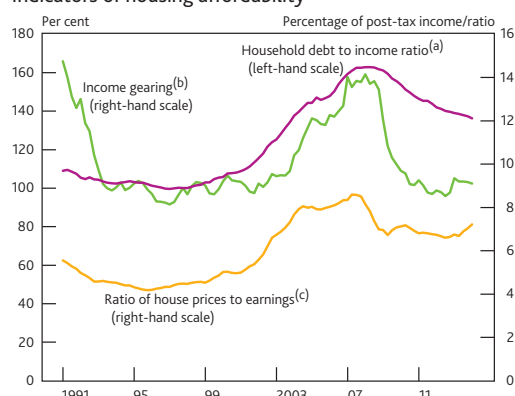
Another factor that is likely to have weighed on housing activity in the early part of 2014 is a fall in the number of properties that were put on the market: the RICS reported that new instructions to sell fell over that period (Chart 1.9), perhaps reflecting people holding off selling their properties in anticipation of further price rises. But secondary market supply has since picked up again. And demand for housing, for example shown by growth in buyer enquiries (Chart 1.9), and mortgage applications, moderated over the first part of the year. These tentative signs of rising secondary market supply, and easing demand, could be associated with some moderation in house price inflation.

The house price to earnings ratio has risen but remains below the levels reached in 2007 (Chart 1.10). Another measure of



**Chart 1.10 Indicators suggest housing remains more affordable than in the run-up to the crisis**

Indicators of housing affordability

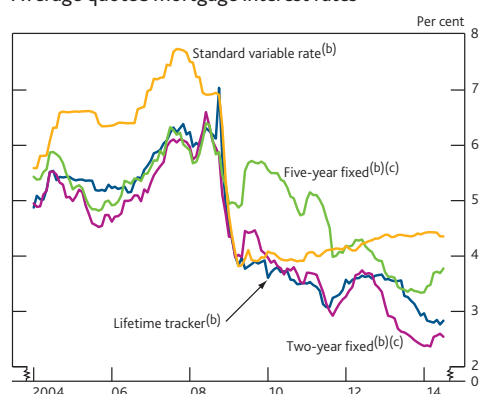


Sources: Bank of England, Halifax, Nationwide, ONS and Bank calculations.

- (a) Household financial liabilities as a percentage of the four-quarter moving sum of nominal household post-tax income. Financial liabilities are non seasonally adjusted.
- (b) 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.
- (c) 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 prior to that average weekly earnings that have been seasonally adjusted by Bank staff. Data are three-month moving averages. The Nationwide measure has been seasonally adjusted by Bank staff.

**Chart 1.11 Rates on some mortgage products rising**

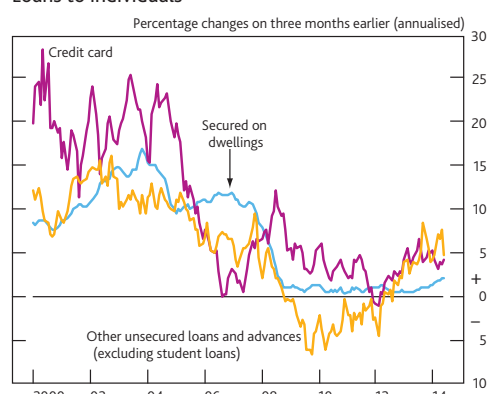
Average quoted mortgage interest rates<sup>(a)</sup>



- (a) Data are non seasonally adjusted.
- (b) Sterling-only end-month average quoted rates. The Bank's quoted interest rates series are weighted averages of rates from a sample of banks and building societies with products meeting the specific criteria (see [www.bankofengland.co.uk/statistics/Pages/iadb/notesiadb/household\\_int.aspx](http://www.bankofengland.co.uk/statistics/Pages/iadb/notesiadb/household_int.aspx)).
- (c) On mortgages with a loan to value ratio of 75%.

**Chart 1.12 Secured loan growth continues to increase**

Loans to individuals



housing affordability, income gearing (interest payments and regular repayments of mortgage principal as a proportion of disposable income), also remains relatively low in aggregate (**Chart 1.10**), reflecting low interest rates. This is likely to rise as interest rates pick up; rates on some mortgage products, in particular those with longer maturities, have already started to increase (**Chart 1.11**). Borrowers with fixed-rate mortgages are not immediately exposed to those rises: the stock of outstanding mortgages at fixed rates is only around a third, although the proportion of new mortgages taken out at fixed rates has increased steadily, from less than half in 2010 to more than 80% in 2014 Q1.

Secured loan growth has risen only moderately since the *May Report* (**Chart 1.12**). In aggregate, the ratio of household debt to income remains below levels reached in 2007 (**Chart 1.10**). New lending at high loan to income ratios, however, has surpassed its pre-crisis levels, particularly for high-value properties, including those in London.

Those households with higher levels of debt relative to their income are likely to be more vulnerable to shocks to income or interest rates. The FPC has therefore recommended that mortgage lenders limit the proportion of mortgages at loan to income multiples of 4.5 and above to no more than 15% of new mortgages. The FPC has also recommended that, when assessing affordability, lenders should apply an interest rate stress test that assesses whether borrowers could still afford their mortgages if, at any point over the first five years of the loan, Bank Rate were to be 3 percentage points higher than the prevailing rate at origination.<sup>(1)</sup> These recommendations are designed to provide insurance against a marked loosening in underwriting standards and a further significant increase in the number of highly indebted households (Section 5).

### Unsecured bank lending to households

Unsecured credit growth continued to grow roughly in line with nominal GDP in Q2 (**Chart 1.12**) with little change in rates charged on new loans. Evidence from the CCS suggests that unsecured credit availability increased in Q2, and was expected to improve further in Q3.

## 1.4 Money

Annual broad money growth was 4% in 2014 Q2 (**Chart 1.13**). Within that, money holdings by other financial institutions fell, but flows into household and PNFC deposits remained robust.

Broad money has typically grown more quickly than nominal GDP. But recently nominal GDP has grown at a similar pace to broad money (**Chart 1.13**). There are several reasons why the

(1) For more detail on the FPC's recommendations, see Section 5 of the June 2014 *Financial Stability Report*; [www.bankofengland.co.uk/publications/Documents/fsr/2014/fsr35sec5.pdf](http://www.bankofengland.co.uk/publications/Documents/fsr/2014/fsr35sec5.pdf).

## Monetary policy since the May Report

The MPC's central projection in the *May Report*, under the assumptions that Bank Rate followed a path implied by market interest rates and that the stock of purchased assets remained at £375 billion, was that four-quarter GDP growth would ease slightly in the near term, but that it would remain relatively steady thereafter. Inflation was expected to be at, or slightly below, the target throughout the forecast period. The MPC judged that there was scope to make further inroads into slack before an increase in Bank Rate was necessary.

At the MPC's meeting on 4–5 June, the Committee judged that overall, there had been little news on the month relative to the *May Report* projections. US and euro-area output growth had been surprisingly weak in Q1, although a bounceback in growth was anticipated in Q2. Domestic output growth remained strong, with a pickup in business investment growth signalling that the recovery had broadened. As expected, CPI inflation had picked up a little on the month, but the short-term outlook had been revised down marginally. Average weekly earnings growth slowed unexpectedly in March and non-labour cost growth remained more benign than in recent years.

The precise timing of the first rise in Bank Rate would depend on a range of indicators, including the outlook for inflation. That, in turn, would depend on the data flow, and in particular what that implied for the degree of slack, the prospects for its absorption, and the broader outlook for wages. There was considerable uncertainty around the current level of slack, and a range of views on the MPC. For some members, the policy decision had become more balanced in the past couple of months than earlier in the year. In terms of the immediate policy decision, however, all members agreed that it would be necessary to see more evidence of slack being absorbed before an increase in Bank Rate would be warranted. Against that backdrop, the MPC voted unanimously to maintain Bank Rate at 0.5%, and the stock of asset purchases at £375 billion.

At its meeting on 9–10 July, the MPC noted that UK growth had remained at or slightly above longer-term averages and sustained economic momentum was looking more assured. It remained unclear whether growth would slow modestly in the second half of the year. But there were some indications that a gradual slowing might take place. For instance, growth in real incomes had probably been slower than expected in the first half of the year, and there were signs of a slowdown in housing market activity, likely, in part, to be associated with the Mortgage Market Review. In addition, news about the central outlook for the global economy was to the downside on the month.

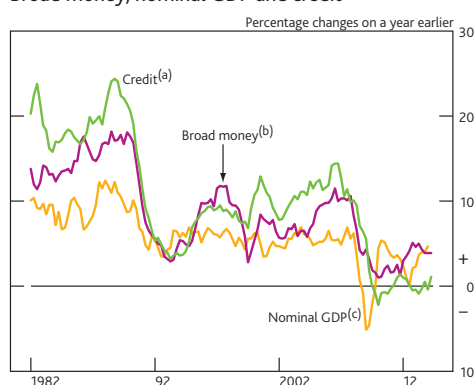
CPI inflation had risen unexpectedly to 1.9% in June. Further out, the path for inflation would depend on how quickly spare capacity was absorbed, and the impact this had on wages, and firms' pricing power. The weakness of wages in the face of strong employment growth was becoming more striking, and there was reason to believe both that reductions in labour market slack were taking longer to affect wage growth, and that effective labour supply had increased.

The MPC noted that on one interpretation, the risk of a small rise in Bank Rate derailing the expansion and leaving inflation below the target in the medium term was receding as that expansion became more established. On an alternative interpretation, although the domestic economy was growing at or above longer-term average rates, there was little indication of inflationary pressures building and there was uncertainty as to whether there had been a more structural change in the relationship between the labour market and inflation; a premature tightening in monetary policy might leave the economy vulnerable to shocks. Members put different weights on each element of these interpretations. Against that backdrop, the MPC voted unanimously to maintain Bank Rate at 0.5%, and the stock of asset purchases at £375 billion.

At its meeting on 6–7 August, the MPC voted to maintain Bank Rate at 0.5%, and the stock of asset purchases at £375 billion.

**Chart 1.13 Nominal GDP and money growing in line**

Broad money, nominal GDP and credit



(a) M4 and M4 lending (excluding securitisations) growth prior to 1998 Q4, and equivalent measures excluding the deposits of, and borrowing by, intermediate OFCs thereafter.  
(b) M4 excluding intermediate other financial corporations (OFCs).  
(c) At current market prices. The latest observation is 2014 Q1.

relationship between broad money and nominal GDP may have changed. First, credit growth, the main source of money creation, has been weak since the financial crisis (**Chart 1.13**), as banks' efforts to reduce the size of their balance sheets have resulted in a reduction of lending. Second, the Bank's programme of asset purchases, which supported money growth while the Bank's balance sheet was being expanded, has remained unchanged. So, while it continues to boost nominal demand, its impact on money growth has faded.

## 2 Demand

The UK recovery continued and broadened out further across the demand components of GDP. Growth in private domestic demand remained solid, with positive contributions from household and business spending in particular. The UK trade balance improved, alongside a small narrowing in the current account deficit. External demand growth weakened, but that is largely expected to prove temporary.

**Table 2.A** Monitoring the MPC's key judgements

Developments anticipated in May	Developments since May
<b>Consumer spending</b>	<b>Broadly on track</b>
<ul style="list-style-type: none"> <li>Quarterly consumer spending growth of close to ¾%.</li> </ul>	<ul style="list-style-type: none"> <li>Consumption grew by 0.7% in Q1, with a little less than ¾% expected for Q2 and Q3.</li> </ul>
<b>Investment</b>	<b>Broadly on track for business, weaker than expected for housing</b>
<ul style="list-style-type: none"> <li>Indicators of business investment consistent with average quarterly growth rates of around 3%.</li> <li>Housing investment averaging growth of a little less than 4% per quarter.</li> </ul>	<ul style="list-style-type: none"> <li>Business investment growth stronger than expected at 5% in Q1, with around 3% expected for Q2 and Q3.</li> <li>Much weaker than expected at 2.2% in Q1, and expected to weaken in Q2.</li> </ul>
<b>Advanced economies</b>	<b>Slightly weaker than expected</b>
<ul style="list-style-type: none"> <li>Quarterly euro-area GDP growth of between ¼% and ½%.</li> <li>Quarterly US GDP growth averaging around ¾%; non-farm payrolls increasing by just over 200,000 per month.</li> </ul>	<ul style="list-style-type: none"> <li>Q1 growth slightly weaker, with similar growth expected for Q2.</li> <li>Q1 growth much weaker than expected, but rebounded to 1% in Q2. Non-farm payrolls increased 245,000 per month between May and July.</li> </ul>
<b>Rest of the world</b>	<b>Broadly on track</b>
<ul style="list-style-type: none"> <li>Four-quarter PPP-weighted emerging-economy growth around 5% on average; Chinese GDP growth slightly above 7%.</li> </ul>	<ul style="list-style-type: none"> <li>Growth around 5% in Q1 for the emerging economies, expected to be similar in Q2 and Q3. Chinese GDP slightly stronger than expected in Q2.</li> </ul>
<b>Exports</b>	<b>Slightly stronger than expected</b>
<ul style="list-style-type: none"> <li>UK exports to grow at around ½% per quarter on average over 2014.</li> </ul>	<ul style="list-style-type: none"> <li>Exports were broadly flat in Q1, with growth of a little under 1½% expected for Q2.</li> </ul>

**Table 2.B** Households' and businesses' financial savings have fallen

Net financial accounts by sector

Percentages of nominal GDP

	Averages			2014 Q1
	1998–2007	2008–09	2013	
Private non-financial corporations	0.8	2.8	1.5	1.2
Households <sup>(a)</sup>	-2.1	-0.5	-0.3	-1.0
Government <sup>(b)</sup>	-1.4	-8.2	-7.1	-6.2
Rest of the world	-2.0	-0.9	-4.2	-4.2

(a) Includes non-profit institutions serving households.

(b) Excludes public corporations. The series has been adjusted by Bank staff to exclude the impact of the Royal Mail and Asset Purchase Facility transfers.

UK GDP expanded by 0.8% in 2014 Q1 according to the ONS, unchanged from the estimate available at the time of the *May Report*. Growth has been reasonably well balanced, with household spending, business investment and net trade contributing positively to growth over the past two quarters (**Table 2.C**). The ONS estimates that output also grew by 0.8% in 2014 Q2 (Section 3).

Following sharp increases during the recession, financial saving by households and businesses has fallen back (**Table 2.B**) as consumption and investment growth have picked up. By contrast, the fiscal deficit has narrowed (**Table 2.B**) and growth in government spending has been weak.

UK net trade contributed positively to growth in 2014 Q1 and supported a slight narrowing in the current account deficit. The near-term outlook for external demand remains broadly unchanged, with growth expected to pick up gently.

### 2.1 Domestic demand

#### Household spending

Consumption grew by 0.7% in 2014 Q1 (**Table 2.C**), broadly as expected in May (**Table 2.A**). Consumption is expected to have grown at a similar rate in Q2 (**Table 2.A**), as indicated by ONS data and surveys of retail spending, for example (**Chart 2.1**). And the Bank's Agents' reports are consistent with robust growth in consumer spending on services, which makes up around half of all consumption expenditure.

Following ten consecutive quarters of growth, the level of consumer spending is now close to its 2007 Q4 peak. For the most part, this recovery has been funded by growth in household income (**Chart 2.2**). But since mid-2012, consumption growth has outstripped income growth and the saving ratio has fallen. As discussed in a box on pages 20–21, forthcoming ONS methodological changes are likely to lead to a mechanical upward revision to the level of the saving ratio, although they are less likely to change its pattern.

**Table 2.C Private sector domestic demand rose in 2014 Q1**  
Expenditure components of demand<sup>(a)</sup>

Percentage changes on a quarter earlier

	Averages					2014 Q1
	1998– 2007	2008– 09	2010– 12	2013 H1	2013 H2	
Household consumption <sup>(b)</sup>	0.9	-0.7	0.2	0.6	0.5	0.7
Private sector investment	0.9	-4.7	0.5	2.3	2.2	4.0
<i>of which, business investment<sup>(c)</sup></i>	0.7	-1.6	0.4	1.8	2.3	5.0
<i>of which, private sector housing investment</i>	1.1	-8.8	1.5	3.5	2.0	2.1
<b>Private sector final domestic demand</b>	<b>0.9</b>	<b>-1.3</b>	<b>0.2</b>	<b>0.9</b>	<b>0.8</b>	<b>1.3</b>
Government consumption and investment <sup>(c)</sup>	0.8	0.8	-0.1	0.5	0.2	-0.7
<b>Final domestic demand</b>	<b>0.9</b>	<b>-0.8</b>	<b>0.1</b>	<b>0.8</b>	<b>0.6</b>	<b>0.8</b>
Change in inventories <sup>(d)(e)</sup>	0.0	-0.2	0.2	-0.1	-0.1	0.4
Alignment adjustment <sup>(e)</sup>	0.0	0.0	0.0	-0.4	0.4	-0.7
<b>Domestic demand</b>	<b>0.9</b>	<b>-1.1</b>	<b>0.3</b>	<b>0.3</b>	<b>1.0</b>	<b>0.5</b>
'Economic' exports <sup>(f)</sup>	1.1	-0.7	0.9	0.9	-0.8	0.1
'Economic' imports <sup>(f)</sup>	1.4	-1.4	0.8	0.1	-0.1	-1.0
<b>Net trade<sup>(e)(f)</sup></b>	<b>-0.1</b>	<b>0.2</b>	<b>0.0</b>	<b>0.3</b>	<b>-0.2</b>	<b>0.3</b>
<b>Real GDP at market prices</b>	<b>0.8</b>	<b>-0.9</b>	<b>0.2</b>	<b>0.6</b>	<b>0.7</b>	<b>0.8</b>

(a) Chained-volume measures.

(b) Includes non-profit institutions serving households.

(c) Investment data take account of the transfer of nuclear reactors from the public corporation sector to central government in 2005 Q2.

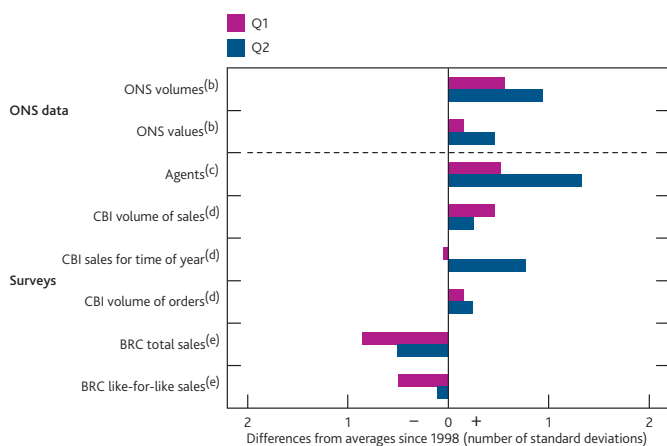
(d) Excludes the alignment adjustment.

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

(f) 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 2.1 Most indicators point to strong goods consumption growth in 2014 Q2**

Indicators of retail sales growth<sup>(a)</sup>



Sources: Bank of England, British Retail Consortium (BRC), CBI and ONS.

(a) Averages of monthly data, unless otherwise stated. Data are to 2014 Q2.

(b) Growth on a year earlier. Quarterly data.

(c) Agents' scores for retail sales values growth. End-quarter observation.

(d) Balance of respondents to the CBI *Distributive Trades Survey* questions 'How do your sales and orders this month compare with a year earlier?' and 'What is your position with regards to your volume of sales for the time of year?'

(e) Percentage changes in total and like-for-like sales on a year earlier.

One reason why households may have been willing to spend more, despite weak income growth, is a lower perceived risk of unemployment. Another reason might be increased optimism about future income: if income levels are thought only to be temporarily weak, households will be more inclined to borrow or to save less to fund spending. Households' expectations of lifetime income are not directly observable, but can be proxied using indicators such as spending on durable goods or consumer surveys. Growth in spending on durables, at 14% in the year to 2014 Q1, has significantly outpaced growth in non-durables and services spending of only 0.2%. And consumer confidence surveys have improved markedly over the past few years. Improvements in credit conditions in recent years (Section 1) should have made it easier for households to fund spending through borrowing and may also have reduced their desire to build up precautionary savings in case they are unable to access credit in times of need.

Improved optimism over income growth and the economic outlook, combined with improved access to credit, are likely to continue to support consumption in the near term. Downside risks to consumption, however, remain. A little over a third of survey respondents to the NMG Consulting survey, conducted over April and May 2014, expressed concern about their level of debt: these concerns could hold back spending growth. And there is uncertainty about the sensitivity of spending to any change in interest rates. For example, according to the NMG Consulting survey, a majority of survey respondents<sup>(1)</sup> who would need to respond to a 2 percentage point increase in their mortgage rate would do so by cutting back spending if incomes remained unchanged. A rise in interest rates should, however, also increase households' interest receipts on deposits, which have been weak in recent years (Chart 2.3).

### Housing investment

Housing investment, which comprises house building, home improvements and spending on services associated with property transactions, grew in 2014 Q1, continuing the recovery that started in late 2012.<sup>(2)</sup> The pace of growth was, however, weaker than anticipated in May (Table 2.A). Indeed, growth in housing investment has been lower than expected in every quarter since the November 2013 *Report*, with spending on services associated with property transactions proving particularly weak.

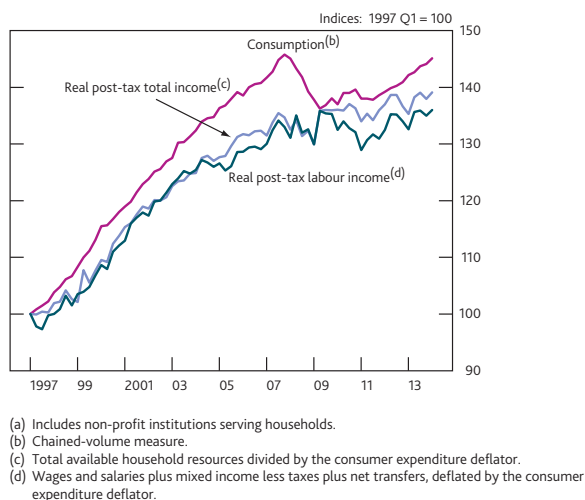
The weakness in spending associated with property transactions may, in part, reflect the impact of reforms associated with the Mortgage Market Review. Mortgage

(1) The respondents to this question in the NMG Consulting survey refer to a subset of mortgage holders, for whom the increase in mortgage payments associated with a 2 percentage point rise in interest rates would exceed the amount that they report their monthly mortgage payments could increase for a sustained period without them having to take some kind of action to find the extra money (such as cutting spending, working longer hours, or requesting a change to their mortgage).

(2) For a discussion on the link between the housing market and demand, including housing investment, see the box on pages 20–21 of the November 2013 *Report*; [www.bankofengland.co.uk/publications/Documents/inflationreport/2013/ir13nov.pdf](http://www.bankofengland.co.uk/publications/Documents/inflationreport/2013/ir13nov.pdf).

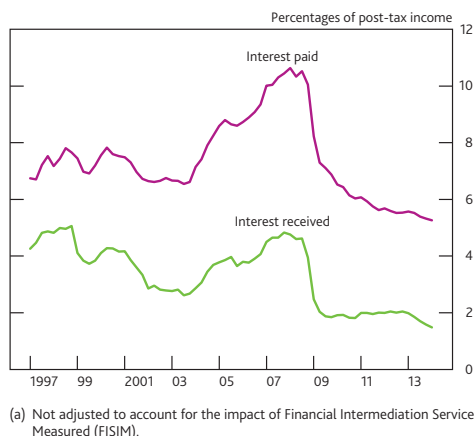
**Chart 2.2 Household consumption growth has been outpacing income growth**

Household consumption and real income<sup>(a)</sup>



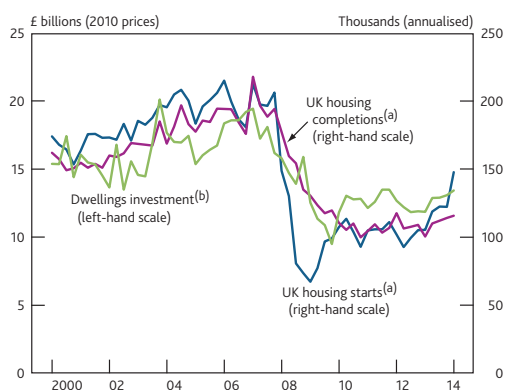
**Chart 2.3 Household interest payments and receipts have been low since 2009**

Interest received and interest paid by households<sup>(a)</sup>



**Chart 2.4 Rises in housing starts suggest scope for dwellings investment growth**

Dwellings investment and house building



- (a) Number of permanent dwellings in the United Kingdom started and completed by private enterprises. Permanent dwellings starts in Wales are assumed to grow in line with Welsh total permanent dwellings starts between 2011 Q2 and 2013 Q4. UK data for 2013 Q4 and 2014 Q1 have been grown in line with permanent dwellings starts and completions in England. Data have been seasonally adjusted by Bank staff.  
 (b) Includes new dwellings and improvements to dwellings. Chained-volume measure (reference year 2010).

approvals and housing transactions both weakened in Q1 (Section 1), as did the spending associated with them. That weakness is likely to continue in the near term: approvals and transactions fell in Q2, although there were signs of a pickup towards the end of the quarter.

The other components of housing investment — house building and home improvements — grew in Q1, consistent with the modest rise in housing completions since mid-2012. And housing starts, having also picked up since mid-2012, rose sharply in Q1 (Chart 2.4): this points to continued growth in recorded investment in new homes over the next few quarters.

Growth in housing investment is expected to pick up in the second half of 2014, but at a more modest pace than thought likely in May (Table 2.A). Growth is initially expected to be driven by the house building and home improvements components, with the weakness in spending associated with transactions expected to unwind only slowly (Section 1).

### Business spending

The ONS estimates that business investment rose by 5% in 2014 Q1, above the 3% growth rate expected in the May Report (Table 2.A). Surveys point to continued robust growth in Q2, although some balances, such as those in the CBI surveys, have eased a little (Chart 2.5).

The near-term outlook for business investment remains largely unchanged from that in May, with several factors likely to support growth. First, surveys suggest that uncertainty about demand, which was a major impediment to investment following the financial crisis, has receded significantly over the past few years. Second, business volumes and order books, as indicated by both the CBI and Markit PMI surveys, have continued to grow robustly in recent months; this could suggest a need to undertake investment to satisfy increased demand. Third, favourable financing conditions, along with the financial surpluses run by private non-financial corporations over the past decade (Table 2.B), suggest that companies should be able to finance increases in investment.

There are still downside risks to business investment growth, though. Excess capital, such as plant and machinery, within some businesses could weigh on investment growth: businesses could make more productive use of existing capital instead of increasing capital expenditure. According to new ONS estimates, the real capital stock grew by 5.6% between 2007 and 2012 despite a 3% fall in real output, leading to a sharp rise in the capital stock to GDP ratio (Chart 2.6). It is, however, possible that excess capital is concentrated in only a few sectors and that industries with less or no excess capital could deliver strong investment growth.

### Government spending

Government spending contracted in 2014 Q1 (Table 2.C), driven by a sharp fall in government investment. These data



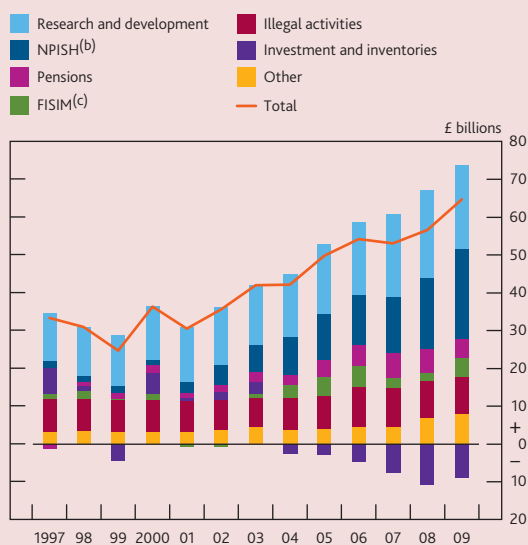
## Forthcoming revisions to the National Accounts

The *Blue Book* is an annual ONS publication in which National Accounts data are revised to incorporate both a wider range of information than is used to produce earlier estimates and methodological improvements. The quarterly National Accounts for 2014 Q2, published in September, will be consistent with the 2014 *Blue Book* and *Pink Book* (covering the Balance of Payments). The ONS has published comprehensive information on the forthcoming changes<sup>(1)</sup> including impacts up to and including 2009 — future releases will present impacts for more recent periods. This box summarises some of the information published to date, which relate to the EU-wide implementation of the European System of National and Regional Accounts (ESA 2010)<sup>(2)</sup> and improvements to the existing National Accounts framework. These changes — given that they relate to revisions to historical data — should have relatively little effect on the MPC's assessment of the current degree of inflationary pressure: the implications of future releases, which will contain revisions to more recent data, will be assessed upon publication.

The ONS estimates that the *Blue Book* changes will have a sizable impact on the level of nominal GDP. Provisional estimates suggest an average upward revision of 3.6% to the level of nominal GDP over 1997–2009, adding £65 billion to the level of nominal GDP in 2009 (Chart A). Figures for more recent years will be published in September 2014.

**Chart A R&D and NPISH changes drive much of the change in the level of nominal GDP**

Contributions to the revision to the level of nominal GDP<sup>(a)</sup>



Sources: ONS and Bank calculations.

- (a) ONS estimates of the *Blue Book* 2014 changes to nominal GDP are available at [www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-360146](http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcn%3A77-360146).  
 (b) Non-profit institutions serving households.  
 (c) Financial Intermediation Services Indirectly Measured.

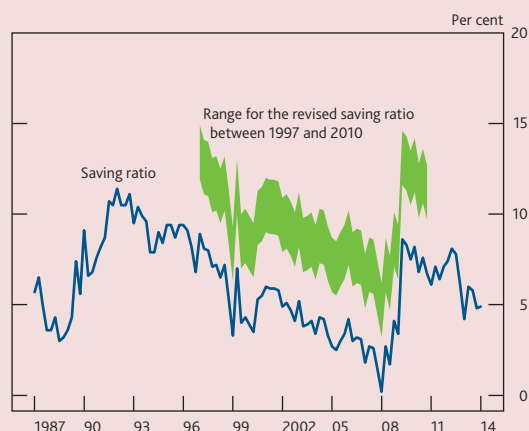
Around half of the change to the level of nominal GDP relates to improvements made to the existing National Accounts framework. A major driver of these changes relates to a review of the way in which the key aggregates of the non-profit institutions serving households (NPISH) sector are compiled. The implementation of this change, by using new data sources for example, is estimated to add £24 billion to the level of nominal GDP in 2009 (Chart A), split between an upward revision to NPISH consumption (£14 billion) and household consumption (£10 billion). The inclusion of certain illegal activities, such as the sale of illegal drugs, in the National Accounts for the first time is also estimated to add £10 billion to nominal GDP in 2009 (Chart A).

Other drivers of the change to the level of nominal GDP relate to the new treatment and measurement of certain activities under the ESA 2010 framework. In particular, the reclassification of research and development (R&D) expenditure as investment instead of intermediate consumption, combined with improvements to how R&D is measured, is estimated to add £22 billion to the level of nominal GDP in 2009 (Chart A).

Another key change relates to the new treatment of pensions in the National Accounts under ESA 2010. In particular, the value of funded defined benefit pension schemes — those in which the size of an employee's pension is determined by factors such as their final salary and length of service instead of the size of the pension pot — will now be calculated on an actuarial basis instead of on a cash basis. This will have a modest impact on nominal GDP, reflecting higher household, local government and NPISH consumption. But it will have a more significant impact on sectoral income, savings and

**Chart B The household saving ratio will be revised up**

Indicative illustration of the revision to the household saving ratio between 1997 and 2010<sup>(a)</sup>



Sources: ONS and Bank calculations.

- (a) The swathe has been calculated by adding 3 and 6 percentage points to the saving ratio between 1997 and 2010. ONS estimates of the *Blue Book* 2014 changes to the saving ratio are available at [www.ons.gov.uk/ons/re/naa1-rd/national-accounts-articles/impacts-of-european-system-of-accounts--2010-and-other-changes-on-economic-statistics/index.html](http://www.ons.gov.uk/ons/re/naa1-rd/national-accounts-articles/impacts-of-european-system-of-accounts--2010-and-other-changes-on-economic-statistics/index.html).

wealth. In particular, the new approach will measure scheme participants' entitlements as part of their assets and add the changes in those entitlements each year to their measured income. That change is estimated to raise the household saving ratio by between 3 and 6 percentage points per year between 1997 and 2010 (**Chart B**), with corresponding downward revisions to saving split across those providing such pensions, such as private corporations and local government. The level of national saving will, therefore, be unaffected.

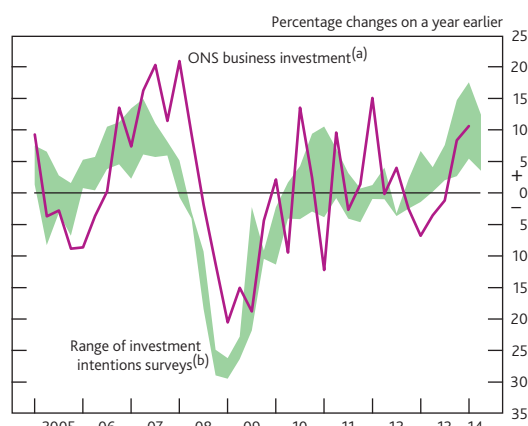
The changes to the level of nominal GDP announced so far relate to revisions to historical data and therefore do not contain significant information on the strength of the

recovery: they should therefore have relatively little effect on the MPC's assessment of the current degree of inflationary pressure. Provisional ONS estimates suggest that the average impact on real GDP growth over 1997–2009 will be limited. Similarly, the increase in the household saving ratio does not contain any significant information on the outlook for household consumption. The level of households' incomes has not changed; only the way in which it is measured has.

- (1) The ONS publications on the upcoming methodological changes and their likely impact are available at [www.ons.gov.uk/ons/guide-method/development-programmes/esa2010/index.html](http://www.ons.gov.uk/ons/guide-method/development-programmes/esa2010/index.html).
- (2) For further details on the ESA 2010, see the Eurostat's dedicated ESA 2010 webpages, available at [epp.eurostat.ec.europa.eu/portal/page/portal/esa\\_2010/introduction](http://epp.eurostat.ec.europa.eu/portal/page/portal/esa_2010/introduction).

**Chart 2.5 Surveys point to continued strong growth in business investment**

Business investment and surveys of investment intentions

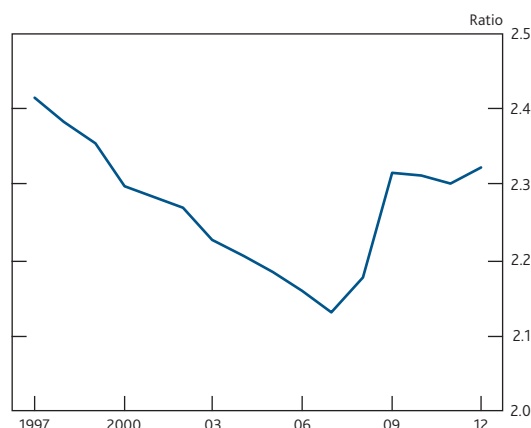


Sources: Bank of England, BCC, CBI, CBI/PwC, ONS and Bank calculations.

- (a) Chained-volume measure. Data are to 2014 Q1 and take account of the transfer of nuclear reactors from the public corporation sector to central government in 2005 Q2.
- (b) Includes survey measures of investment intentions from the Bank's Agents (companies' intended changes in investment over the next twelve months), BCC (net percentage balance of companies who say they have increased planned investment in plant and machinery over the past three months) and CBI (net percentage balance of companies who say they have revised up planned investment in plant and machinery over the next twelve months), scaled to match the mean and variance of four-quarter business investment growth since 2000. Measures weight together sectoral surveys using shares in real business investment. BCC data are non seasonally adjusted.

**Chart 2.6 The capital stock has risen relative to GDP**

Net capital stock to GDP ratio (a)



Sources: ONS and Bank calculations.

- (a) Calculated by Bank staff using chained-volume measures.

tend to be volatile and therefore some of this fall may unwind over Q2. According to the Institute for Fiscal Studies, using the March 2008 *Budget* as a baseline, around half of the Government's fiscal consolidation has already taken place. The planned reduction in investment spending has already been implemented, but nominal government consumption is expected to fall further as a share of GDP (**Chart 2.7**).

## 2.2 External demand and UK trade

External demand growth weakened in 2014 Q1, but that is expected to prove temporary.

### The euro area

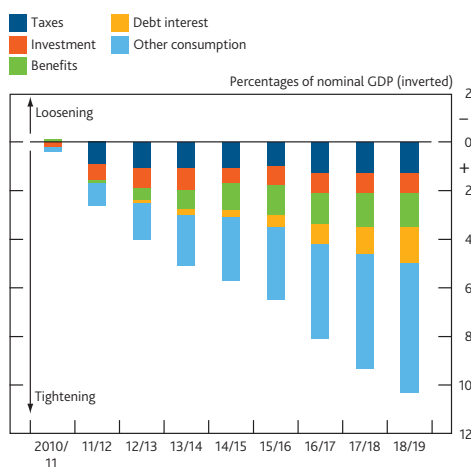
Despite euro-area periphery countries making considerable progress in raising competitiveness and stabilising debt levels, euro-area growth prospects remain muted. GDP growth, at 0.2% in 2014 Q1 (**Table 2.D**), was lower than anticipated in May. Official data, such as industrial production, suggest only a similar growth rate for Q2 (**Table 2.A**). Some surveys point to a slight pickup in growth in Q3: for example, the composite euro-area PMI indicator was higher in Q2 than in Q1, and increased further in July.

One factor that may have held back euro-area growth is weak lending to the real economy. Loans to the private sector have fallen over the past year, driven by lower lending to non-financial corporations. Although that weakness is likely to reflect both demand and supply factors, the spread between interest rates on loans to non-financial corporations and the ECB's main policy rate remains high relative to the pre-crisis period, suggesting that credit supply remains tight.

Persistent demand weakness has probably contributed to a fall in aggregate euro-area inflation. A prolonged period of low inflation across the region could make rebalancing more difficult: adjustments in relative competitiveness are harder to achieve when average prices are not rising by much. While prices have been broadly stable or falling in the euro-area

### Chart 2.7 More fiscal consolidation to come

Composition of the fiscal consolidation<sup>(a)</sup>



Sources: HM Treasury, Institute for Fiscal Studies and Office for Budget Responsibility.

(a) Bars represent the planned fiscal tightening (reduction in government borrowing) relative to the March 2008 *Budget* projections for the years to 2014/15. Beyond 2014/15, the fiscal tightening is calculated against a counterfactual of nominal government spending growing in line with national income. The calculations are based on all HM Treasury Budgets, Pre-Budget Reports and Autumn Statements between March 2008 and March 2014. See [www.ifs.org.uk/publications/7186](http://www.ifs.org.uk/publications/7186) for more details.

**Table 2.D UK-weighted world GDP growth moderated in 2014 Q1**  
GDP in selected countries and regions<sup>(a)</sup>

Percentage changes on a quarter earlier, annualised

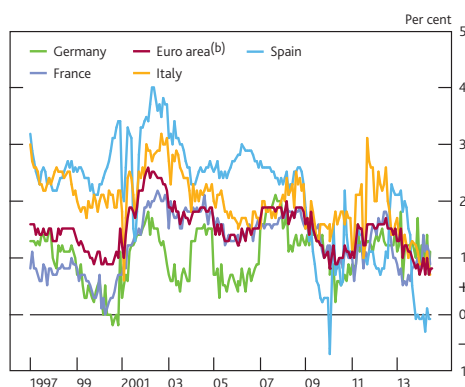
	Averages		2013		2014	
	1998–2007	2012	Q3	Q4	Q1	Q2
United Kingdom	3.2	0.2	3.4	2.6	3.3	3.2
Euro area (40%)	2.3	-1.0	0.4	1.2	0.8	n.a.
United States (17%)	3.0	1.6	4.5	3.5	-2.1	3.9
Japan (2%)	1.1	-0.3	1.3	0.3	6.7	n.a.
China (3%)	10.0	7.8	7.8	7.7	7.4	7.5
UK-weighted world GDP <sup>(b)</sup>	3.0	1.1	2.4	2.6	1.4	n.a.

Sources: Eurostat, IMF *World Economic Outlook (WEO) Update* July 2014, Japanese Cabinet Office, National Bureau of Statistics of China, ONS and US Bureau of Economic Analysis.

(a) Real GDP measures. Figures in parentheses are shares in UK goods and services exports in 2012 from the 2013 *Pink Book*. Chinese data are four-quarter growth because data on quarterly Chinese growth are only available from 2010 Q4. The earliest observation for China is 2000 Q1.  
(b) Constructed using data for real GDP growth rates of 143 countries weighted according to their shares in UK exports. For the vast majority of countries, the latest observation is 2014 Q1. For those countries where national accounts data for 2014 Q1 are not yet available, data are assumed to be consistent with projections in the IMF *WEO Update* July 2014.

### Chart 2.8 Inflation is low in the euro area

Euro-area annual core inflation<sup>(a)</sup>



Sources: Eurostat and Bank calculations.

(a) Non seasonally adjusted. Measure excludes energy, food, alcohol and tobacco.  
(b) Data are based on a changing composition of the euro area, which currently includes 18 countries. Includes flash estimate for July 2014.

periphery countries for nearly a year, their rate of increase has moderated in the core countries over the past few quarters (Chart 2.8).

In response to these developments, the ECB announced a number of measures to loosen policy further (see the box on page 10). These measures should, by reducing bank funding costs and improving credit conditions, support GDP growth in the euro area.

### The United States

In the United States, GDP was estimated to have fallen by 0.5% in Q1, below the initial estimate of no growth. At least some of this weakness may have been temporary: growth is estimated to have picked up to 1% in Q2 (Table 2.D). Growth is expected to remain robust in the second half of this year.

The strength in other US indicators also points to the weakness in Q1 GDP growth being temporary. Labour market conditions have, for example, continued to improve: the unemployment rate fell (Chart 2.9) and non-farm payrolls rose — by an average of 230,000 per month — between January and July. The extent to which increases in labour demand lead to a reduction in labour market slack will influence the evolution of wages and, in turn, inflation. For example, labour market participation fell sharply over the recession, but the recovery may encourage those who left the labour market to re-enter it, which would dampen upward pressure on wages. Participation has stabilised over the past few months, but remains far below pre-crisis levels (Chart 2.9), while some measures of wage growth have picked up. Personal consumption expenditure inflation, at 1.6% in June, has risen steadily this year, but remains below the Federal Reserve's 2% target.

### Rest of the world

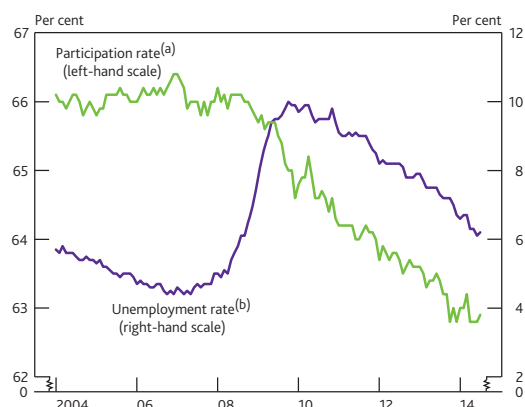
The near-term outlook for growth in the rest of the world is also broadly unchanged since May.

Japanese Q1 GDP growth — at 1.6%, following average growth of 0.6% in 2013 — was much stronger than anticipated. Strong growth in part reflects households bringing forward consumption ahead of the increase in consumption tax in April and growth is therefore likely to slow sharply in Q2. Developments in the labour market may support consumption growth in the near term, however. The unemployment rate fell to a 16-year low of 3.5%, picking up only slightly in June to 3.7%. Following the rise in the consumption tax, inflation rose to a 23-year high of 3.7% in May and June: the Bank of Japan estimates that the consumption tax rise will add 2 percentage points to the 2014 inflation rate.

Chinese four-quarter GDP growth was a little stronger than anticipated in May, at 7.5% in Q2 (Table 2.D). The near-term



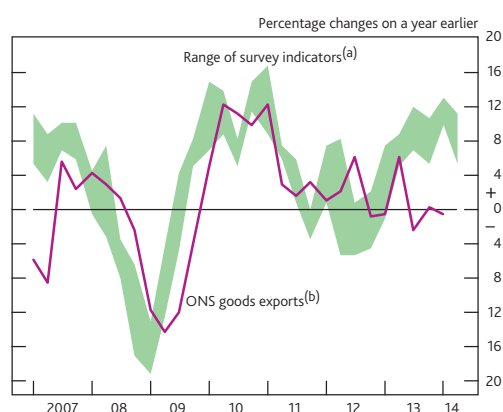
**Chart 2.9 US unemployment continued to fall, with participation rate broadly unchanged**  
US participation and employment rates



Source: Bureau of Labor Statistics.

- (a) Percentage of the 16+ non-institutional civilian population.  
(b) Percentage of the 16+ civilian labour force.

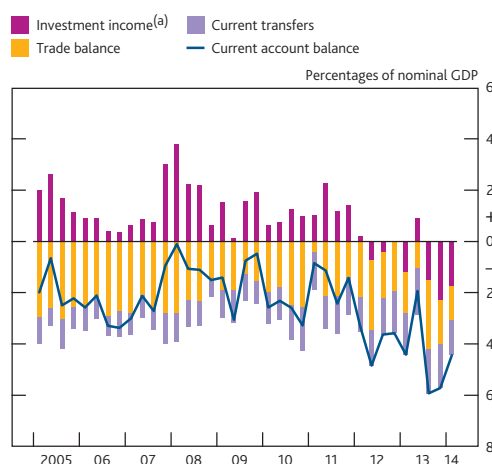
**Chart 2.10 Survey balances for export orders remain strong**  
Goods exports growth and surveys of export orders



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

- (a) Includes measures of manufacturing export orders from BCC, CBI and Markit/CIPS scaled to match the mean and variance of quarterly goods export growth since 2000. BCC data are non seasonally adjusted. Data are to 2014 Q2.  
(b) Goods exports data exclude the estimated impact of MTIC fraud and are to 2014 Q1.

**Chart 2.11 The UK current account deficit narrowed from recent record highs**  
UK current account



- (a) Net compensation of employees is classified by the ONS as income and is included in the investment income series in this chart.

outlook for Chinese growth is broadly unchanged from May, with the slowdown in the property market and the associated weakening in lending likely to drag on activity in the near term. Indicators for the property market and lending activity have shown signs of stabilising, however. Indicators such as housing starts and sales weakened sharply earlier in this year, but have recently recovered a little. Similarly, growth in bank and non-bank lending, following a period of gradual decline, picked up slightly in June. These developments may, in part, reflect a series of targeted measures introduced by Chinese authorities to support the property market.

### UK trade and the current account

UK export growth depends on global demand and the competitiveness of UK exports, which will be influenced by the level of sterling. Growth in UK-weighted world trade has been sluggish over the past few years and remains well below pre-crisis rates. And sterling has appreciated by 14% since its March 2013 trough.

Despite these headwinds, the level of exports was broadly unchanged in Q1 (Table 2.C). The Bank's Agents suggest that the recent appreciation in sterling has so far had a negative impact on export margins (Section 4), with little effect on export volumes. Imports, which like exports tend to be volatile, contracted sharply despite strong growth in import-weighted demand. Net trade, therefore, contributed more to Q1 GDP than anticipated.

The near-term outlook for net trade has improved slightly: export growth is likely to be a little stronger than expected in May (Table 2.A) and to outpace growth in imports in Q2 and Q3. Services exports have, for example, risen steadily for three quarters. In addition, although monthly data suggest that the volume of goods exports fell slightly in Q2, survey balances for export orders have risen over the past year (Chart 2.10).

In 2014 Q1, the United Kingdom's current account deficit, as a percentage of nominal GDP, narrowed to 4.4% from a near-record high of 5.7% in 2013 Q4 (Chart 2.11). As discussed in a box on pages 22–23 of the *May Report*, the deterioration in the deficit over the past two years predominantly reflects a decline in net investment income, and in particular the earnings by UK non-financial corporations on their foreign direct investments. Although all three components — current transfers, trade and investment income — are currently in deficit, the reversal in net income from a consistent surplus before 2012 to -1.8% in 2014 Q1 is the main factor driving recent trends.

## 3 Output and supply

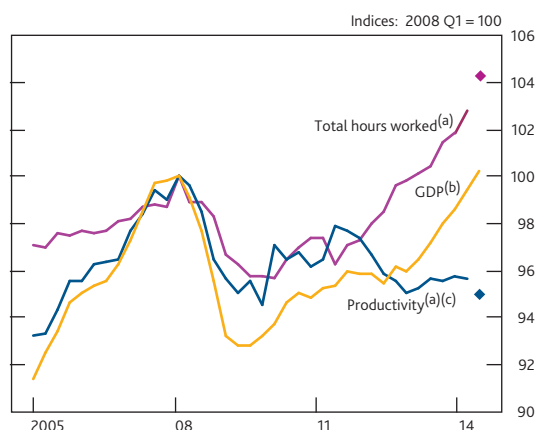
Output is estimated to have increased by 0.8% in 2014 Q2. Employment growth remained robust in the three months to May, with the unemployment rate falling to 6.5%. Hourly productivity grew by 0.4% in the four quarters to Q1, weaker than expected at the time of the previous *Report*. It seems likely that the degree of labour market slack has been greater in the past than previously thought, but that it is narrowing, and doing so faster than anticipated at the time of the *May Report*. There is greater uncertainty about the prevailing level of slack.

**Table 3.A** Monitoring the MPC's key judgements

Developments anticipated in May	Developments since May
<b>Unemployment</b>	<b>Slightly lower than expected</b>
• Headline LFS unemployment rate to decline to around 6½% by 2014 Q2, and to edge down thereafter.	• The headline LFS unemployment rate fell to 6.5% in the three months to May, and is expected to be 6.4% in Q2.
<b>Participation</b>	<b>Much higher than expected</b>
• Labour market participation rate broadly flat over the rest of 2014.	• Participation rate increased again, to 63.9% in the three months to May.
<b>Average hours</b>	<b>Much higher than expected</b>
• Average hours worked to increase by around ½% during the rest of 2014.	• Average weekly hours worked increased by 0.6% in the three months to May.
<b>Spare capacity</b>	<b>Broadly on track</b>
• Little change in indicators of spare capacity within companies.	• Survey indicators of capacity utilisation were broadly unchanged in Q2.
<b>Productivity</b>	<b>Weaker than expected</b>
• Four-quarter growth in hourly labour productivity of around 1% during 2014.	• Four-quarter growth in hourly labour productivity was 0.4% in Q1, and is expected to be slightly negative in Q2.

**Chart 3.1** GDP surpassed its 2008 peak; productivity still well below its peak

GDP, total hours and productivity



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

(a) The diamonds are estimates for 2014 Q2 based on a staff projection for total hours worked.

(b) Chained-volume measure at market prices.

(c) Whole-economy output per hour.

### 3.1 Recent developments in output

The ONS provisionally estimated that GDP expanded by 0.8% in Q2, leaving the level of output just above its pre-crisis peak (**Chart 3.1**). That was in line with expectations at the time of the *May Report*; Bank staff's projection for the final estimate of Q2 growth remains at 0.9%.

At the sectoral level, services output growth was solid at 1% in Q2. Manufacturing output expanded by 0.2%, higher than its pre-crisis average, but lower than rates seen over the past year. Construction output was estimated to have fallen by 0.5%, following four quarters of growth.

Growth is expected to start to moderate a little in the second half of the year, as the boost from pent-up demand fades (Section 5). Consistent with that, some forward-looking survey indicators, such as the Markit/CIPS orders balances, have softened a little. But in general, indicators remain well above historical averages (**Table 3.B**), and Bank staff expect the preliminary estimate of growth in Q3 to be 0.7% (**Chart 3.2**). The final estimate incorporated into the MPC's fan charts is 0.8%.

### 3.2 Recent developments in the labour market

#### Total hours and employment

Total hours worked continued to grow robustly in the three months to May, rising to 4% above their pre-crisis peak (**Chart 3.1**). That partly reflected unexpectedly strong average weekly hours, which rose 0.6% in the three months to May, compared with the previous three months (**Table 3.A**), as the full-time employed worked longer hours.

The number of people in employment also increased by more than expected, rising 254,000 in the three months to May compared with the previous three months. Over four fifths of

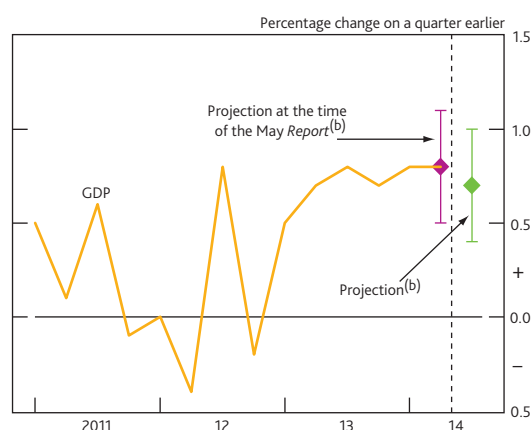
**Table 3.B Survey indicators of output growth remain robust**

Survey indicators of manufacturing and services output growth

	Averages			2014	
	1999–2007	2010–12	2013	Q1	Q2
BCC <sup>(a)</sup>	22	7	26	36	36
CBI <sup>(b)</sup>	12	1	11	27	33
Markit/CIPS <sup>(c)</sup>	55	53	57	58	59

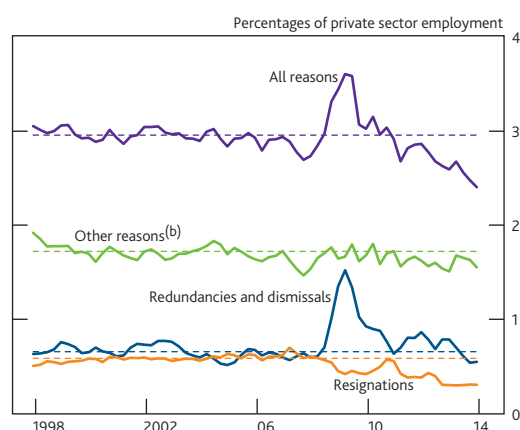
Sources: BCC, CBI, CBI/PwC, Markit/CIPS and Bank calculations.

- (a) Net percentage balances of respondents reporting an increase in domestic sales in the non-services and services sectors, weighted together using nominal shares in value added. Data are non seasonally adjusted.
- (b) Net percentage balances of respondents reporting an increase in the volume of output in the manufacturing sector, in the volume of business in the financial services and professional/business/consumer services sectors, and in the volume of sales in the distributive trades sector, weighted together using nominal shares in value added.
- (c) Indices of changes in output (manufacturing) and business activity (services), weighted together using nominal shares in value added.

**Chart 3.2 GDP growth expected to soften slightly**Bank staff projection for near-term output<sup>(a)</sup>

Sources: ONS and Bank calculations.

- (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 Q2 at the time of the May Report. The green diamond shows the current staff projection for the preliminary estimate of GDP growth for Q3. The bands on either side of the diamonds show uncertainty around those projections based on staff estimates of the root mean squared error of forecasts for quarterly GDP growth made since 2004.
- (b) As the staff projections are for the preliminary estimates of GDP, they can differ from those used to construct the GDP fans in Section 5, because those fans are based on the MPC's best collective judgement of the final estimate of GDP.

**Chart 3.3 Employment outflows have been very low**Reasons for leaving employment<sup>(a)</sup>

Sources: Labour Force Survey and Bank calculations.

- (a) Flows from private sector employment, of people aged 16 to 64. Two-quarter averages. Dashed lines are averages from 1997 Q2 to 2007 Q4. Seasonally adjusted by Bank staff.
- (b) Includes people leaving employment for: retirement, early retirement, education or training, health or family reasons, because their temporary employment ended, or for other reasons.

that was accounted for by full-time employees; the number of part-time employees fell. Self-employment also rose, increasing its share slightly.<sup>(1)</sup>

Quarterly employment flows, although less timely than headline figures, can shed more light on labour market conditions and prospects. Employment growth of just under 1% in Q1 reflected steady inflows into and weak outflows from employment. The gross outflow rate reached its lowest level since the series began in 1993, partly reflecting a fall in the number of people leaving employment because they were made redundant or dismissed (Chart 3.3). That suggests robust demand for labour.

The proportion of people leaving employment through resignations remains well below its historical average (Chart 3.3). The proportion of people staying in employment, but moving from one job to another, also remains low relative to its historical average (Chart 3.4). These developments could suggest that people are still reluctant to change jobs. As a result, businesses may so far have faced limited pressure to increase wages, despite falling unemployment (Section 4).

### Unemployment and labour supply

Robust growth in employment has been associated both with a fall in the headline unemployment rate, and continued strength in labour force participation. The participation rate rose to 63.9% in the three months to May, its highest since 1991 (Section 3.4), and much higher than expected at the time of the previous Report. The Labour Force Survey (LFS) unemployment rate fell slightly faster than had been expected in the May Report, to 6.5% in the three months to May (Chart 3.5). The claimant count rate, a timely indicator of unemployment, also fell, to 3.1% in June.

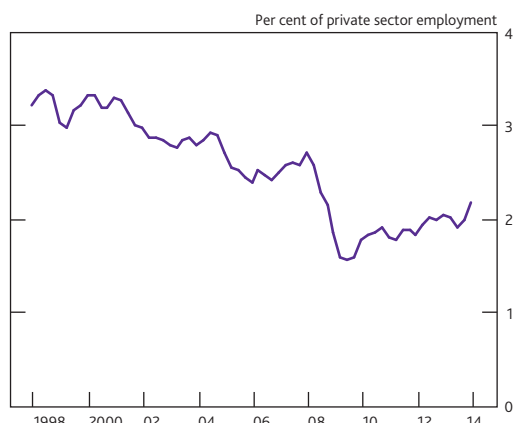
The headline unemployment rate was probably 6.4% in Q2 and is projected to fall to 6.1% in Q3 (Chart 3.5). The prospects for the labour market in the second half of the year will depend on demand, but also on the extent to which companies use their existing staff more productively.

## 3.3 Productivity

Hourly labour productivity increased by 0.4% in the four quarters to Q1, less than had been expected at the time of the May Report and well below its historical average growth rate (Chart 3.6). Productivity remains more than 4% below its pre-crisis peak (Chart 3.1).

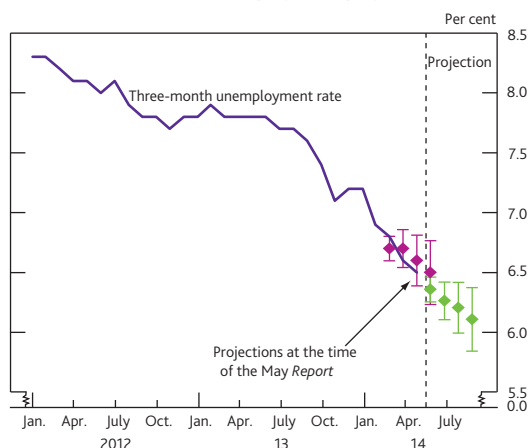
The fall in labour productivity during the recession was larger, and the recovery more protracted, than in any other post-war recession. UK productivity has also lagged behind that in other countries, such as the United States and France.

(1) Developments in self-employment since the recession are discussed in greater detail in the box on page 27 of the May 2014 Report; [www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14may.pdf](http://www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14may.pdf).

**Chart 3.4 Job-to-job flows below pre-crisis rates**Job-to-job flows<sup>(a)</sup>

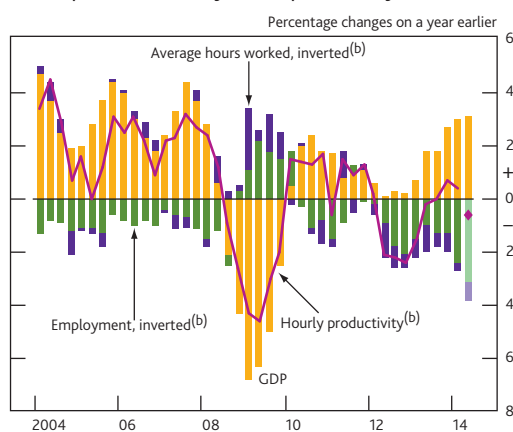
Sources: Labour Force Survey and Bank calculations.

(a) Number of people who reported being in a private sector job three months ago, and report being in a private sector job for less than three months. Two-quarter average. Seasonally adjusted by Bank staff.

**Chart 3.5 Unemployment rate expected to fall further**Bank staff's near-term unemployment projection<sup>(a)</sup>

Sources: Labour Force Survey (LFS) and Bank calculations.

(a) The magenta diamonds show Bank staff's central projections for the headline unemployment rate for March, April, May and June, at the time of the May Report. The green diamonds show the current staff projections for the headline unemployment rate for June, July, August and September 2014. The bands on either side of the diamonds show uncertainty around those projections based on staff estimates of the root mean squared error of past forecasts for the three-month LFS unemployment rate.

**Chart 3.6 Productivity growth remains weak**Decomposition of hourly labour productivity<sup>(a)</sup>

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

(a) Whole-economy output per hour. Contributions may not sum to total due to seasonal adjustment.

(b) The final observations are based on Bank staff projections for 2014 Q2. The error bands around those projections are wide.

The level of productivity is currently around 17% below where it would have been had its pre-crisis trend continued. Recent research by Bank staff suggests that there are a range of factors that can help to explain this shortfall.<sup>(1)</sup>

Up to a quarter of the productivity shortfall may reflect measurement issues. Output or hours worked may be mismeasured.<sup>(2)</sup> Trend productivity growth may also have slowed, for example due to the decline in North Sea oil output.

Low productivity growth may partly reflect the weakness of demand. For example, if companies have had to work harder during the downturn to win business or obtain work contracts, because of reduced demand,<sup>(3)</sup> more effort will have been needed to achieve a particular level of output. But the persistent weakness of productivity, even as demand has recovered, suggests that other factors are also at play. For example, the financial crisis discouraged companies from investing in both physical and intangible capital. And resource reallocation from low to high productive uses is likely to have been impaired.

The relevant measure of capital in judging productive potential is capital services, which weights assets using estimates of their contribution to output. Growth in capital services relative to hours worked has moderated since the recession (**Chart 3.7**), which is likely to have constrained productivity growth. The fall in real wages relative to the cost of capital at the start of the recession may have encouraged companies to use more labour-intensive forms of production. While this may have reduced the level of output per hour, it may also have helped companies to lower their overall costs.

Hourly labour productivity is expected to increase by around ½% in the second half of the year (Section 5).

### 3.4 Indicators of spare capacity

A key judgement for the MPC in assessing future inflationary pressure is the extent to which the balance between supply and demand — spare capacity or slack — has changed. The MPC assesses a range of indicators, splitting spare capacity into two elements: that within companies, and that within the labour market.<sup>(4)</sup>

(1) For more information on the different explanations for the weakness in productivity, see Barnett, A, Batten, S, Chiu, A, Franklin, J and Sebastián-Barriel, M (2014), 'The UK productivity puzzle', *Bank of England Quarterly Bulletin*, Vol. 54, No. 2, pages 114–28; [www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q201.pdf](http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q201.pdf).

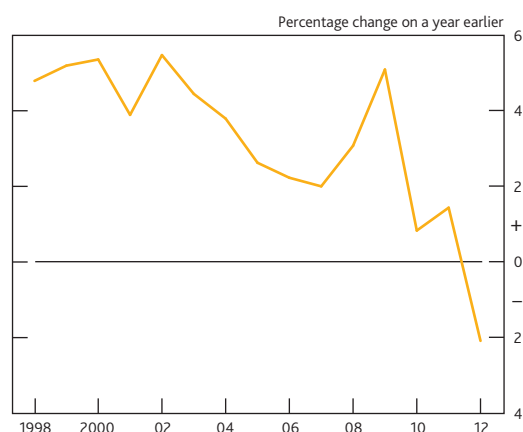
(2) See the box on page 118 in Barnett *et al* (2014) for a more detailed discussion of the extent to which measurement issues can explain the productivity puzzle.

(3) See McCafferty, I (2014), 'The UK productivity puzzle — a sectoral perspective'; [www.bankofengland.co.uk/publications/Documents/speeches/2014/speech739.pdf](http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech739.pdf).

(4) See the box on page 29 of the May 2014 *Report* for more information on quantifying the MPC's assessment of spare capacity; [www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14may.pdf](http://www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14may.pdf).

**Chart 3.7 Production may have become less capital-intensive**

Whole-economy capital services per hour<sup>(a)</sup>

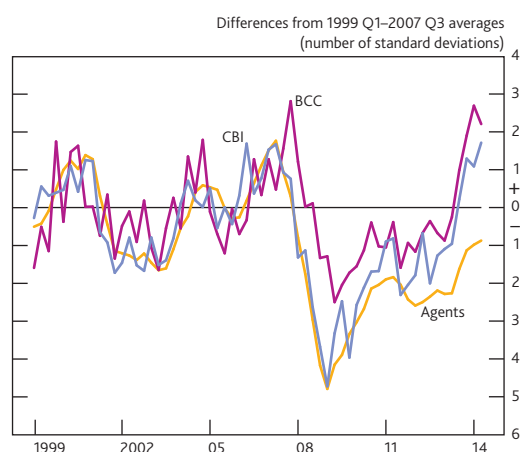


Sources: ONS (including the Labour Force Survey) and Bank calculations.

(a) Whole-economy capital services divided by the total number of hours worked.

**Chart 3.8 Companies' capacity utilisation was broadly unchanged in Q2**

Survey indicators of capacity utilisation<sup>(a)</sup>



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

(a) 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, professional/business/consumer services and distributive trades) using nominal shares in value added. The surveys are adjusted to have a mean of zero and a variance of one over 1999 Q1 to 2007 Q3. The BCC data are non seasonally adjusted.

### Spare capacity within companies

On average, surveys suggest that companies were operating close to normal capacity in Q1 and Q2 (**Chart 3.8**). But it is not possible to map these surveys into capacity utilisation precisely. The range of surveys has been particularly wide in recent quarters, with some well above average levels. Most survey measures, however, capture companies' capacity utilisation relative to 'normal' levels and views of 'normal' levels of utilisation may have fallen recently. The Bank's Agents report that, although contacts in the manufacturing sector report slightly above normal capacity utilisation, they still see scope to increase the utilisation of existing physical capacity, in some cases by bringing mothballed capacity back into use.

### Spare capacity in the labour market

There is greater uncertainty around the margin of slack in the labour market than at the time of the *May Report*. This reflects conflicting signals from headline labour market quantities and wage growth. On the one hand, continued robust growth in employment and hours (Section 3.2) suggests that slack is narrowing more quickly than the MPC had expected. On the other hand, continued and unexpected weakness in wages could be indicative of a greater degree of slack than had seemed likely. The box on page 28 summarises possible explanations for these developments. One interpretation — and one on which the MPC places some weight — is that there has been an increase in effective labour supply, implying more slack and greater downward pressure on wages.

When assessing labour market slack, the MPC focuses on unemployment, participation and average hours relative to their respective medium-term equilibrium levels. These are discussed below.

The **unemployment gap** indicates how far unemployment is from its medium-term equilibrium. That is the rate consistent with neither upward nor downward pressure on wage growth, and it is likely to vary over time. At the time of the August 2013 *Report*, Bank staff estimated that rate to be around 6½% (**Chart 3.9**). In subsequent *Reports*, the equilibrium rate was revised down a little, reflecting falls in longer-term unemployment. But unemployment has reached a level close to the medium-term rate estimated at the time of the *May Report* while wage growth has remained weak (Section 4).<sup>(1)</sup> Partly in response to these outturns, the central estimate of the current medium-term equilibrium unemployment rate has been revised down to around 5½% (**Chart 3.9**); considerable uncertainty surrounds this judgement (Section 5).

One reason why the medium-term equilibrium rate may be lower than previously assumed is if the long-term unemployed are having a greater influence on wage growth. Historical transition rates show that the long-term unemployed have a

(1) See Weale, M (2014), 'Spare capacity and inflation'; [www.bankofengland.co.uk/publications/Documents/speeches/2014/speech737.pdf](http://www.bankofengland.co.uk/publications/Documents/speeches/2014/speech737.pdf).



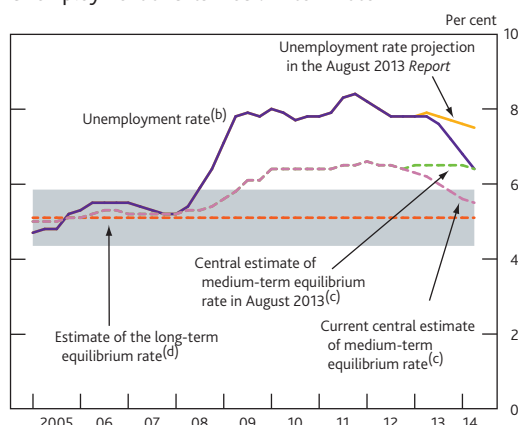
## Reconciling labour market prices and quantities: a summary

Recently, nominal indicators — particularly wage growth — have been weak at a time when real indicators — such as employment and labour force participation — have been robust. The table below summarises several possible explanations, which all probably play a role.

Uncertainty about how much slack there is has increased in recent months, in part reflecting these labour market developments. In the Committee's best collective judgement, however, the degree of slack has narrowed somewhat, and the central estimate is now broadly in the region of 1% of GDP. The MPC will continue to monitor both real and nominal indicators when assessing the margin of slack in the economy.

Explanation	Evidence	Implications
Measurement issues (box on page 34).	Average weekly earnings (AWE) will be affected by changes in the mix of employment across sectors. During late 2013 and early 2014, these 'compositional effects' reduced AWE growth.	Compositional effects can account for a little of the weakness in wage growth, but by no means all of it.
It is taking longer than usual for wages to respond to rises in employment (Section 4).	With wages typically renegotiated once a year, many employees may not yet have had a pay award since unemployment started falling sharply. Job churn has remained relatively low. So businesses may so far have faced limited pressure to increase wages (Chart 3.4).	As people become more confident to change (or threaten to change) jobs and as employers and employees renegotiate wages, the improvements in labour market conditions could start to feed through to wage growth.
A lower medium-term equilibrium unemployment rate (Section 3.4).	Unemployment is very close to Bank staff's estimate of the medium-term equilibrium rate prevailing at the time of the May Report. The long-term unemployed, however, may be having a greater effect on wage growth than previously assumed. For example, recent employment growth has been among lower-skilled occupations, and the long-term unemployed may have been better able to compete for these jobs (Chart 3.11).	Bank staff have revised down their estimate of the medium-term rate to around 5½% (Chart 3.9). That suggests greater labour market slack in the recent past than previously judged.
A higher medium-term equilibrium participation rate (Section 3.4).	Labour force participation rate is at its highest since 1991. Rises in participation over recent years are likely to reflect changes to the women's state pension age, the abolition of the default retirement age, concerns about the adequacy of pension and saving income, and changes to the benefit regime.	Bank staff have revised up their view of the medium-term equilibrium rate of participation. The actual participation rate is now judged to be below its medium-term equilibrium (Chart 3.12). This also suggests greater labour market slack than previously judged.

**Chart 3.9 Bank staff estimate of medium-term equilibrium unemployment has been falling**  
Unemployment and its medium-term rate<sup>(a)</sup>



Sources: Labour Force Survey and Bank calculations.

(a) Percentages of the economically active population.

(b) Quarterly data. The final data point shows Bank staff's central expectation for unemployment in Q2.

(c) Staff estimate. This proxy measure is based on a simple calculation rather than an estimated model, so there are no associated error bands to reflect estimation uncertainty, but there is considerable uncertainty about how well this proxy measure captures the medium-term equilibrium unemployment rate. See the box on pages 28–29 of the August 2013 Report for more details.

(d) Staff estimate. The swathe around the central staff estimate of the natural rate reflects uncertainty about the parameters in the estimated model, but does not capture uncertainty about model misspecification. The true uncertainty is likely to be much larger. See the box on pages 28–29 of the August 2013 Report for more details.

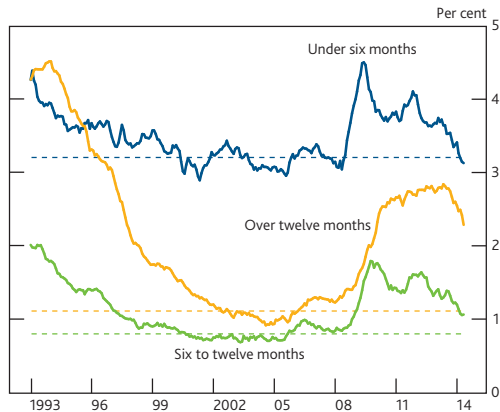
lower probability of finding a job than the short-term unemployed, which suggests that they should exert less downward pressure on wages.<sup>(1)</sup>

Wage pressures have remained subdued, however, even as the short-term unemployment rate has fallen sharply, to around its pre-crisis average (Chart 3.10). The longer-term unemployed, despite having relatively lower rates of transition into work on average, may put additional downward pressure on wages because they are willing to work for lower wages — for example, if they have fewer alternative options than the short-term unemployed. And this effect may have intensified, perhaps in response to less generous out-of-work benefits. In addition, employment growth over the past few quarters has been

(1) Many studies have concluded that the long-term unemployed have a limited effect on inflation, see for example Gordon, R (2013), 'The Phillips Curve is alive and well: inflation and the NAIRU during the slow recovery', *NBER Working Paper No. 19390*, for the United States, and Llaudes, R (2005), 'The Phillips Curve and long-term unemployment', *European Central Bank Working Paper No. 441*, for OECD countries, including the United Kingdom. It is worth noting however that some research concludes that the long-term unemployed have a similar effect on wages as the short-term unemployed, including Bell, D and Blanchflower, D (2014), 'Labour market slack in the UK', *Peterson Institute for International Economics Working Paper 14–2*, and Kiley, M (2014), 'An evaluation of the inflationary pressure associated with short and long-term unemployment', *Finance and Economics Discussion Series No. 2014–28*, Federal Reserve Board, Washington, DC.

**Chart 3.10 Short-term unemployment has returned to its pre-crisis average rate**

Unemployment rates by duration<sup>(a)</sup>

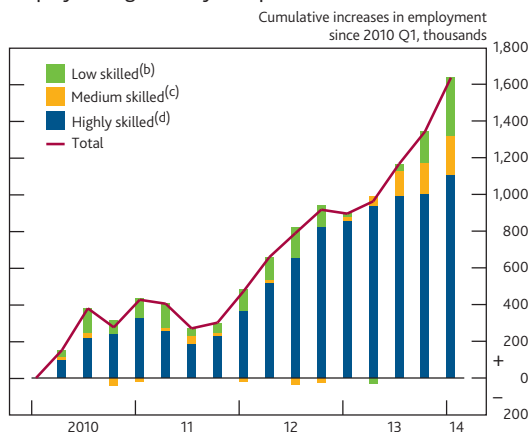


Sources: Labour Force Survey and Bank calculations.

(a) The number of people unemployed in each duration category, divided by total participation. Dashed lines are averages from 2002 to 2007.

**Chart 3.11 Much of the recent rise in employment has been among the lower skilled**

Employment growth by occupational skill level<sup>(a)</sup>

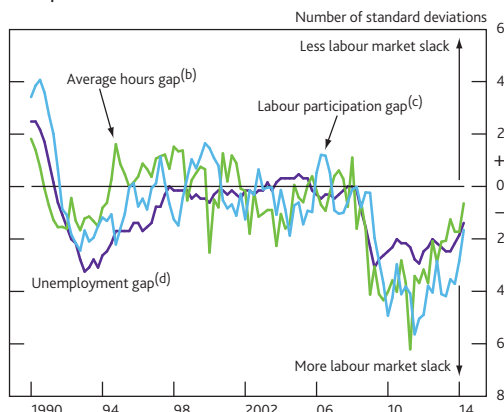


Sources: Labour Force Survey and Bank calculations.

(a) Uses the Standard Occupational Classification (SOC) 2000. Seasonally adjusted by Bank staff.  
(b) Includes elementary occupations, plant machine operatives, sales and customer services.  
(c) Change in total employment less changes in high and low-skilled occupations.  
(d) Includes managers, professional and associate professional and technical occupations.

**Chart 3.12 Some slack remains in the labour market**

Components of labour market slack<sup>(a)</sup>



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

(a) Standard deviations are calculated over the period 1992–2007.  
(b) Percentage difference between Bank staff's estimate of the medium-term equilibrium level of average weekly hours worked and average weekly hours worked.  
(c) Difference between the participation rate and Bank staff's estimate of the medium-term equilibrium participation rate.  
(d) Difference between Bank staff's estimate of the medium-term equilibrium unemployment rate and the unemployment rate.

skewed towards lower-skilled occupations (**Chart 3.11**) and data suggest that the long-term unemployed are more likely to be lower skilled. The long-term unemployed, therefore, may recently have been better able to compete for jobs on offer.

The extent to which the medium-term equilibrium unemployment rate falls further depends in part on the long-term equilibrium rate, which is determined by the structural characteristics of the labour market. Bank staff have estimated the long-term rate to be just over 5% (**Chart 3.9**). But it may be lower, for example because changes to the benefit system may have affected the incentives facing those out of work (Section 5).

Overall, it is likely that the unemployment gap was bigger than previously thought in Q1 and over much of 2013. But the gap is likely to have narrowed faster over the first half of 2014, so its current level is similar to that expected three months ago (**Chart 3.12**). Consistent with that, there have been emerging signs of tightness in parts of the labour market, particularly for skilled employees. For example, the Bank's Agents' contacts report recruitment difficulties in IT, construction and engineering. That could be putting upward pressure on the pay of new recruits (see the box on page 34). The CBI survey suggests that, in general, however, recruitment difficulties for skilled employees in the service sector remain below average (**Table 3.C**).

As well as the unemployment gap, the MPC also considers the **participation gap** — the difference between the labour force participation rate and its medium-term rate — as those who are currently not in the labour market, but could enter it relatively quickly, probably have some influence on wage growth.

Labour force participation has continued to grow robustly (**Chart 3.13**). At the time of the *May Report*, the participation gap was judged to be broadly closed. But continued upside surprises in participation suggest that the strength may instead reflect a structural increase in labour supply, consistent with less pressure on pay.

Outturns for participation have been much stronger than anticipated a year ago (**Chart 3.13**). In the August 2013 projections, participation was expected to be broadly flat in the year to 2014 Q2. That reflected a significant downward drag from the ageing of the population being offset by an increasing tendency of those over 50 to remain in the labour market for longer than in the past. Participation among the older age groups is likely to have been boosted by the rise in the women's state pension age since 2010, the abolition of the default retirement age, and the impact of the financial crisis on pension and saving income.<sup>(1)</sup> The continued rise in

(1) For a discussion of factors affecting participation, see the box on page 27 of the *May 2013 Report*; [www.bankofengland.co.uk/publications/Documents/inflationreport/2013/ir13may.pdf](http://www.bankofengland.co.uk/publications/Documents/inflationreport/2013/ir13may.pdf).

**Table 3.C Quantity indicators suggest narrowing labour market slack**

Indicators of labour market slack

	Averages			2014	
	1998–2007 <sup>(a)</sup>	2010–12	2013	Q1	Q2
Vacancies/unemployed ratio <sup>(b)(c)</sup>	0.41	0.19	0.22	0.28	0.30
Number of people working part-time because they could not find a full-time job <sup>(b)(d)</sup>	2.2	4.3	4.8	4.7	4.4
Number of people in temporary employment because they could not find a permanent job <sup>(b)(d)</sup>	1.6	2.0	2.1	2.0	2.0
<b>Recruitment difficulties for skilled employees<sup>(e)</sup></b>					
Manufacturing	12	13	17	13	22
Services <sup>(f)</sup>	31	16	20	24	25

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

(a) Unless otherwise stated.

(b) The figure for 2014 Q2 shows data for the three months to May.

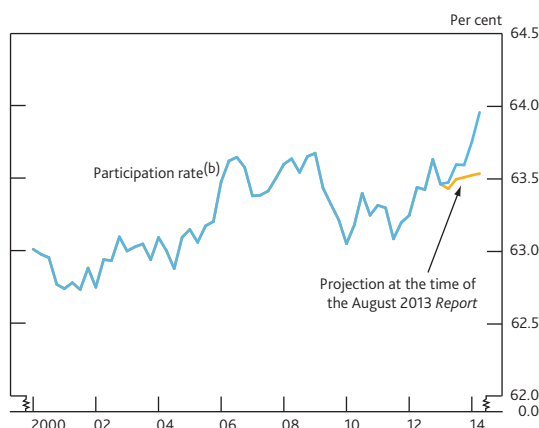
(c) Vacancies (excluding agriculture, forestry and fishing) divided by LFS unemployment. Average since 2001 Q2.

(d) As reported to the LFS. Percentage of LFS total employment.

(e) Percentages of respondents to the CBI surveys expecting skilled labour to limit output/business over the next three months (in the manufacturing sector) or over the next twelve months (in the services sector). Averages are since 1998 Q4.

(f) Proportions weighted together using Workforce Jobs employee jobs shares.

**Chart 3.13 Participation much stronger than expected**  
Labour force participation rate and projection at the time of the August 2013 Report<sup>(a)</sup>



Sources: Labour Force Survey and Bank calculations.

(a) Percentages of 16+ population.

(b) Quarterly data. The final data point shows Bank staff's central projection for the participation rate in 2014 Q2.

participation over the past year could imply that the impact of some of those factors has been greater than anticipated. In addition, other factors could be pushing up participation. For example, those who were discouraged from searching for employment because of a lack of jobs may be returning to the labour market, suggesting that more of the past weakness was cyclical rather than structural. Benefit reforms could also have had a larger impact.

This continued strength in actual participation in the face of weak wage growth has caused Bank staff to revise up their view of the medium-term equilibrium rate of participation. In particular, rather than being broadly flat since 2008, the medium-term rate is now thought to have followed the broad upward trend seen in participation over the past decade or so (Chart 3.13). That is consistent with participation remaining below its potential level (Chart 3.12), but there is uncertainty around the estimate of the medium-term rate, as it is unclear to what extent factors supporting participation will continue to offset demographic effects.

Another constituent of slack considered by the MPC is the **average hours gap**, or the extent to which people are working fewer hours than they would like. Bank staff estimate that the gap between average hours and their medium-term equilibrium level narrowed in Q2 (Chart 3.12). That reflects the increase in average hours worked in the three months to May. Consistent with this, the number of people who are working part-time because they could not find a full-time job continued to fall (Table 3.C).

The number of people who say they want to work longer hours remains elevated relative to its average level. But it is unclear to what extent this reflects the effects of the crisis, which are likely to reverse in time, and how much is likely to persist. For example, some of the rise in 'desired' hours could unwind as household real incomes recover. Bank staff's estimate of medium-term equilibrium average hours continues to reflect the judgement that only around half of the present gap between actual and desired hours reflects slack in the labour market. But it is possible that weak wage growth could indicate a larger average hours gap.

Overall, it seems likely that although the degree of labour market slack has been greater in the past than previously thought, it is narrowing, and doing so faster than anticipated at the time of the May Report. There is a wide range of views on the Committee about the likely extent of spare capacity in the economy. Uncertainty about how much slack there is has increased in recent months, in part reflecting labour market developments. In the Committee's best collective judgement, however, the degree of slack has narrowed somewhat over the recent past and the central estimate for Q3 is broadly in the region of 1% of GDP (Section 5).



# 4 Costs and prices

CPI inflation was 1.9% in June, broadly in line with expectations at the time of the *May Report*. Import prices continued to fall, reflecting the appreciation of sterling. Private sector pay grew by 1% in the year to May according to the average weekly earnings measure, although other indicators of wage pressures have been a little stronger. Inflation expectations were little changed, and remain consistent with the 2% target.

**Table 4.A** Monitoring the MPC's key judgements

Developments anticipated in May	Developments since May
<b>Inflation expectations</b>	<b>On track</b>
• Medium-term inflation expectations consistent with the 2% target.	• Household and financial market expectations broadly unchanged.
<b>Earnings growth</b>	<b>Weaker than expected</b>
• Four-quarter AWE growth to approach 2½% by 2014 Q4, following some volatility in 2014 H1.	• The level of wages likely to be little changed in Q2 compared with a year earlier, ¾ percentage points weaker than expected.
<b>Unit wage costs</b>	<b>Slightly weaker than expected</b>
• Growth in unit wage costs of around ¼% a quarter through 2014.	• Quarterly unit wage cost growth is expected to average around zero during H1.
<b>The exchange rate, utility bills and commodities</b>	<b>Broadly on track</b>
• Sterling ERI, domestic energy bills and commodity prices evolve in line with conditioning assumptions.	• Sterling ERI around 2% higher. US dollar oil futures higher. UK gas futures lower.
<b>Import prices</b>	<b>Broadly on track</b>
• Import prices to fall by just over 2% in 2014 H1.	• Import prices are likely to have fallen by around 2¼% in 2014 H1, broadly in line with expectations.

**Table 4.B** Nominal indicators weak relative to recent averages

Indicators of inflationary pressures

Percentage changes on a year earlier

	Averages		2014	
	1997–2007 <sup>(a)</sup>	2008–13	Q1	Q2
Gross value added deflator	2.1	2.1	1.3	n.a.
Import price deflator excluding fuel <sup>(b)</sup>	-0.1	3.7	-2.9	n.a.
Total AWE <sup>(c)</sup>	4.3	1.7	2.0	-0.1
AWE excluding bonuses <sup>(c)</sup>	3.9	1.9	1.5	0.9
Unit labour costs <sup>(d)</sup>	2.4	3.2	2.0	n.a.
Unit wage costs <sup>(e)</sup>	1.9	2.9	1.3	n.a.
Producer price index <sup>(f)</sup>	1.0	3.0	0.6	0.5
Service producer price index <sup>(f)(g)</sup>	2.1	1.5	1.2	n.a.
CPI inflation	1.6	3.2	1.7	1.7

(a) Unless otherwise stated.

(b) Goods and services deflator excluding fuels and the impact of MTIC fraud. Average since 1999.

(c) Private sector AWE pay excluding arrears of pay. Average since 2001. Figures for 2014 Q2 are estimates, based on data for April and May, and the Bank staff's projection for June.

(d) Estimated labour cost per worker, calculated using private sector AWE data adjusted using the ratio of private sector employee compensation to wages and salaries, divided by market sector output per worker. Average since 2001.

(e) Private sector AWE divided by market sector output per worker. Average since 2001.

(f) Data are presented on a net basis.

(g) Data are non seasonally adjusted. Average since 1999.

CPI inflation was 1.9% in June, close to the 2% inflation target. Other indicators of inflationary pressure, however, are below past averages (**Table 4.B**). The cost of imported goods and services has fallen over the past year (Section 4.2). And wage growth has remained weak, containing businesses' labour cost growth (Section 4.3).

## 4.1 Consumer prices

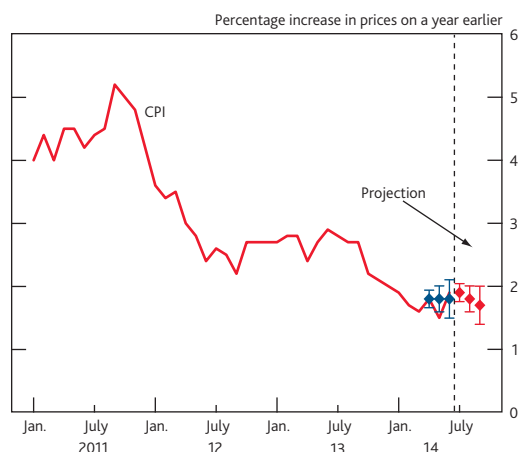
CPI inflation was 1.9% in June, broadly in line with expectations at the time of the *May Report* (**Chart 4.1**). In contrast with much of the period since 2008, when inflation was elevated, CPI inflation is close to the 2% inflation target. Within that, below-average contributions from food, petrol and utilities, and services prices are being partly offset by an above-average contribution from clothing and footwear prices.

Clothing and footwear price inflation contributed 0.2 percentage points to CPI inflation in June, around 0.4 percentage points more than its average since 1997. That is partly the result of changes in clothing and footwear collection methods in 2010 which raised the average contribution, an effect that is likely to persist (see the box on page 39 of the February 2011 *Report*). But, unusually, the contribution in June was high relative to its recent average (**Chart 4.2**). The Bank's Agents report that this reflects a smaller impact from summer sales than in previous years, due both to clothing retailers having smaller excess stocks following warmer weather, and stronger underlying demand. The contribution from clothing and footwear prices is expected to remain at around 0.2 percentage points in Q3.

The contributions from food and energy prices were below their historical averages in June. Past falls in sterling oil prices have taken the contribution of petrol slightly negative (Section 4.2). Food price inflation has slowed, in part reflecting intensifying competition between supermarkets. The slowing also reflects movements in agricultural commodity prices (**Chart 4.3**): having increased sharply during early 2014, these prices have fallen back since the

### Chart 4.1 CPI inflation expected to fall slightly over Q3

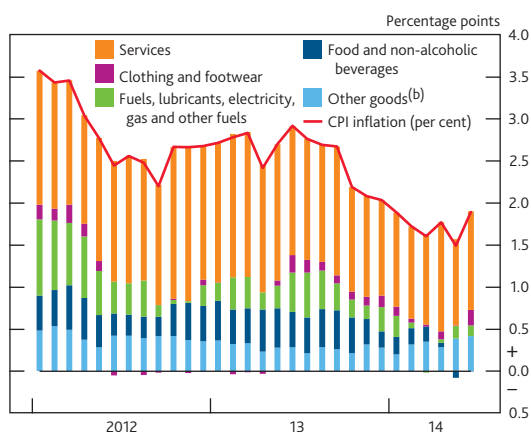
Bank staff projection for near-term CPI inflation<sup>(a)</sup>



(a) The blue diamonds show the Bank staff's central projection for CPI inflation in April, May and June 2014 at the time of the *May Inflation Report*. The red diamonds show the staff projection for July, August and September 2014. The bands on each side of the blue and red diamonds show the root mean squared error of the projections for CPI inflation one, two and three months ahead made since 2004.

### Chart 4.2 Recent falls in CPI inflation reflect lower food and energy price inflation

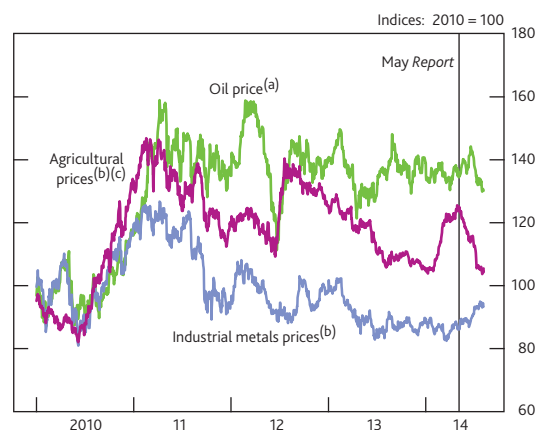
Contributions to CPI inflation<sup>(a)</sup>



(a) Monthly contributions to annual CPI inflation. Data are non seasonally adjusted.  
(b) Calculated as the difference between CPI inflation and the contributions to CPI inflation of the goods or services identified in the chart.

### Chart 4.3 Agricultural commodity prices have fallen back

US dollar oil and commodity prices



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

(a) US dollar Brent forward prices for delivery in 10–21 days' time.  
(b) Calculated using S&P US dollar commodity price indices.  
(c) Total agriculture and livestock S&P commodity index.

*May Report*, reflecting expectations of better harvests. Although agricultural commodity prices represent only a small portion of supermarkets' costs, the recent falls in prices, together with continued competition in the supermarket sector, should bear down on food price inflation further in the near term.

The contribution to CPI inflation from services prices was also lower than its historical average in June. Services prices are particularly dependent on developments in wages, which tend to form a greater portion of the production costs of services than of manufactured goods. Wage growth remained weak in early 2014 (Section 4.3).

Overall, CPI inflation is expected to fall a little over coming months (Chart 4.1), in part reflecting the subdued outlook for food price inflation. Beyond the near term, prospects for inflation will depend on the effects of the recent appreciation of sterling (Section 4.2) and movements in unit wage costs (Section 4.3).

## 4.2 Global costs and prices

Part of the fall in CPI inflation over the past year reflects the fading pressures on inflation from earlier increases in import prices. But import prices have recently started falling, reflecting subdued world export prices and the 14% appreciation in sterling since March 2013 (Section 1).

Import prices excluding fuel fell by 2.9% in the year to 2014 Q1 (Chart 4.4). Sterling's appreciation has been the primary contributor to this fall. But tradables inflation has also weakened: annual world export price inflation, weighted according to countries' share in UK imports, was around zero in 2014 Q1. That is partly due to weak euro-area inflation (Section 2).

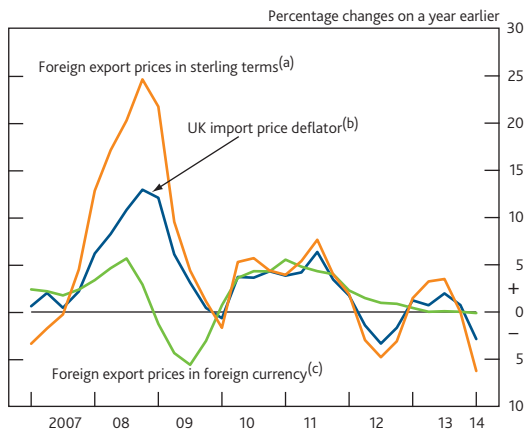
Analysis by Bank staff suggests that, in total, the appreciation of sterling over the past year should reduce the level of UK import prices by around 6%, all else equal. To date, around half of this effect appears to have come through. In time, this projected decline in the level of import prices should feed through fully into CPI inflation. Estimates of import price pass-through are inevitably uncertain. But Bank staff estimates suggest that, once pass-through is complete, the level of UK consumer prices will be around 2% lower than otherwise would have been the case. Most of this pass-through is likely to be completed within the MPC's forecast period, with a peak impact on inflation of almost ½ a percentage point in about 18 months' time.

### Energy prices

UK consumer energy prices depend on global commodity prices and on the sterling exchange rate. Changes in oil prices are passed straight through to petrol prices; natural gas prices are a key influence on utility prices. Since March 2013, when

**Chart 4.4 Sterling's appreciation weighing on UK non-fuel import prices**

UK import prices and foreign export prices excluding fuel

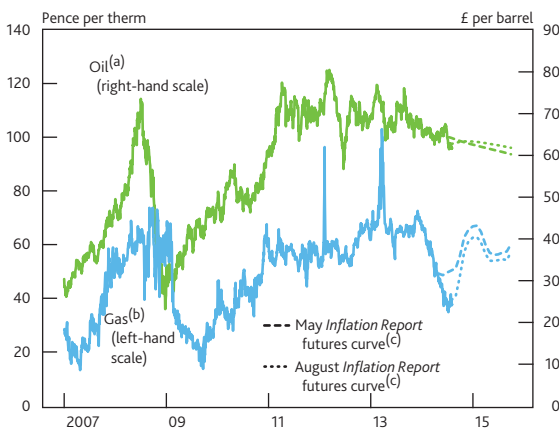


Sources: Bank of England, CEIC, Eurostat, ONS, Thomson Reuters Datastream and Bank calculations.

- (a) Domestic currency non-oil export prices of goods and services of 49 countries weighted according to their shares in UK imports, divided by the sterling effective exchange rate. The sample does not include any major oil exporters. In 2014 Q1, export prices for Cyprus, Iceland, Ireland, Pakistan, Portugal and Switzerland are assumed to grow at the same rate as export prices in the rest of the world excluding the euro area and the United States.
- (b) Goods and services deflator excluding fuels and the impact of MTIC fraud.
- (c) Domestic currency non-oil export prices as defined in footnote (a).

**Chart 4.5 Sterling oil price futures a touch higher, gas price futures lower**

Sterling oil and wholesale gas prices<sup>(a)</sup>



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) Futures prices at the time of the August Inflation Report are averages during the fifteen working days to 6 August 2014. Futures prices at the time of the May Inflation Report are averages during the fifteen working days to 7 May 2014.

sterling started to appreciate, the sterling oil price has fallen by around 15% (**Chart 4.5**), as sterling's rise against the dollar compounded a small fall in the dollar oil price. Oil prices depend heavily on the outlook for, and risks to, future oil supply and demand growth. Despite increased concerns about the outlook for supply in some oil-producing regions, such as Iraq and Libya, dollar spot oil prices have changed little during 2014, although futures prices were a touch higher in the run-up to the *August Report* than three months earlier.

Movements in gas prices also affect CPI inflation, through households' and businesses' utility bills. Gas spot prices have fallen steadily during 2014, and are almost 45% lower than their average level during 2013. These falls are, however, expected largely to unwind: the gas futures curve is only around 4% lower than three months ago. Nevertheless, lower wholesale gas prices mean that no change is now expected in domestic energy prices in 2015, compared with the increase of 2½% expected in the *May Report* (Section 5). The falls in spot gas prices during 2014 probably reflect historically high European inventories following a relatively warm winter, and lower prices of imported substitutes such as coal. To date, there has been little impact on gas prices of tensions in Ukraine.

### 4.3 Domestic costs

Businesses' domestic costs are also important for inflation. Although productivity growth remains low relative to before the crisis, wage growth has been sufficiently weak to keep businesses' costs growing only modestly (**Chart 4.6**). Four-quarter growth in unit wage costs in the private sector — the wage cost of producing an extra unit of output — fell to 1.3% in 2014 Q1, below its historical average rate (**Table 4.B**). On average, quarterly unit wage cost growth is expected to be around zero during the first half of 2014.

Wage growth remained weak in early 2014. The level of average weekly earnings (AWE) is expected to be little different in Q2 than in the same period a year earlier, in both the whole economy and private sector (**Table 4.C**). Some of this weakness reflects differences in the timing of bonus payments between 2013 and 2014: some people deferred their 2013 bonus to take advantage of the April 2013 reduction in the top rate of income tax. Earnings growth excluding bonuses has also been weak, however: annual private sector regular pay growth looks to have fallen to around 1% in Q2, from 1½% in Q1. Overall, private sector pay growth in Q2 appears to have been at least ½ percentage point weaker than expected three months ago.

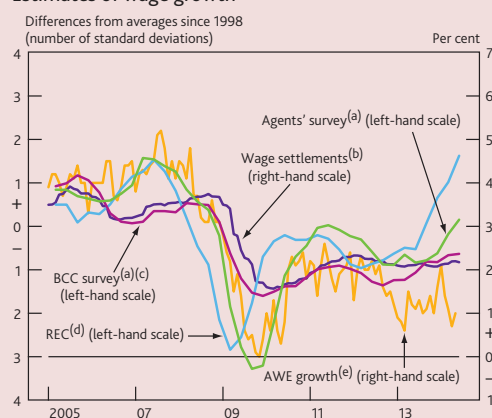
Some other indicators of pay point to stronger wage growth than AWE. The apparent divergence across indicators partly reflects differences in coverage and concepts, as discussed in the box on page 34. For example, AWE measures the average wage paid across the economy. The REC survey of the starting

## Measures of wages

The MPC considers a range of indicators when assessing wage pressures. These have become increasingly divergent since the start of 2013. Annual growth in the ONS measure of average weekly earnings (AWE) has been weak. Some other indicators — particularly the survey of new employees' pay by the Recruitment and Employment Confederation (REC) — have been more robust (Chart A). This box considers the concepts, coverage and timeliness of various indicators of wage growth.

### Chart A Wage surveys stronger than AWE

Estimates of wage growth



Sources: Bank of England, BCC, Income Data Services, KPMG/REC/Markit, the Labour Research Department, ONS and XpertHR.

- (a) The Bank's Agents' scores and the BCC survey are produced by weighting together surveys for the manufacturing and service sector according to their employment shares. The Bank's Agents' scores are a quarterly average of monthly data, and are available from June 1998.
- (b) Average over the past twelve months.
- (c) Four-quarter moving average measure.
- (d) The REC measure is produced by weighting together survey indices for the pay of permanent and temporary placements using shares in employment; quarterly averages.
- (e) Private sector pay excluding bonuses and arrears of pay.

Survey measures of pay growth — such as the REC index, the Bank's Agents' scores and the British Chambers of Commerce (BCC) survey — provide a *qualitative* assessment of changes in wages. That means that they only capture whether wages have been increasing or decreasing, so can be difficult to map into quantitative estimates of growth. It is possible, for example, that a given survey balance may now be associated with a lower level of average wage growth than before the crisis.

Qualitative surveys are nevertheless useful. They tend to be timelier and provide a cross-check on official data. They can also provide signals for future wage growth: this is particularly true of the REC survey, which covers new employees' wages. The REC has increased sharply since late 2013, and is back at its pre-crisis level, which, at the time, was associated with robust AWE growth (Chart A). Although there is uncertainty about the precise mapping between the REC and AWE, the REC may be signalling that pay growth for new employees is rising somewhat more quickly than that for the workforce as a whole. This could be because the pay growth of new employees is more sensitive to changes in labour market slack; the higher pay growth seen by new employees may feed through to other employees' pay as job churn increases towards pre-crisis rates (Section 3).

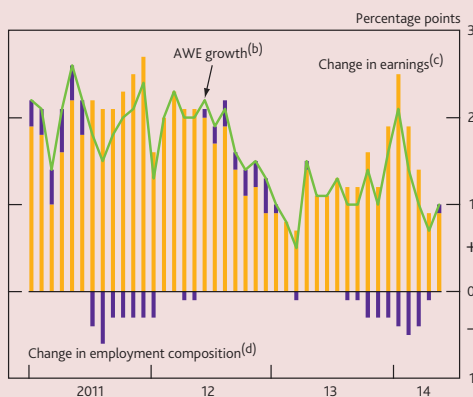
Quantitative estimates of wage growth include data on wage settlements and the official AWE series. Wage settlements dropped sharply immediately following the crisis, and have been around 2% since (Chart A). Settlements, however, are only a partial measure of wages — they capture company-wide pay awards, but not changes in average pay associated with individuals' performance or changes in working patterns.

The AWE is the most comprehensive timely measure of the average wage. It measures the average weekly wage level of people working in businesses with at least 20 employees. As well as capturing changes in working patterns, the AWE will also capture changes in average wages associated with changes in the composition of employment.

These compositional effects can be material. For example, an increase in the share of young employees would typically be expected to reduce average wages, as young employees tend to be relatively lower paid. As long as the youth share rises this would drag on wage growth. Changes in the mix of other characteristics, such as occupation or education, would also be reflected in AWE. But they are likely to be only slowly reflected in survey indicators, whose weights are updated less frequently. One observable compositional effect is changes associated with the sectoral composition of employment (Chart B). During late 2013 and early 2014, compositional effects were bearing down on AWE growth. In other words, increases in employment in sectors with a lower average wage rates masked higher pay within sectors. More generally, changes in the skill and tenure mix of employment may be reducing annual wage growth by around ½ percentage point.

### Chart B Sector mix important for average wages

Contributions to private sector average earnings growth<sup>(a)</sup>

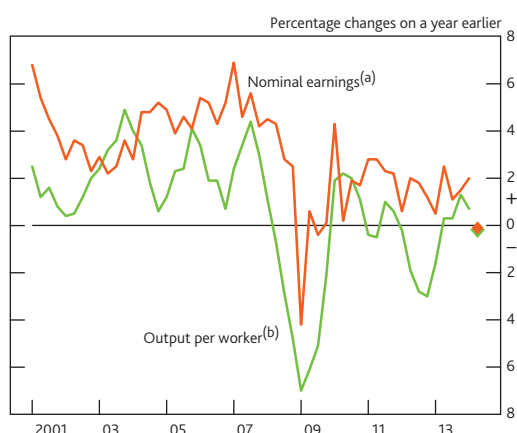


- (a) Monthly contributions to annual earnings growth. Data are non seasonally adjusted.
- (b) Private sector total pay excluding bonuses and arrears of pay.
- (c) Changes in earnings due to changes in sector's employment share. In April and May 2014 this includes a 0.1 percentage point uplift from the reclassification to the private sector of Lloyds Banking Group.
- (d) Changes in earnings assuming no change in the share of employment across sectors.

Overall, as a measure of the average wage, the AWE is the most comprehensive indicator. But other measures may be useful leading indicators, particularly at turning points.

**Chart 4.6 Wage and productivity growth are weak**

Private sector nominal earnings and output per worker



Sources: ONS and Bank calculations.

(a) AWE total pay. The diamond shows an estimate for 2014 Q2, based on data for April and May, and the Bank staff projection for June.

(b) The diamond is based on the Bank staff's projection for market sector output per worker in 2014 Q2. The error band round that forecast is wide.

**Table 4.C Official estimates of wage growth remain weak**

Private sector earnings

	Averages				2014	
	2001–07	2008 Q3–2010 Q2	2010 Q3–2012	2013	Q1	Q2
<b>Official estimates (percentage changes on a year earlier)</b>						
(1) Total AWE <sup>(a)</sup>	4.3	0.7	1.9	1.4	2.0	-0.1
(2) AWE regular pay <sup>(a)(b)</sup>	3.9	1.6	2.0	1.1	1.5	0.9
(1)–(2) Bonus contribution <sup>(a)(c)</sup>	0.4	-0.9	0.0	0.3	0.5	-1.1
Pay settlements <sup>(d)</sup>	3.3	2.6	2.1	2.1	2.1	2.2
Memo: Whole-economy total AWE <sup>(a)</sup>	4.3	1.4	1.9	1.2	1.9	-0.1

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

(a) Figures for 2014 Q2 are estimates, based on data for April and May, and the Bank staff projection for June.

(b) Private sector total pay excluding bonuses and arrears of pay.

(c) Percentage points. The bonus contribution does not always equal the difference between total AWE growth and AWE regular pay growth due to rounding.

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

salaries for new placements by recruitment consultants, by contrast, may better capture the marginal cost to businesses of employing another person. That survey has suggested strong pay growth. It is possible that stronger pay growth for new employees could begin to show up in aggregate measures of pay as job churn — currently low by historical standards — increases (Section 3).

### Candidate explanations for the weakness in wages

A central judgement for the Committee is the degree to which the current weakness in wage growth will persist. That depends on why wage growth has remained weak. It could reflect continued weakness in productivity. It may also be that changes in labour market conditions are not yet apparent in wages. Or it could reveal information about the degree of labour market slack.

Weakness in wage growth may reflect weak productivity growth (Chart 4.6), but slower unit wage cost growth suggests that this cannot explain all the weakness. That said, recent increases in employment have been concentrated in occupations with lower skill levels (Section 3). This composition effect is likely to have weighed on aggregate productivity growth, and in turn average wage growth a little, but will have little impact on unit wage cost growth. Any recovery in productivity growth should be associated with some recovery in wage growth, but with few implications for costs.

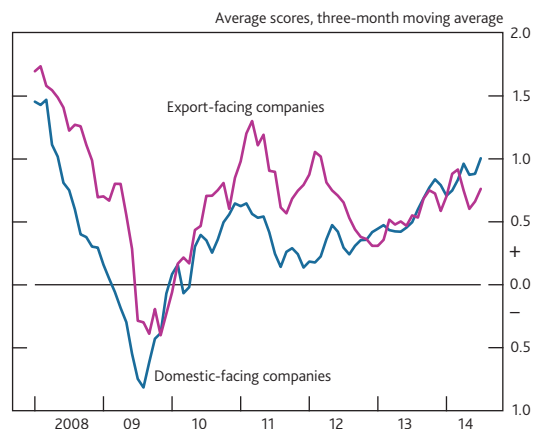
Wages may not yet reflect recent improvements in labour market conditions. Individuals' basic wages are typically renegotiated only once a year — for example, almost half of employees covered by the Bank's wage settlement database are not likely to have had a pay award since unemployment started falling sharply in late 2013. In addition, although according to a recent XpertHR survey retention is increasingly cited by companies as putting upward pressure on wage growth, resignations and the proportion of people moving between jobs have remained relatively low (Section 3). As people become sufficiently confident to change (or threaten to change) jobs, and as employers and employees renegotiate wages, the improvements in conditions could start to feed through.

Wage growth could also have remained weak because significant slack remains in the labour market. That would be the case if effective labour supply had been growing alongside the strong growth in total hours worked seen recently (Section 3). Indeed, the weakness in wages together with evidence of further improvements in labour supply has led the MPC to judge that the degree of labour market slack has been greater than previously thought (see the box on page 28). The path for wages will depend in part on how quickly that slack is absorbed: as the pool of potential employees shrinks, and people become less willing to work extra hours, that is likely to put upward pressure on pay. Overall, the MPC judges



**Chart 4.7 Margins of export-facing companies appear to be increasing less quickly than those of domestic-facing companies**

Bank Agents' company visit scores: change in profitability of export and domestic-facing companies<sup>(a)</sup>



(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 31 July 2014.

**Table 4.D Inflation expectations remain anchored**

Indicators of inflation expectations<sup>(a)</sup>

Per cent	2000 (or start of series) to 2007 averages <sup>(b)</sup>	Averages since 2008	2012	2013	2014		
					Q1	Q2	Q3 <sup>(c)</sup>
<b>One year ahead inflation expectations</b>							
<b>Households<sup>(d)</sup></b>							
Bank/NOP	2.4	3.3	3.5	3.5	2.8	2.6	n.a.
Barclays Basix	2.8	3.2	3.1	2.8	2.3	2.4	n.a.
YouGov/Citigroup (Nov. 2005)	2.5	2.7	2.7	2.7	2.2	2.1	2.2
<b>Companies (2008 Q2)<sup>(e)</sup></b>	n.a.	0.5	0.6	0.4	0.7	0.7	n.a.
<b>Financial markets (Oct. 2004)<sup>(f)</sup></b>	2.6	2.7	2.6	3.0	2.8	3.0	3.1
<b>Two to three year ahead expectations</b>							
<b>Households<sup>(d)</sup></b>							
Bank/NOP (2009 Q1)	n.a.	2.9	3.1	3.3	2.8	2.5	n.a.
Barclays Basix	3.2	3.4	3.3	3.2	2.7	2.8	n.a.
<b>Professional forecasters (2006 Q2)<sup>(g)</sup></b>	2.0	2.1	2.1	2.2	2.1	2.1	2.1
<b>Financial markets (Oct. 2004)<sup>(h)</sup></b>	2.8	3.0	2.8	3.1	3.2	3.1	3.1
<b>Five to ten year ahead expectations</b>							
<b>Households<sup>(d)</sup></b>							
Bank/NOP (2009 Q1)	n.a.	3.3	3.4	3.6	3.2	2.9	n.a.
Barclays Basix (2008 Q3)	n.a.	3.8	3.9	3.8	3.6	3.7	n.a.
YouGov/Citigroup (Nov. 2005)	3.5	3.4	3.4	3.5	3.0	3.0	3.0
<b>Financial markets (Oct. 2004)<sup>(i)</sup></b>	3.0	3.5	3.1	3.5	3.4	3.4	3.4
<b>Memo: CPI inflation</b>	1.6	3.1	2.9	2.6	1.7	1.7	n.a.

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

(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 July to 6 August. YouGov/Citigroup data are for July.

(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) Instantaneous RPI inflation one year ahead implied from swaps.

(g) Bank's survey of external forecasters, inflation rate three years ahead.

(h) Instantaneous RPI inflation three years ahead implied from swaps.

(i) Five-year, five-year forward RPI inflation implied from swaps.

that wage growth is likely to remain weak for the remainder of 2014 (Section 5).

### Companies' margins

Margins in the consumer-facing sector have been squeezed since the start of the financial crisis, but are estimated to have recovered somewhat over the past two years. Whether that process will continue is unclear. In sectors with excess capacity, for example, rates of profit are more likely to be restored by cutting back on investment. Where demand is firmer, weaker labour and import costs may continue to be used to expand profits, rather than passed on to consumers in the form of lower prices.

Although lower import prices reduce businesses' costs, they also affect exporters' prices. Many exporters price their products in local currency terms, with those prices reflecting supply and demand conditions in local markets. They will therefore see their margins squeezed following sterling's appreciation as their foreign price is worth less in sterling. There is tentative evidence from the Bank's Agents that export-facing businesses' margins have been increasing at a slightly slower rate than those of domestic-facing businesses during 2014 so far (Chart 4.7).

## 4.4 Inflation expectations

Inflation expectations are an important factor in pricing and wage-setting decisions. As discussed in a recent *Quarterly Bulletin* article,<sup>(1)</sup> since early 2014, one year ahead inflation expectations have been close to, or somewhat below, their averages since 2000 (Table 4.D). Longer-term expectations are also relatively close to their averages.

Household inflation expectations fell back sharply in early 2014, perhaps reflecting falls in inflation in the second half of 2013. If households believe that prices will rise only slowly, that may lead them to reduce their wage demands. This is more likely to lead to below-target inflation if companies also expect weak inflation to persist. Overall, businesses' inflation expectations have changed little since late 2013 (Table 4.D), although expectations are below average in the distribution sector and above average in other service sectors.

In contrast to the falls in household inflation expectations, and in common with professional forecasters, longer-term financial market implied measures of inflation expectations have changed little over the past 18 months. Overall, the MPC continues to judge that inflation expectations remain anchored at around the inflation target.

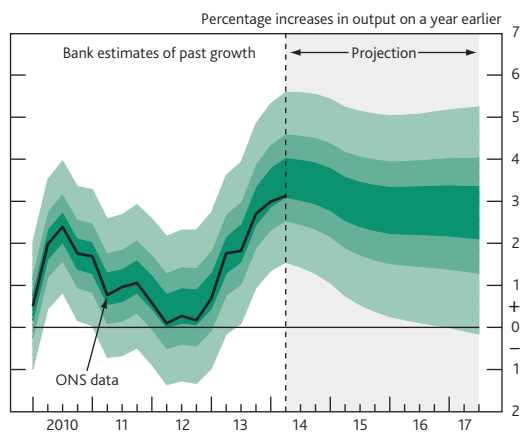
(1) For a fuller discussion of recent developments in inflation expectations, see Anderson, G and Maule, B (2014), 'Assessing the risk to inflation from inflation expectations', *Bank of England Quarterly Bulletin*, Vol. 54, No. 2, pages 148–62; [www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q204.pdf](http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q204.pdf).

# 5 Prospects for inflation

The expansion in output is projected to move to a firmer footing as productivity and real incomes revive. The remaining spare capacity in the economy is expected to be absorbed at a slower pace than in the recent past, and some slack is likely to persist for most of the forecast period. This should curb the build-up of domestic inflationary pressure. Import prices are expected to pull down inflation. Overall, CPI inflation is projected to remain at, or slightly below, 2%, before reaching the target at the end of the forecast period.

Since the *May Report*, output growth has been robust, and relatively broadly based, with GDP surpassing its pre-crisis level. Although productivity and average household real incomes have yet to stage a meaningful recovery, the Committee envisages that they will rise over time, and so underpin a sustained expansion. In the Committee's latest forecasts, and conditioned on the path of Bank Rate implied by market yields,<sup>(1)</sup> the economy is projected to expand at close to, or a little above, its historical average rate for much of the next two to three years (**Chart 5.1**).

**Chart 5.1** GDP projection based on market interest rate expectations and £375 billion purchased assets



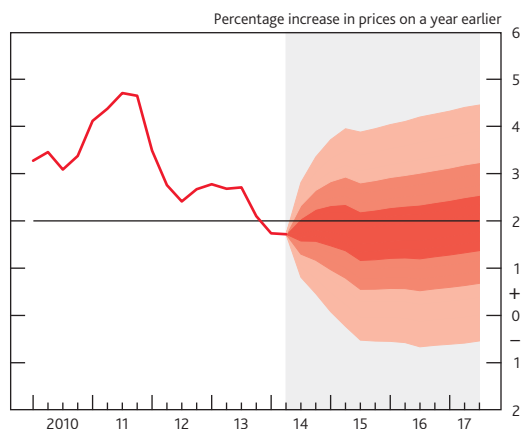
The fan chart depicts the probability of various outcomes for GDP growth. It has been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 billion throughout the forecast period. To the left of the vertical dashed line, the 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.

The domestic expansion continues to be accompanied by a strengthening labour market, with employment and total hours posting robust gains. But the recent strength of labour market quantities contrasts with the weakness of wage growth. These conflicting signals have underscored the uncertainty about the prevailing margin of slack in the economy; that uncertainty has increased in recent months. Not surprisingly, there is a wide range of views on the Committee about the likely extent of spare capacity in the economy. In the Committee's best collective judgement, however, the degree of slack has narrowed somewhat, and the central estimate is now broadly in the region of 1% of GDP. In the central view, the remaining spare capacity in the economy is fully absorbed towards the end of the forecast period.

Inflation has been around, or a little below, the 2% target in recent quarters. The Committee's central view is that inflation will remain close to, but a little below, 2% for the next couple of years, before reaching the target at the end of the forecast period (**Chart 5.2**). In part, that is because the anticipated modest expansion in supply capacity should help to slow the

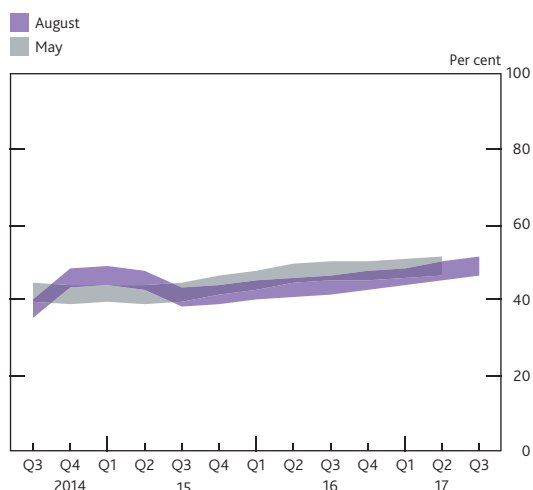
(1) Unless otherwise stated, the projections shown in this section are conditioned on: Bank Rate following a path implied by market yields; a constant stock of asset purchases; the recommendations of the Financial Policy Committee and the current regulatory plans of the Prudential Regulation Authority; the Government's tax and spending plans as set out in the March 2014 *Budget*; commodity prices following market paths; and the sterling exchange rate remaining broadly stable. See [www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14augca.pdf](http://www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14augca.pdf).

**Chart 5.2** CPI inflation projection based on market interest rate expectations and £375 billion purchased assets



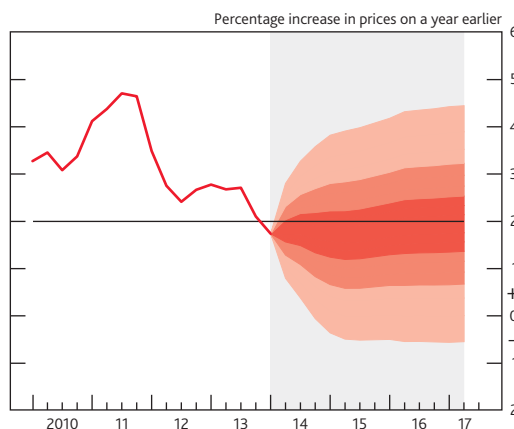
Charts 5.2 and 5.3 depict the probability of various outcomes for CPI inflation in the future. They have been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 billion throughout the forecast period. If economic circumstances 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 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 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 2002 *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 August and May swatches 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 the target in each quarter of the forecast period. The 5 percentage points width of the swatches reflects the fact that there is uncertainty about the precise probability in any given quarter, but they should not be interpreted as confidence intervals.

**Chart 5.3** CPI inflation projection in May based on market interest rate expectations and £375 billion purchased assets



rate at which slack is absorbed, thereby limiting the build-up of domestic inflationary pressure. The muted inflation outlook also reflects the dampening effect on import prices of the recent rise in the sterling exchange rate. Overall, the inflation outlook is similar to that in May (Chart 5.3) and the risks are judged to be broadly balanced around the 2% target (Chart 5.4).

## 5.1 Key judgements and risks

The Committee's projections are underpinned by four key judgements, described below. Table 5.A provides projections for variables that illustrate those judgements; Table 5.B provides a range of indicators to monitor them.

### Key Judgement 1: the global economy expands steadily in the face of continuing economic and financial challenges

The moderation in growth seen in the United Kingdom's main trading partners in the early part of the year should prove largely temporary (Section 2). Over the next two to three years, world growth is projected to be sustained at close to its pre-crisis average rate as the legacy of the financial crisis recedes. However, that central view assumes that the global expansion continues in the face of a number of economic and financial challenges. These include the continuing structural adjustment in the euro area and the possible repercussions of prospective monetary policy normalisation in the United States.

In the euro area, the United Kingdom's largest trading partner, output growth has been muted, bank lending weak, and inflation lower than anticipated. In the central view, there is expected to be a modest easing in credit conditions over the next few years, in part reflecting the recent package of measures announced by the European Central Bank (ECB); euro-area growth and inflation are projected to pick up gradually. Growth



**Table 5.A MPC key judgements<sup>(a)(b)</sup>****Key Judgement 1: the global economy expands steadily in the face of continuing economic and financial challenges**

	Average 1998– 2007	Projections		
		2014	2015	2016
World GDP (UK-weighted) <sup>(c)</sup>	3	2¼ (2½)	2¾ (2¾)	3 (2¾)
Euro-area GDP <sup>(d)</sup>	2¼	1 (1¼)	1¾ (1½)	1¾ (1½)
US GDP <sup>(e)</sup>	3	2 (2½)	3 (3)	3 (3)

**Key Judgement 2: a gradual revival in productivity and real incomes underpins a sustained expansion in private sector spending**

	Average 1998– 2007	Projections		
		2014	2015	2016
Credit spreads <sup>(f)</sup>	¾(g)	2¼ (2¼)	2 (2)	2 (2)
Household saving ratio <sup>(h)</sup>	4¼	4½ (5)	3¼ (3¾)	3 (3½)
Business investment to GDP ratio <sup>(i)</sup>	9¼	8¾ (8¾)	9½ (9½)	10¼ (10½)

**Key Judgement 3: the remaining slack in the economy is absorbed, but at a more gradual pace than in the recent past, reflecting a modest expansion in supply**

	Average 1998– 2007	Projections		
		2014	2015	2016
Productivity <sup>(j)</sup>	2½	¼ (1)	1 (1¼)	1¾ (2)
Participation rate <sup>(k)</sup>	63	64 (63¾)	64 (63¾)	64¼ (63¾)
Average hours <sup>(l)</sup>	32¼	32¼ (32¼)	32½ (32¼)	32½ (32¼)

**Key Judgement 4: as the drag from slack lessens, the associated path for wage growth and margins is consistent with the inflation target**

	Average 1998– 2007	Projections		
		2014	2015	2016
UK import prices <sup>(m)</sup>	½	-3¼ (-2¼)	-1¼ (0)	0 (¼)
Unit wage costs <sup>(n)</sup>	2¼	-¼ (1)	1½ (1¾)	2¼ (1¾)

Sources: Bank of England, BDRG Continental *SME Finance Monitor*, Bloomberg, BofA Merrill Lynch Global Research, used with permission, British Household Panel Survey, Department for Business, Innovation and Skills, Eurostat, IMF *World Economic Outlook (WEO)*, ONS, US Bureau of Economic Analysis and Bank calculations.

- (a) The MPC's projections for GDP growth, CPI inflation and unemployment (as presented in the fan charts) are underpinned by four key judgements. The mapping from the key judgements to individual variables is not precise, but the profiles in the table should be viewed as broadly consistent with the MPC's key judgements.
- (b) Figures show calendar-year growth rates unless otherwise stated. Figures in parentheses show the corresponding projections in the *May Inflation Report*.
- (c) Chained-volume measure. Constructed using real GDP growth rates of 143 countries weighted according to their shares in UK exports.
- (d) Chained-volume measure.
- (e) Chained-volume measure.
- (f) Level in Q4. Percentage point spread over reference rates. Based on a weighted average of household and corporate loan and deposit spreads over appropriate risk-free rates. Indexed to equal zero in 2007 Q3.
- (g) Based on the weighted average of spreads for households and large companies over 2003 and 2004 relative to the level in 2007 Q3. Data used to construct the SME spread are not available for that period. The period is chosen as broadly representative of one where spreads were neither unusually tight nor unusually loose.
- (h) Calendar-year average. Percentage of total available household resources.
- (i) Calendar-year average. Chained-volume business investment as a percentage of GDP.
- (j) GDP per hour worked. GDP at market prices is based on the mode of the MPC's backcast.
- (k) Level in Q4. Percentage of the 16+ population.
- (l) Level in Q4. Average weekly hours worked, in main job and second job.
- (m) Four-quarter inflation rate in Q4. Excludes the impact of missing trader intra-community fraud.
- (n) Four-quarter growth in unit wage costs in Q4. Whole-economy wages and salaries divided by GDP at market prices, based on the mode of the MPC's GDP backcast.

is expected to remain below its pre-crisis average, however, reflecting the drag from the continuing adjustment in the competitiveness and indebtedness of the euro-area periphery.

A variety of risks surround the euro-area outlook. Upside risks include the possibility that credit conditions ease by more than implied by the central view, perhaps in response to the publication later this year of the ECB's asset quality review and bank stress-test results. Set against that, however, is the possibility that inflation remains persistently low, exacerbating the adjustment challenges and weighing on growth. This would dampen the demand for UK exports directly; it could also pose broader downside risks through financial market channels, for example if it re-awakened concerns about debt sustainability.

In the United States, output has been volatile, falling in Q1 but posting a marked bounceback in Q2 (Section 2). The central view envisages a return to historical average growth rates. This could prove too pessimistic — for example, the degree of momentum in the private sector could be stronger than anticipated. The central view also embodies the assumption that the US supply side has not been persistently impaired following the financial crisis.

In China, the central view assumes that policymakers succeed in sustaining growth at around 7% a year despite the strains posed both by credit markets — where the shadow banking system has expanded rapidly in recent years — and by property markets — which have slowed sharply since the beginning of the year. The challenges stemming from China's financial sector represent distinct downside risks. And fragilities remain in emerging economies more generally, where a number of economies continue to experience high levels of inflation and indebtedness, and remain vulnerable to global events.

Despite these policy challenges, as well as broader geopolitical tensions, there have been some continued signs of a search for yield, particularly in fixed-income markets, as noted in the Bank's recent *Financial Stability Report*. Gauges of financial market uncertainty, such as implied volatilities, have remained relatively low, particularly at shorter horizons (Section 1). At some point, some reversal in these trends seems likely. Potential triggers for a marked reappraisal of risk include prospective monetary policy normalisation in the United States and an intensification of geopolitical tensions. If such a reversal were associated with disorderly adjustment in financial markets, it would pose material downside risks to global — and UK — activity.

Prospects for UK exports depend both on global growth and on the competitiveness of UK exporters. While the gradual pickup in global growth embodied in the Committee's central view should prove supportive, this will be offset to a degree by the lagged impact of the past appreciation of the sterling exchange rate. In the central view, UK export growth is close to pre-crisis average rates for much of the forecast period. Uncertainties surround the outlook for the exchange rate itself

**Table 5.B** 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 understand the degree

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

Key judgement	Likely developments in 2014 H2 and 2015 Q1 if judgements evolve as expected
<b>1: the global economy expands steadily in the face of continuing economic and financial challenges</b>	<ul style="list-style-type: none"> <li>Quarterly euro-area GDP growth of between ¼% and ½%, with credit conditions improving slightly.</li> <li>Quarterly US GDP growth averaging a little below ¾%; non-farm payrolls increasing by a little more than 200,000 per month.</li> <li>Indicators of activity consistent with four-quarter PPP-weighted emerging-economy growth of just below 5% on average; within that, Chinese GDP growth averaging a little above 7%.</li> <li>UK export volumes to increase by just below 1½% a quarter on average.</li> </ul>
<b>2: a gradual revival in productivity and real incomes underpins a sustained expansion in private sector spending</b>	<ul style="list-style-type: none"> <li>Quarterly consumer spending growth of a little below ¾%.</li> <li>Indicators of business investment consistent with average quarterly growth rates of a little below 3%.</li> <li>Housing investment growth to pick up gradually, approaching 4% per quarter by the turn of the year.</li> <li>Mortgage approvals for house purchase to rise to around 75,000 a month, on average, in 2014 Q4.</li> <li>Rates of increase in the main indices of national house prices slowing to around ½% a month by 2015 Q1.</li> <li>PNFC net lending to be positive in 2014 H2, and pick up in 2015.</li> <li>Credit spreads to continue to decline.</li> </ul>
<b>3: the remaining slack in the economy is absorbed, but at a more gradual pace than in the recent past, reflecting a modest expansion in supply</b>	<ul style="list-style-type: none"> <li>Hourly labour productivity to increase by around ½% in the second half of the year.</li> <li>Headline LFS unemployment rate to decline to around 6% by the turn of the year.</li> <li>The labour market participation rate to reach 64% in the second half of the year.</li> <li>Average hours worked to increase by around ¼% during the second half of the year.</li> <li>Indicators of spare capacity within companies to show little intensification of capacity pressures.</li> </ul>
<b>4: as the drag from slack lessens, the associated path for wage growth and margins is consistent with the inflation target</b>	<ul style="list-style-type: none"> <li>Medium-term indicators of inflation expectations to continue to be consistent with the 2% target.</li> <li>Headline four-quarter AWE growth approaching 1½% by the end of the year.</li> <li>Growth in unit wage costs averages around 0% a quarter in 2014 H2.</li> <li>Sterling ERI, domestic energy bills and commodity prices to evolve in line with the conditioning assumptions set out in <a href="http://www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14augca.pdf">www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14augca.pdf</a>.</li> <li>Import prices to fall at annual rate of just under 4% in the second half of the year.</li> </ul>

(Key Judgement 4), the degree to which the past appreciation will bear down on export growth, and prospects for UK financial service exports, which have been relatively weak during the post-crisis period.

#### **Key Judgement 2: a gradual revival in productivity and real incomes underpins a sustained expansion in private sector spending**

The expansion in domestic demand has been maintained since May, with consumer spending, residential investment and business spending all contributing positively to growth. Over the past year or so, however, the rises in private sector spending have outpaced those in income. Net private sector financial savings have consequently declined, and the current account deficit has remained close to record levels.

In the near term, growth is likely to be supported by the boost from the pent-up demand released by the easing in credit conditions and lifting of uncertainty over the past year or two. That boost is likely to fade over time: in the central view, the

pace of growth starts to moderate during the course of 2014. It is possible that the central view understates the degree of momentum in the economy, however, posing an upside risk to demand, particularly in the near term.

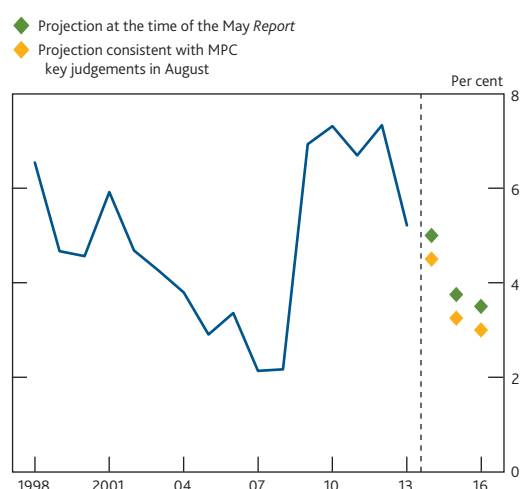
But there are also downside risks to the central view that the private sector will be prepared to finance spending through higher borrowing or lower financial savings until productivity and real incomes start to rise. This may prove overly optimistic, particularly for the household sector, where the central view assumes a further fall in the saving ratio over the next year or so to a level below the pre-crisis average, and little to no recovery thereafter (**Chart 5.5**). There is also uncertainty about the outlook for productivity, which will determine average real incomes, and hence spending, in the medium term (Key Judgement 3).

Housing investment has been rising strongly for the past year or so, reflecting brightening prospects in the property market. Recent data outturns, however, suggest that mortgage approvals have eased a little during this year (Section 1). Some borrowers may be reassessing their expectations about the likely cost of, or ease of access to, credit — partly in the light of reforms associated with the Mortgage Market Review. The Committee's latest projections assume that the near-term outlook for approvals, and hence housing investment, is a little less buoyant than previously thought. The central view assumes a gradual strengthening in mortgage approvals over the forecast period, and a degree of moderation in the recent pace of house price increases. Although there are risks in both directions to these central profiles, the recent recommendations by the Financial Policy Committee should provide insurance against a marked deterioration in underwriting standards, and associated rises in indebtedness.

Business investment has been rising robustly; following upward revisions to official data, the gains over the past year or so have been stronger than first thought. A number of factors point to further solid increases: in aggregate, companies appear well-placed to finance a continued expansion in investment and, having eased significantly over the past year or two, corporate credit conditions are projected to improve a little further. Acting against this may be excess capital stock in some parts of the economy. This could weigh on investment prospects to a degree, though the likely magnitude of this effect is far from certain. Overall, the central path for business investment growth is a little weaker than in May, with risks in both directions.

A broader source of uncertainty relates to the way in which private sector spending is likely to react to the gradual rise in Bank Rate embodied in the market curve. Uncertainties include the extent to which increases in Bank Rate will be passed through into deposit and loan rates, and the likely impact of higher Bank Rate on those households and smaller companies with high levels of indebtedness.

**Chart 5.5** Household saving ratio<sup>(a)</sup>



Sources: ONS and Bank calculations.

(a) Calendar-year average. Percentage of total available household resources.

## Influences on policy in the medium term

The MPC sets monetary policy to meet the 2% inflation target in the medium term, and in a way that helps to sustain growth and employment. In its February *Report*, the MPC gave guidance on the expected path for Bank Rate consistent with that policy objective. The central message of the February guidance continues to apply: when Bank Rate begins to rise, the Committee expects it will do so only gradually, and probably to a level materially below its historical average. This box provides more detail on the Committee's current judgements about medium-term influences on Bank Rate, which include the persistence of headwinds to domestic demand as well as broader global determinants of savings and investment.

### *Bank Rate is expected to rise gradually...*

The level of Bank Rate judged appropriate to keep inflation close to the target and maintain demand in line with supply will vary over time. It fell sharply after the financial crisis, in part reflecting the abrupt reduction in the supply of credit and the surge in global uncertainty. And the Committee undertook a programme of asset purchases as it judged it impractical to reduce Bank Rate below 0.5%. Over time, as the headwinds to demand recede, and the economy continues to heal, it is likely that Bank Rate will need to move away from the effective lower bound if demand is to be kept roughly in line with supply, and inflation close to the target. The adjustment path for Bank Rate is expected to be gradual, however, in part reflecting the likelihood that the headwinds to demand will take time to die away completely, and price pressures are therefore expected to be muted.

Persistent headwinds include the need for further balance sheet repair in the public sector, high levels of indebtedness in some parts of the private sector and the persistent muted demand from the United Kingdom's major export markets. The continuing adjustment in the financial sector is also likely to weigh on economic prospects, and hence the appropriate level of Bank Rate. One manifestation of the financial sector headwinds has been the persistence of a large difference (or spread) between Bank Rate and the cost of credit facing households and businesses.<sup>(1)</sup> Although that spread has fallen since the crisis, it remains elevated compared with its unsustainably low pre-crisis level, and is likely to decline only a little further over the next two to three years (**Chart 5.6**). It is unclear, however, how much of this spread represents temporary headwinds, and how much represents a structural shift, perhaps related to regulatory reforms in the banking sector (see below).

Uncertainty about the sensitivity of the economy to changes in Bank Rate is another reason why gradual increases may be appropriate. It is far from clear, for example, by how much the loan and deposit rates available to households and companies

will change to reflect any rise in Bank Rate. Nor is it clear how those households and smaller companies with relatively high levels of indebtedness will respond to higher borrowing costs. Small, slow increases in Bank Rate should help to mitigate the risk that higher borrowing costs trigger a sharp slowdown in domestic demand.

While it is possible to identify an anticipated path for Bank Rate, the actual path will depend on economic circumstances. For example, Bank Rate may rise more slowly than expected, and increases in Bank Rate may be reversed, if economic headwinds intensify or the economy falters. Similarly, Bank Rate may be raised more rapidly than anticipated if economic developments raise the outlook for inflation significantly.

### *...and to a level materially below its historical average rate.*

Looking beyond the MPC's usual forecast horizon, the level of Bank Rate needed to maintain demand in line with supply and keep inflation close to the target may remain at materially below its pre-crisis average for some time. That in part reflects the enduring effect of the financial crisis. Costs of financial intermediation may be permanently higher relative to pre-crisis levels. In part, this reflects regulatory requirements aimed at building the resilience of the financial system. It may also be affected by investor reappraisal of the riskiness of bank debt.

### *Global influences matter too.*

The United Kingdom's financial openness means that, beyond the near term, UK real interest rates will tend to track global real rates. These displayed a pronounced downward trend in the years preceding the financial crisis (**Chart A**).<sup>(2)</sup> In principle, longer-term global real rates should reflect the balance between desired global savings and planned global investment. Influences that increase desired global savings relative to investment should put downward pressure on long-term real rates.

**Chart A** Global long-term real rates<sup>(a)</sup>



Source: IMF.

(a) Ten-year real interest rate estimates based on a GDP-weighted averages of rates across 25 advanced economies and 15 developing market economies. Real rates are estimates using zero-coupon nominal bond yields where available, along with estimates of expected inflation. For more information see: Furceri, D and Pescatori, A, 'Real interest rate: a global perspective', *IMF Working Papers*, forthcoming.

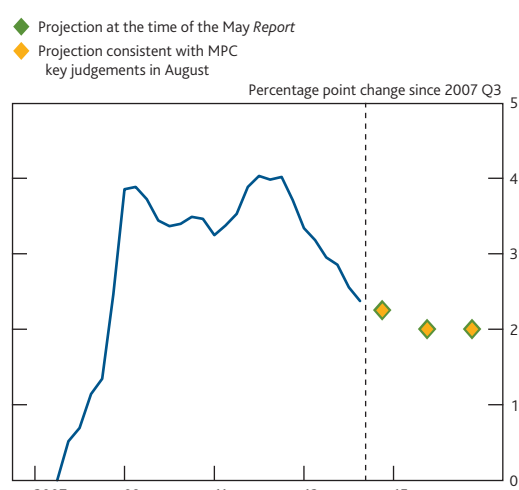
Desired savings will reflect factors such as demographics, household uncertainty about future income flows and government policy. While the ageing world population should, over time, reduce global desired savings and put upward pressure on longer-term rates, a number of influences are likely to act in the opposite direction. For example, following the financial crisis, the belief that households may be less able to access credit in times of need would tend to raise desired levels of global precautionary saving, at least to some extent. In the public sector, many governments are aiming to strengthen their balance sheets by increasing savings, with the IMF predicting rising public savings in the coming years.<sup>(3)</sup> And, for a number of years, emerging-economy central banks have been accumulating large pools of reserves.

Planned investment is likely to be affected by influences such as likely growth in the global labour force and productivity.

World population growth has been falling since the beginning of the 1970s, and that downward trend is projected to continue in the coming decades. That would tend to reduce the planned investment rate — less investment is required to keep capital per worker growing at a constant rate. And, while the likely trend in global productivity growth is difficult to discern, if it does not recover to pre-crisis trends, that would weigh on both planned investment and global interest rates.

- (1) See Butt, N and Pugh, A (2014), 'Credit spreads: capturing credit conditions facing households and firms', *Bank of England Quarterly Bulletin*, Vol. 54, No. 2, pages 137–47; [www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q203.pdf](http://www.bankofengland.co.uk/publications/Documents/quarterlybulletin/2014/qb14q203.pdf).
- (2) See, for example: Bernanke, B (2005), 'The global saving glut and the US current account deficit', Homer Jones Lecture, Federal Reserve Bank of St. Louis, St. Louis, Missouri, 14 April; Caballero, R (2006), 'On the macroeconomics of asset shortages', in Beyer, A and Reichlin, L (eds), *The role of money: money and monetary policy in the 21st century*, 4th European Central Banking Conference 9–10 November 2006, pages 272–83.
- (3) For a recent IMF perspective, see Chapter 3 of the April 2014 *World Economic Outlook*.

Chart 5.6 Credit spreads<sup>(a)</sup>



Sources: Bank of England, BDRC Continental *SME Finance Monitor*, Bloomberg, BofA Merrill Lynch Global Research, used with permission, British Household Panel Survey, Department for Business, Innovation and Skills and Bank calculations.

(a) See footnote (f) to Table 5.A.

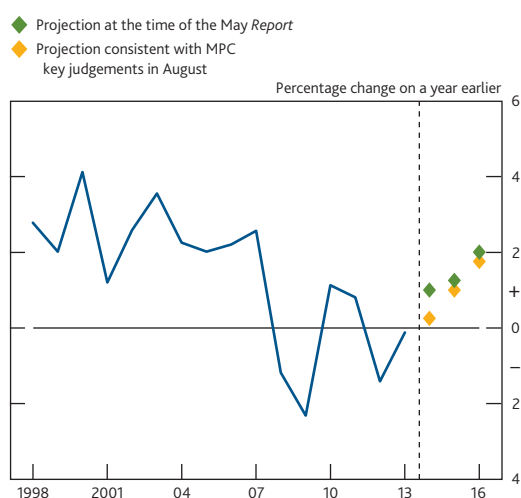
### Key Judgement 3: the remaining slack in the economy is absorbed, but at a more gradual pace than in the recent past, reflecting a modest expansion in supply

In recent months, employment growth has been stronger than expected, and wage growth weaker. Part of the explanation for these conflicting labour market indicators may lie in timing; some of the recent strength in employment growth should be reflected in stronger pay growth in due course (Key Judgement 4). Another explanation — and one upon which the MPC places some weight — is that there has been a rise in effective labour market supply in recent years. This is likely to reflect a combination of factors, including the phasing out of the default retirement age, changes to the state pension age for women, benefit reforms and concerns about the adequacy of retirement provision (see Section 3 and the box on page 27 of the May 2013 *Report*). Overall, it seems likely that although the degree of labour market slack has been greater in the past than previously thought, it is narrowing, and doing so faster than anticipated at the time of the May *Report*.

Not surprisingly, there is a wide range of views on the Committee about the likely extent of spare capacity in the economy. Uncertainty about how much slack there is has increased in recent months, in part reflecting labour market developments. In the Committee's best collective judgement, however, the degree of slack has narrowed somewhat, and the central estimate is now broadly in the region of 1% of GDP. Slack in the economy is found predominantly in the labour market; surveys suggest that spare capacity within companies is at broadly normal levels.

Over the forecast period, an important judgement underpinning the Committee's projections is that the pace at which slack is eroded slows markedly compared with the recent past. In the near term, that partly reflects the judgement that GDP growth is likely to ease a little as the initial boost from pent-up demand fades (Key Judgement 2).



**Chart 5.7** Productivity growth<sup>(a)</sup>

Sources: ONS and Bank calculations.

(a) GDP per hour worked. GDP at market prices is based on the mode of the MPC's backcast.

Beyond the near term, the slow pace of erosion in slack reflects the judgement that the economy's supply capacity will gradually expand, in part because of a modest rise in productivity growth. Overall, in the central view, the remaining spare capacity in the economy is fully absorbed towards the end of the forecast period.

Productivity growth has been persistently weaker than anticipated by the Committee, and has not responded to the revival in demand to the extent expected (see the box on pages 48–49). So, as in previous *Reports*, the Committee has had again to revisit its judgement on productivity. In the new central view, productivity growth picks up more slowly in the near term, and remains below its pre-crisis average rate throughout the forecast period (Chart 5.7).

The economy's supply capacity will also depend on structural influences on unemployment, participation and average hours. There is considerable uncertainty about the equilibrium values for these variables, which will tend to vary over time. For example, the medium-term equilibrium unemployment rate is projected to decline gradually over the forecast period, as the number of long-term unemployed falls back. In the central view, the medium-term equilibrium unemployment rate falls from around 5½% currently, to around 5% at the forecast horizon, a little lower than the central path assumed in May. In the light of recent data outturns, the Committee has also revised up its estimate of the medium-term participation rate over the past few years (Section 3). At the start of the forecast period, the central estimate of the medium-term equilibrium rate for participation is a little above the current rate, and holds broadly steady thereafter.

A key source of risk is the degree to which recent labour market outturns — such as robust labour market participation and rising average weekly hours — prove to be cyclical, and hence ephemeral, rather than structural, and hence enduring. The MPC may have mistaken cyclical shifts for structural ones, or *vice versa*. For example, recent rises in participation may be reversed relatively rapidly as the economy continues to expand and real wage growth resumes. Conversely, the MPC may have underestimated the impact on steady-state participation of factors such as the phasing out of the default retirement age and increases in the state pension age for women. It is also possible that the long-term equilibrium unemployment rate — which is determined by the structural characteristics of the labour market — may be lower than currently estimated, for example because changes to the benefit system may have affected the incentives facing those out of work. The Committee will continue to analyse these important labour market trends.

**Key Judgement 4: as the drag from slack lessens, the associated path for wage growth and margins is consistent with the inflation target**

Wage growth has been weak, and only a modest increase is in prospect in the near term. In the central view, nominal wage



growth rises gradually, and remains below its pre-crisis average of 4½% or so throughout the forecast period. Downside risks to this profile include the possibility that the financial crisis has had a lingering impact on job insecurity, such that employees acquiesce to weaker wage growth than assumed in the central view. To the upside is the risk that employees successfully push for stronger pay growth as job insecurity recedes rapidly, skill shortages intensify and job-to-job churn returns to normal levels.

Over the past year or so, the easing in cost growth has contributed to a rebuild in company margins. Over the forecast period, margins are projected to remain broadly flat, in part because the persistence of a modest amount of spare capacity is assumed to keep company pricing pressures in check. There are risks to this central view in both directions. Companies may take advantage of the brightening outlook in demand to put up prices by further than assumed, for example. Set against that, however, is the possibility that companies limit price increases to build market share, perhaps facilitated by easier credit conditions.

The assumed modest intensification in domestic pricing pressures is counterbalanced by the drag on import prices from the sterling exchange rate. The central view assumes that almost all of the past appreciation in the sterling exchange rate is passed into consumer prices over the forecast period. Companies may, however, pass less of the fall in imported costs on to their customers than assumed, thereby posing an upside risk to the inflation profile.

Higher energy costs have also been a key contributor to higher CPI inflation through much of the post-crisis period. Over the next few years, by contrast, energy prices are expected to make little contribution to inflation. Risks include the possibility that global energy prices become more sensitive to geopolitical events. There is also uncertainty about the degree to which trends in global energy markets are reflected in UK domestic energy bills, which are also affected by a range of regulatory and Government initiatives. The central path of the Committee's latest projections assumes no rises in domestic energy bills over the remainder of this year or next, but an increase of around 3¾% in 2016 and 2017.

**Table 5.C** Calendar-year GDP growth rates of the modal, median and mean paths<sup>(a)</sup>

	Mode	Median	Mean
2014 <sup>(b)</sup>	3.5 (3.4)	3.5 (3.4)	3.5 (3.4)
2015	3.1 (2.9)	3.0 (2.9)	3.0 (2.9)
2016	2.8 (2.8)	2.7 (2.8)	2.6 (2.8)

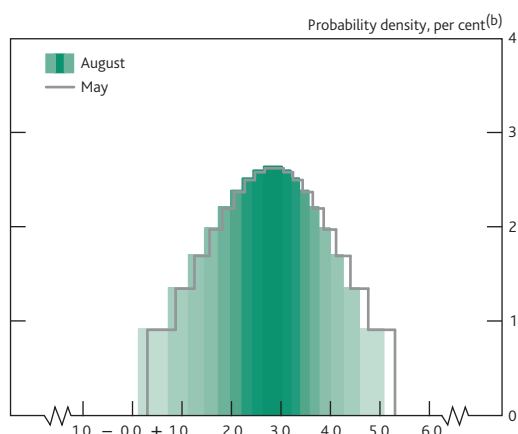
(a) The table shows the projections for calendar-year growth of real GDP consistent with the modal, median and mean projections for four-quarter growth of real GDP implied by the fan chart. Where growth rates depend in part on the MPC's backcast, revisions to quarterly growth are assumed to be independent of the revisions to previous quarters. The numbers in parentheses show the corresponding projections in the *May Inflation Report*. The August and May 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.

(b) The anticipated upward revisions to recent estimates of quarterly GDP growth has implications for calendar-year growth in 2014. Without the anticipated upward revisions to past GDP growth, the modal path of the Committee's August projections would imply calendar-year growth of 3.1% in 2014 rather than 3.5%.

## 5.2 The projections for demand, unemployment and inflation

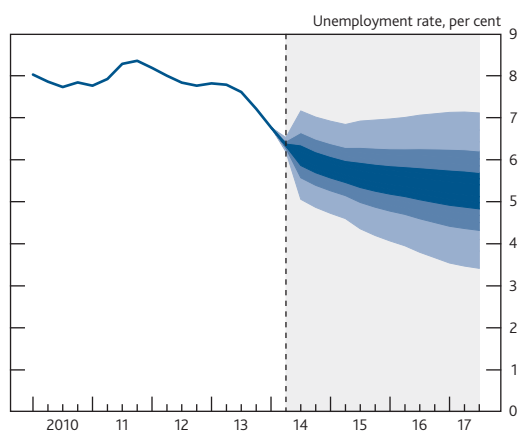
Based on these judgements, and the risks around them, the MPC anticipates relatively stable four-quarter growth in GDP of around 3% for most of the forecast period (Table 5.C). Growth eases a little in the near term, reflecting a fading boost from the pent-up demand released by the easing in credit conditions and lifting of uncertainty. Beyond the near term, domestic demand is underpinned by a gradual recovery in the growth of productivity and household incomes. Consumer

**Chart 5.8** Projected probabilities of GDP growth in 2016 Q3 (central 90% of the distribution)<sup>(a)</sup>



- (a) Chart 5.8 represents the cross-section of the GDP growth fan chart in 2016 Q3 for the market interest rate projection. It has been conditioned on the assumption that the stock of purchased assets remains at £375 billion throughout the forecast period. The coloured bands in Chart 5.8 have a similar interpretation to those on the fan charts. Like the fan charts, they portray the central 90% of the probability distribution. The grey outline represents the corresponding cross-section of the May 2014 *Inflation Report* fan chart, which was conditioned on market 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  $\pm 0.05$  percentage points of any given growth rate, specified to one decimal place.

**Chart 5.9** Unemployment projection based on market interest rate expectations and £375 billion purchased assets



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. The coloured bands have the same interpretation as in Chart 5.1, and portray 90% of the probability distribution. 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 2014 Q2, a quarter earlier than the fan for CPI inflation. That is because Q2 is a staff projection for the unemployment rate, based in part on data for April and May. The unemployment rate was 6.5% in the three months to May, and is projected to fall to 6.4% in Q2 as a whole.

**Table 5.D** Q4 CPI inflation

	Mode	Median	Mean
2014 Q4	1.9 (1.8)	1.9 (1.8)	1.9 (1.8)
2015 Q4	1.7 (1.8)	1.7 (1.8)	1.7 (1.8)
2016 Q4	1.8 (1.9)	1.8 (1.9)	1.8 (1.9)

The table shows projections for Q4 four-quarter CPI inflation. The numbers in parentheses show the corresponding projections in the May *Inflation Report*. The August and May 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.

spending, housing investment and business investment are all anticipated to make positive contributions to growth throughout the forecast period. The contribution from net trade is mildly negative, reflecting persistent low growth in the United Kingdom's main export markets, and the recent rise in sterling.<sup>(1)</sup>

The central path for GDP growth is similar to that in May, although the risks are judged to be slightly to the downside (Chart 5.8). That primarily reflects global uncertainties, in particular the possibility that investors may reappraise their appetite for risk. Potential triggers for this reappraisal include prospective policy normalisation in the United States, the challenges in China's financial sector and geopolitical tensions. The outlook for productivity is another key source of uncertainty — productivity growth has repeatedly disappointed, and there is a risk that it proves weaker still than in the MPC's downwardly revised central view.

Unemployment is projected to decline throughout the forecast period, albeit at a slower rate than recently (Chart 5.9). The outlook for unemployment is closely linked to that for productivity: for a given GDP profile, stronger productivity growth will tend to be associated with less pronounced declines in unemployment, and *vice versa*. The central path for unemployment is lower throughout the forecast period than in May, reflecting recent data outturns and the judgement that the recovery in productivity growth will be slower to come through.

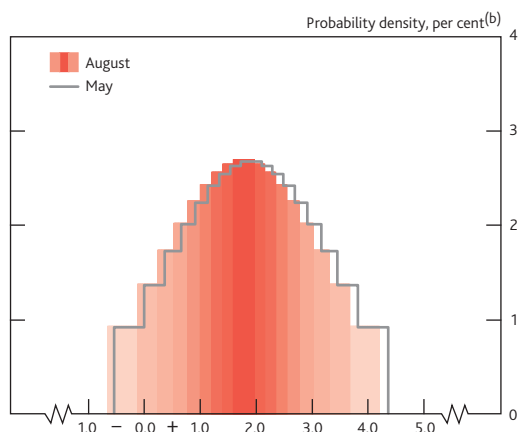
Over the forecast period, the anticipated modest expansion in supply helps to limit the build-up of domestic inflationary pressure. Import prices are likely to pull down CPI inflation, reflecting the recent appreciation of sterling. Inflation expectations are assumed to remain anchored to the 2% target. Together, these influences mean that inflation is set to remain close to, or a little below, 2%, before reaching the target by the end of the forecast period (Table 5.D). The central projection is similar to May (Chart 5.10). The risks around the inflation target are judged to be broadly balanced, as was the case three months ago.

The projections described above are conditioned on Bank Rate following a path implied by market interest rates: these embody the assumption that Bank Rate rises in early 2015, and reaches around 2¼% or so by the end of the forecast period. Under the alternative conditioning assumption of constant Bank Rate,<sup>(2)</sup> four-quarter GDP growth averages around 3½% in the central view (Chart 5.11); CPI inflation lies above the 2% target for most of the forecast period

(1) Bank staff have calculated indicative projections for a range of economic variables consistent with the MPC's modal forecast. See [www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14augca.pdf](http://www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14augca.pdf).

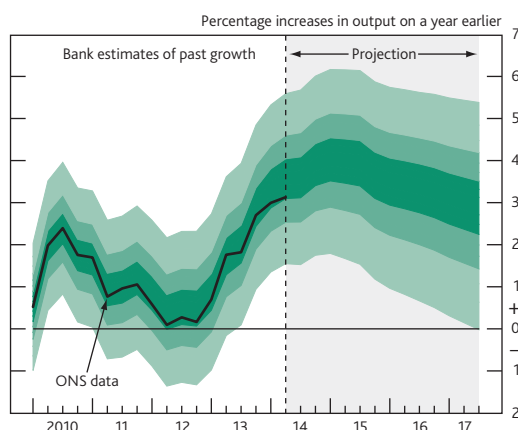
(2) The constant rate projections in this Report assume that Bank Rate is 0.5% for the next three years, and then rises towards the market path over the next three years; that path is anticipated by businesses and households.

**Chart 5.10** Projected probabilities of CPI inflation in 2016 Q3 (central 90% of the distribution)<sup>(a)</sup>



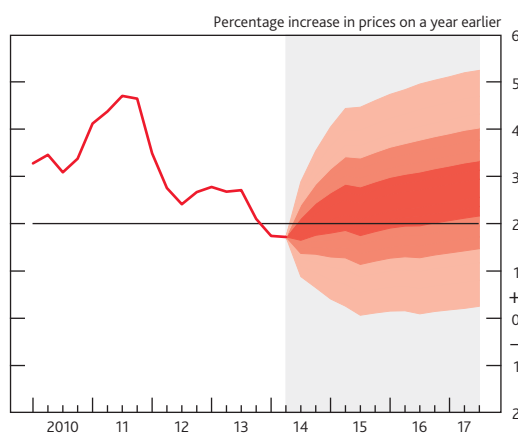
- (a) Chart 5.10 represents the cross-section of the CPI inflation fan chart in 2016 Q3 for the market interest rate projection. It has been conditioned on the assumption that the stock of purchased assets remains at £375 billion throughout the forecast period. The coloured bands in Chart 5.10 have a similar interpretation to those on the fan charts. Like the fan charts, they portray the central 90% of the probability distribution. The grey outline represents the corresponding cross-section of the May 2014 *Inflation Report* fan chart, which was conditioned on market 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  $\pm 0.05$  percentage points of any given inflation rate, specified to one decimal place.

**Chart 5.11** GDP projection based on constant nominal interest rates at 0.5% and £375 billion purchased assets



See footnote to Chart 5.1.

**Chart 5.12** CPI inflation projection based on constant nominal interest rates at 0.5% and £375 billion purchased assets



See footnote to Chart 5.2.

(Chart 5.12). In the light of its recent forecasting experience, the MPC has amended its previous assumption that the additional activity under constant Bank Rate would be associated with higher productivity, which means inflation is a little higher in the constant rate projection than otherwise.

### 5.3 The policy decision

Robust growth over the past year has taken output to above its pre-crisis peak. Strong output growth has yet to be matched with a material pickup in productivity, however. Instead employment gains have been exceptionally strong, and unemployment has fallen sharply. The strength in labour market quantities has contrasted with the weakness of wage growth, increasing the uncertainty about the current degree of spare capacity. It seems likely that slack over the past year or two has been greater than previously thought; it also seems likely that slack is being used up at a faster rate than expected. In light of the heightened uncertainty about the current degree of slack, the Committee noted the importance of monitoring the expected path of costs, particularly wages, in assessing inflationary pressures.

At its August meeting, the Committee noted that, conditioned on the path of Bank Rate implied by market yields, four-quarter output growth was expected to be close to its historical average rates for the next few years. The pace at which slack was being absorbed was projected to slow, reflecting a gentle expansion of supply, thereby limiting the build-up of domestic inflationary pressures. Import prices were likely to weigh on inflation. Overall, CPI inflation was thought likely to remain close to, or a little below, 2%, before reaching the target at the end of the forecast period.

The Committee sets monetary policy to meet the 2% target in the medium term, and in a way that helps to sustain growth and employment. The Committee gave guidance in its February *Report* on how it would seek to achieve the inflation target over the policy horizon. At its August meeting, the Committee noted that the central message of that guidance remained relevant: given the likely persistence of the headwinds weighing on the economy, when Bank Rate did begin to rise, it was expected to do so only gradually. Together with the legacy of the financial crisis and broader global forces, this meant that Bank Rate was expected to remain below average historical levels for some time to come (see the box on pages 42–43). It remained the case, however, that the actual path for monetary policy, even after the first rise in Bank Rate, would remain dependent on economic conditions. In other words, the Committee's guidance on the likely pace and extent of interest rate rises was an expectation, not a promise.

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

## The MPC's forecasting record

Each year, the MPC publishes an assessment of its forecasting record, and explains how and why outturns differed from earlier expectations. This box looks at how outturns for CPI inflation, GDP growth and the LFS unemployment rate compare to the projections in the August 2013 *Inflation Report*, considering which of the MPC's key judgements, shown in **Table 1**, can explain the differences.

### How has the economy evolved relative to the MPC's August 2013 Report?

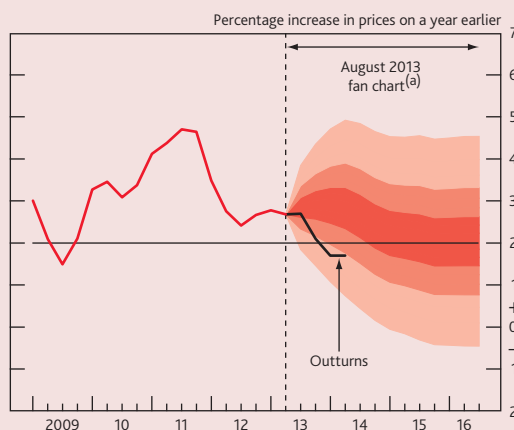
In August 2013, the MPC expected inflation to remain slightly below 3% for around a year, before gradually falling back to the 2% inflation target in late 2015. The Committee anticipated a revival in GDP growth, accompanied by growth in productivity and the economy's effective supply capacity more broadly that would attenuate domestic cost growth. The inflationary impetus from past increases in import prices was expected to fade. And the anticipated recovery in productivity growth meant that unemployment would decline only gradually as the recovery in output took hold. These expectations were based on interest rates remaining at 0.5% throughout the forecast period,<sup>(1)</sup> the stock of asset purchases staying at £375 billion, and the exchange rate being little changed.

In fact, CPI inflation fell to 1.7% in 2014 Q2, 1.1 percentage points below the central projection in August 2013 (**Chart A**).<sup>(2)</sup> The MPC had placed around a 25% weight on inflation being below the 2% target at that point. The surprising weakness in CPI inflation occurred despite the margin of slack being absorbed more quickly than anticipated. GDP grew by almost 1 percentage point more than expected in the central projection (**Chart B**), and productivity growth was weaker than expected. That meant the LFS unemployment rate was 6.8% in Q1, considerably lower than the 7.6% in the central projection (**Chart C**). In addition, the exchange rate appreciated relative to the conditioning path.

### GDP growth

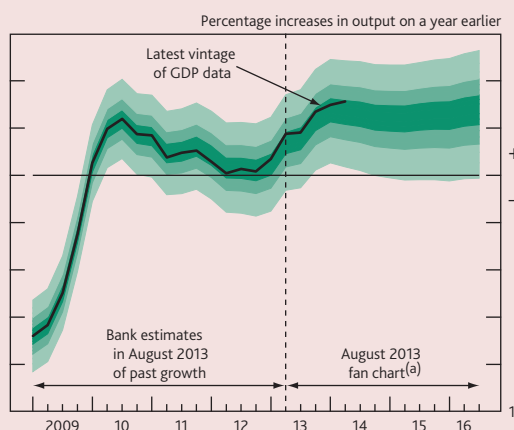
Annual GDP growth was 3.6% in 2014 Q2 according to the MPC's backcast: the MPC ascribed around 25% probability to GDP growth being as strong or stronger. In 2014 Q1 — the latest period for which an expenditure split is available — the unexpected strength in GDP growth can be accounted for largely by business investment: the ratio of business investment to GDP — one of the MPC's key judgement variables — rose to 8½%, above the 7¾% expected (**Table 1**). There were offsetting developments in other expenditure components. Dwellings investment was unexpectedly strong, consistent with broader housing market strength. But export growth was a little weaker than expected: although world

**Chart A Inflation has fallen more quickly than expected**  
CPI inflation outturn and projection in the August 2013 Report



(a) Based on constant interest rates of 0.5% and the assumption that the stock of purchased assets remained at £375 billion throughout the forecast period. See footnote to Chart 5.2 in the August 2013 Report for information on how to interpret the fan chart.

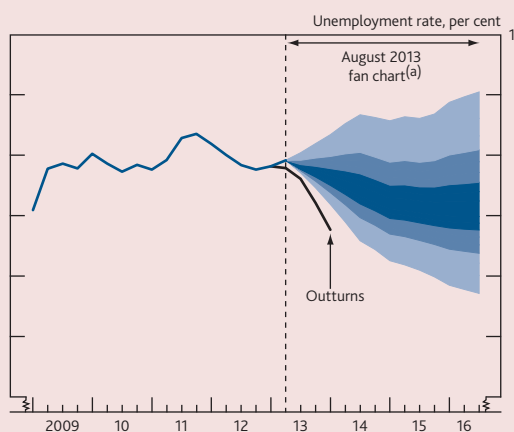
**Chart B GDP growth has been stronger than expected**  
GDP outturn and projection in the August 2013 Report



(a) Based on constant interest rates of 0.5% and the assumption that the stock of purchased assets remained at £375 billion throughout the forecast period. See footnote to Chart 5.1 in the August 2013 Report for information on how to interpret the fan chart.

**Chart C Unemployment has fallen far more quickly than expected**

LFS unemployment rate outturn and projection in the August 2013 Report



(a) Based on constant interest rates of 0.5% and the assumption that the stock of purchased assets remained at £375 billion throughout the forecast period. See footnote to Chart 5.10 in the August 2013 Report for information on how to interpret the fan chart.

**Table 1** Assessing key judgements from August 2013 Report

Conditioning assumptions and key judgement	Growth between 2013 Q1 and 2014 Q1, unless otherwise stated	
	August 2013 projection	Current estimate
<b>Conditioning assumptions</b>		
Bank Rate (per cent) <sup>(a)</sup>	0.5	0.5
Sterling ERI (index) <sup>(b)</sup>	79.1	85.6
<b>1: international policy initiatives facilitate a sustained, but gradual, global recovery</b>		
UK-weighted world GDP <sup>(c)</sup>	2	2½
<b>2: household and business spending recover as the consequences of the financial crisis slowly fade</b>		
Credit spreads (percentage points) <sup>(d)</sup>	-¾	-¾
Household saving ratio (per cent) <sup>(e)</sup>	3¾	4¾
Ratio of business investment to GDP (per cent) <sup>(f)</sup>	7¾	8½
<b>3: the stronger demand outlook is largely matched by an expansion in effective supply</b>		
Productivity <sup>(g)</sup>	1½	¾
Participation rate (per cent) <sup>(h)</sup>	63½	63¾
Average hours (level) <sup>(i)</sup>	32	32
<b>4: a revival in productivity growth attenuates domestic cost pressures, such that inflation gradually returns to target as external price pressures fade</b>		
Import prices <sup>(j)</sup>	1¾	-3¾
Unit wage costs <sup>(k)</sup>	1	½

(a) Average level in 2014 Q1, per cent.

(b) Index: January 2005 = 100. Average level in 2014 Q1.

(c) See footnote (c) to Table 5.A for information on how world trade is calculated.

(d) Percentage point change between 2013 Q1 and 2014 Q1. See footnote (f) to Table 5.A for definition of credit spreads.

(e) Level in 2014 Q1. Percentage of total available household resources.

(f) Level in 2014 Q1. Chained-volume business investment expressed as a percentage of GDP.

(g) GDP per hour worked.

(h) Level in 2014 Q1. Percentage of 16+ population.

(i) Level in 2014 Q1. Average weekly hours worked in main job and second job.

(j) Excludes the impact of missing trader intra-community fraud.

(k) Employee wages and salaries and household mixed income divided by GDP at market prices based on the mode of the MPC's backcast.

GDP growth was broadly in line with expectations, sterling's appreciation may have begun to weigh on exports. Consumption growth was broadly in line with expectations despite some surprising strength in non-wage income growth.

There has been little news in key judgement variables relating to demand — for example, an estimate of credit spreads over Bank Rate declined broadly as expected. The strength in GDP could, however, reflect the boost from the reduction in economic uncertainty being greater than assumed in the August 2013 Report.

### Supply and the degree of spare capacity

Productivity has grown less quickly than anticipated over the past year. Hourly productivity grew by around ¾ percentage points less than expected in the year to 2014 Q1. This is likely, in part, to reflect the effects of the financial crisis persisting for longer than previously thought (Section 3).

The impact of weaker productivity growth on the economy's supply capacity has been offset, at least to a degree, by labour supply increasing more strongly than expected. The medium-term equilibrium unemployment rate is now

estimated to have fallen by ¾ percentage points or so more by 2014 Q1 than anticipated in August 2013. And the ¼ percentage point rise in the labour force participation rate relative to expectations over the past year has been taken as a signal that its medium-term equilibrium is higher. Together, these represent around 1 percentage point more growth in effective labour supply between 2013 Q1 and 2014 Q1 than projected in August.

Developments over the past year, including the weakness of wage growth, have also led to a judgement that there was more slack in the economy in 2013 Q1 than estimated at the time of the August Report. In particular, effective labour supply is now thought to be around 2% higher, due to higher equilibrium participation and desired hours (Section 3).

Overall, it seems likely that although the degree of slack has been greater in the past than previously thought, it is narrowing, and doing so faster than expected. One manifestation of that is the sharp decline in the LFS unemployment rate, which was 0.8 percentage points lower in Q1 than expected in the August 2013 Report. The MPC had placed less than a 5% probability on unemployment falling that quickly.

### CPI inflation

The surprising weakness in CPI inflation reflected an unexpectedly small contribution from import, food and energy prices (Section 4). Import prices including fuel fell by 3¾% in the year to Q1 rather than increasing by 1¾%. Much of that unexpected weakness in energy and import prices was due to sterling's appreciation.

Businesses' wage cost growth has also been lower than expected, consistent with there being a greater degree of slack during 2013. Annual average weekly earnings growth has been almost 1 percentage point weaker than expected so far during 2014. That unexpected weakness may reflect both a wider margin of slack in 2013, but also wage growth taking time to pick up in response to improved labour market conditions (see the box on page 28).

### How has the forecast changed since August 2013?

The key judgements underpinning the MPC's current projections reflect the experience of the past year. Equilibrium labour supply is judged to be higher than previously thought, but productivity is projected to rise more gradually. In addition, the outturns for unemployment have led the MPC to widen its unemployment fan chart, relative to August 2013.

(1) The projections shown in the August 2013 Report were conditioned on constant nominal interest rates, rather than the market path assumption underlying most charts in Section 5 of this Report.

(2) Conditioned on market interest rates, the August 2013 central projection was for CPI inflation of 2.7% in 2014 Q2, and GDP growth of 2.4%.



## Other forecasters' expectations

Every three months, the Bank asks a sample of external forecasters for their latest economic projections. This box reports the results of the most recent survey, carried out during July.<sup>(1)</sup> On average, respondents expected four-quarter GDP growth of around 2.4% over the forecast period (Table 1), a little lower than at the time of the *May Report* and below its historical average rate of 2¾%. The LFS unemployment rate was expected to fall to 5.5% over the next three years, on average, around 0.2 percentage points lower than at the time of the *May Report*. On average, respondents expected annual CPI inflation to be close to the 2% inflation target over the next three years, little changed from the time of the *May Report*.

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

	2015 Q3	2016 Q3	2017 Q3
CPI inflation <sup>(b)</sup>	2.0	2.0	2.1
GDP growth <sup>(c)</sup>	2.6	2.4	2.3
LFS unemployment rate	6.0	5.6	5.5
Bank Rate (per cent)	1.2	2.0	2.6
Stock of purchased assets (£ billions) <sup>(d)</sup>	367	337	299
Sterling ERI	88.8	87.3	86.7

Source: Projections of outside forecasters as of 28 July 2014.

(a) For 2015 Q3, there were 27 forecasts for CPI inflation and GDP growth, 26 for Bank Rate, 25 for the unemployment rate, 21 for the stock of asset purchases and 18 for the sterling ERI. For 2016 Q3, there were 23 forecasts for CPI inflation, GDP growth and Bank Rate, 21 for the unemployment rate, 20 for the stock of asset purchases and 16 for the sterling ERI. For 2017 Q3, there were 22 forecasts for CPI inflation, GDP growth and Bank Rate, 20 for the unemployment rate, 20 for the stock of asset purchases 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.

Forecasters' expectations for four-quarter GDP growth were a little weaker than those of the MPC, especially at the three-year horizon. External forecasters' average central expectation was for growth to slow a little over the three years, from 3.1% in 2014 Q2 to around 2.3% in three years' time. That is a little weaker than the MPC's central expectation for growth of 2¾% at the end of the forecast period (Chart A).

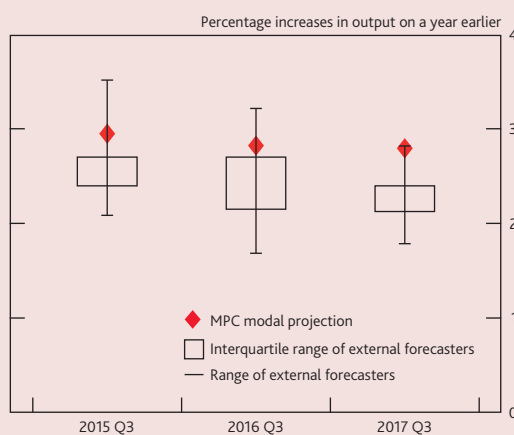
The average of respondents' central expectations for CPI inflation, at around 2% throughout the forecast period, was similar to that of the MPC. On average, and also in line with the MPC's expectation, respondents viewed the risks around their expectations for inflation as being broadly balanced.

Forecasters expected some tightening in the monetary stance over the forecast period, due to both a higher level of Bank Rate and a gradually falling stock of purchased assets. On average, external forecasters' expectations for Bank Rate were broadly in line with the market yield curve, albeit a touch

higher than the rate implied by the market curve in 2017. The stock of purchased assets was, on average, expected to fall by around £75 billion over the forecast period, a slightly larger reduction than expected three months ago. Most of that fall was expected to happen in the later part of the forecast, but the distribution of average expectations three-years ahead was considerably wider than one and two years ahead (Chart B). Those respondents that expected some decline in the stock of assets thought that the reduction would be roughly evenly split between stopping reinvestment and active asset sales.

**Chart A** External forecasters expect growth to slow a little over the forecast period

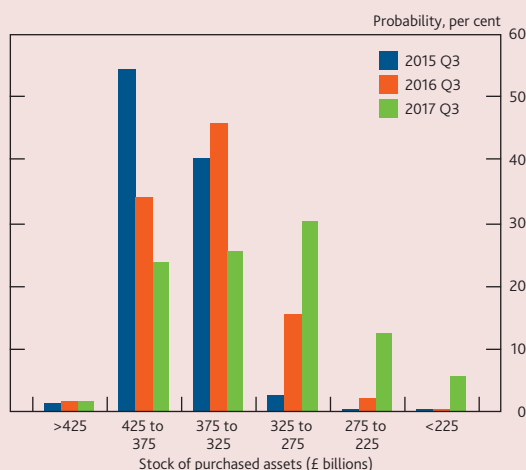
Range of central expectations for GDP growth



Source: Projections of outside forecasters as of 28 July 2014.

**Chart B** External forecasters expect the stock of assets to fall over the forecast period

Frequency distribution of the stock of asset purchases<sup>(a)</sup>



Source: Projections of outside forecasters as of 28 July 2014.

(a) These represent the mean of external forecasters' expectations for the probability of the stock of purchased assets lying within a particular range. For 2015 Q3, 2016 Q3 and 2017 Q3, 17 forecasters provided the Bank with their assessment of the likelihood of the stock of purchased assets falling in the ranges shown above.

(1) For detailed distributions of other forecasters' expectations, see 'Other forecasters' expectations' on the Bank's website, available at [www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14augofe.pdf](http://www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14augofe.pdf).

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**Text of Bank of England press notice of 5 June 2014****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 today voted to maintain Bank Rate at 0.5%. The Committee also voted to maintain the stock of purchased assets financed by the issuance of central bank reserves at £375 billion.

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

**Text of Bank of England press notice of 10 July 2014****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 today voted to maintain Bank Rate at 0.5%. The Committee also voted to maintain the stock of purchased assets financed by the issuance of central bank reserves at £375 billion.

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

**Text of Bank of England press notice of 7 August 2014****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 today voted to maintain Bank Rate at 0.5%. The Committee also voted to maintain the stock of purchased assets financed by the issuance of central bank reserves at £375 billion.

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

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

# 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.

**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.

**BRC** – British Retail Consortium.

**CBI** – Confederation of British Industry.

**CCS** – Credit Conditions Survey.

**CEIC** – CEIC Data Company Ltd.

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

**ECB** – European Central Bank.

**ESA** – European System of National and Regional Accounts.

**EU** – European Union.

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

**FLS** – Funding for Lending Scheme.

**FOMC** – Federal Open Market Committee.

**FPC** – Financial Policy Committee.

**FTSE** – Financial Times Stock Exchange.

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

**HMRC** – Her Majesty's Revenue and Customs.

**IMF** – International Monetary Fund.

**MMR** – Mortgage Market Review.

**MPC** – Monetary Policy Committee.

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

**NPISH** – non-profit institutions serving households.

**OECD** – Organisation for Economic Co-operation and Development.

**OFCs** – other financial corporations.

**ONS** – Office for National Statistics.

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

**PPP** – purchasing power parity.

**PwC** – PricewaterhouseCoopers.

**R&D** – research and development.

**REC** – Recruitment and Employment Confederation.

**RICS** – Royal Institution of Chartered Surveyors.

**S&P** – Standard & Poor's.

**SMEs** – small and medium-sized enterprises.

**TLTRO** – targeted longer-term refinancing operation.

**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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