Inflation Report

November 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.

The Monetary Policy Committee:

The Overview of this *Inflation Report* is available in PDF at
www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14novo.pdf.

The entire *Report* is available in PDF at
www.bankofengland.co.uk/publications/Pages/inflationreport/2014/ir1404.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/ir1404.aspx.

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Overview

The expansion in UK domestic demand has continued. But the outlook for global growth has weakened. Some asset and commodity prices have fallen, as have market interest rate expectations. Growth is projected to be a little weaker than in August. It slows slightly in the near term, settling back to around historical average rates, underpinned by a gradual pickup in demand abroad and a revival in productivity and real household income growth at home.

Inflation has fallen further below the MPC's 2% target, reflecting the impact of lower food, energy and import prices and some continued drag from domestic slack. Inflation is expected to remain below the target in the near term, and is more likely than not to fall temporarily below 1% at some point over the next six months. It then rises gradually back to the target as external pressures fade and unit labour cost growth picks up. The MPC's guidance on the expected path for Bank Rate continues to apply. 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 and supply

The global outlook has weakened since August. In the euro area, the United Kingdom's largest trading partner, output grew only modestly in the first half of 2014. More timely survey indicators of activity and consumer and business confidence are consistent with continuing subdued growth. Growth has also slowed in some emerging economies, including China. Although US GDP grew solidly in Q3, household consumption growth remained subdued. Partly reflecting weaker external demand, UK exports fell in Q2 and surveys of export orders paint a less positive picture of the near-term outlook than three months ago.

Disappointing news on global activity was associated with some declines in risky asset prices, with financial markets exhibiting pronounced volatility during October. The FTSE All-Share is around 5% lower than in August and spreads on riskier corporate bonds have risen by 70 basis points on average. It is also possible that investors are now demanding greater compensation for holding some riskier assets. Market participants' expectations for interest rates in three years' time have also fallen notably since August in some advanced economies — for example, by around 60 basis points in the United Kingdom and around 40 basis points in the United States. In the United Kingdom, rates are now expected to remain below 2% over the next three years.

Against this backdrop of slower global activity, UK domestic demand growth has so far remained robust, supported by easier credit conditions and past rises in confidence. Consumer spending growth strengthened in 2014 H1, despite weak wage growth.

Surveys suggest a continuation of strong business investment in the near term. Revisions in the *Blue Book* suggest that the UK recovery has been better balanced than previously estimated, with business investment playing a greater role.

Although housing investment rose markedly in Q2, housing market activity has moderated further. Mortgage approvals were broadly flat in Q3, weaker than expected in August, and house price inflation has also slowed. This may in part reflect some restriction in the availability of mortgage credit, but an easing in demand for housing finance may also have been a factor. The near-term outlook for housing market activity is softer than in August.

The unemployment rate continued to fall, reaching 6.0% in the three months to August. The most recent decline largely reflects fewer people participating in the labour market, with employment rising more slowly than earlier in the year. Private sector productivity growth has picked up a little, but still remains weak. The margin of spare capacity has probably narrowed a little over the past six months. But the central view of most MPC members is that slack remains broadly in the region of 1% of GDP. There is, however, considerable uncertainty around that central estimate, with a wide range of views on the Committee.

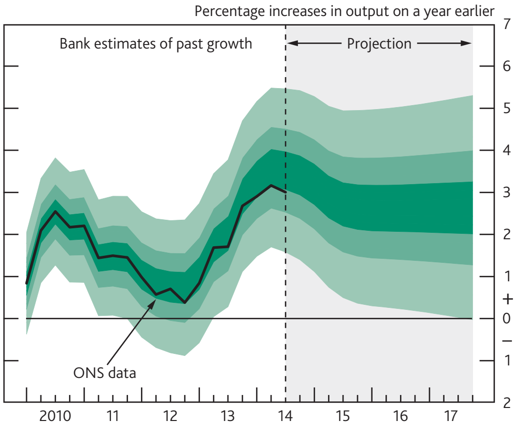
Costs and prices

CPI inflation was 1.2% in September, down from 1.9% three months ago, and much weaker than projected in August. Low CPI inflation partly reflects a decline in food and energy prices which, after pushing up CPI inflation for most of the past decade, are now weighing on the headline rate. These lower prices reflect falls in global commodity prices, which in turn reflect both the slowdown in global demand and positive news about supply. Prices of other imported goods and services are also lower. Although sterling has depreciated slightly since August, its rise over the previous year or so is pushing down import prices. Inflation in the euro area, a key source of UK imports, also remains low.

Cost pressures from the labour market remain subdued. Unit labour costs fell over the four quarters to Q2. While that fall was largely driven by the volatile non-wage component of labour costs, wage growth remains low relative to historical averages. That reflects both slack in the labour market and subdued productivity growth. The composition of employment gains has probably weighed on productivity and pay: much of the most recent rise in employment has been concentrated in lower-skilled occupations.

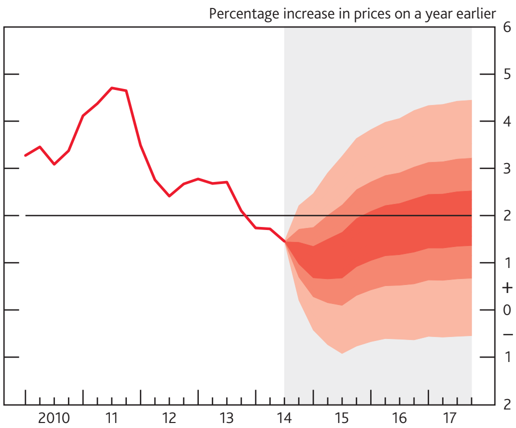
Most measures of medium-term inflation expectations have changed little since August and remain consistent with the 2% inflation target. However, some measures of short-term inflation expectations have fallen somewhat.

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.

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 outturns of inflation are also expected to lie within each pair of the lighter red areas on 30 occasions. In any particular quarter of the forecast period, inflation is therefore expected to lie somewhere within the fan on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions inflation can fall anywhere outside the red area of the fan chart. Over the forecast period, this has been depicted by the light grey background. See the box on pages 48–49 of the May 2002 *Inflation Report* for a fuller description of the fan chart and what it represents.

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 Bank Rate rises gradually from late 2015, in line with the path implied by market interest rates, and the stock of purchased assets stays at £375 billion. Four-quarter growth is projected to fall back towards its historical average rate, somewhat above estimated potential supply growth. That central path is a little weaker than in August, reflecting the weaker global outlook and a softer profile for private sector domestic demand, the latter despite a lower implied path for Bank Rate. The risks around that central path are judged to be balanced, rather than skewed to the downside as in August.

The projection assumes that overseas growth is slower than in August, particularly in the euro area. The main downside risk stems from weaker euro-area activity, which would weigh on UK exports and could be associated with a further rise in financial market volatility. But there are also risks to the upside — for example, greater momentum in US growth or larger impacts than expected from European Central Bank or Bank of Japan policy actions.

Domestically, the projection is for solid consumption growth as households reduce their saving rate further, particularly in the near term. The weakness in the housing market bears down on housing investment. Business investment grows strongly, but at a slower rate than projected in August, reflecting the weaker and more uncertain global backdrop. There remains a risk that households may not be willing to cut back saving, particularly if concerns around the economic outlook build. Further out, the medium-term outlook for growth is underpinned by a gradual revival in productivity growth. But there remains considerable uncertainty around that judgement.

Chart 2 summarises the MPC's best collective judgement for the outlook for CPI inflation on the same basis as **Chart 1**. In the central case, inflation remains around its current level in the near term as the drags from food, energy and other imported goods and services prices, and slack in the domestic economy, persist. There is a significant probability that inflation could temporarily fall below 1% in the near term. Inflation then rises back to the target by the end of the forecast period as external pressures fade and growth in unit labour costs gradually picks up.

There are significant risks either side of this inflation projection. Global commodity prices could be higher if adverse geopolitical developments or a tightening in supply push up the price of oil, or lower if abundant supply or weaker demand for commodities proves persistent. Consumer prices will also continue to be affected by the pass-through from sterling's appreciation over the past year and any further movements in the exchange rate.

Domestic risks to inflation centre on unit labour costs. Wages need to grow more strongly than productivity to return inflation to the 2% target, absent external price pressures. Wage growth could remain subdued if slack is greater than estimated or if households' and companies' inflation expectations were to fall. Alternatively, it could pick up more sharply than anticipated if there were less slack, if it were absorbed more quickly than assumed, or if confidence in the recovery meant that pay pressures, evident in some survey indicators, started to feed through more sharply than expected into wages.

The policy decision

UK domestic demand growth remained robust in the first half of 2014. But the global backdrop has weakened, particularly in the euro area. CPI inflation fell to 1.2% in September, well below the 1.7% expected at the time of the August *Report*. Low inflation in large part reflects downward pressure from food, energy and the prices of other imported goods and services, which were previously pushing inflation above the 2% target. But domestic price pressures are also weaker than previously thought.

At its November meeting, the Committee noted that market participants had revised down their expectations for the path of Bank Rate, by around 0.5 percentage points on average over the next three years, since the time of the August *Report*. This was probably in response to the weaker global outlook. The outlook for domestic demand also appeared softer. Taking those together, the central outlook for four-quarter output growth was a little weaker than expected three months ago. Growth was expected to fall back to around its historical average rate and slack to be absorbed over the next three years. That absorption in slack was associated with inflation returning to the 2% target by the three-year forecast horizon. But the near-term profile for inflation was markedly different from that in August, with inflation likely to remain close to 1% over the next twelve months.

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 November 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 and to remain below average historical levels for some time to come. The actual path for monetary policy 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 purchased assets at £375 billion.

1 Money and asset prices

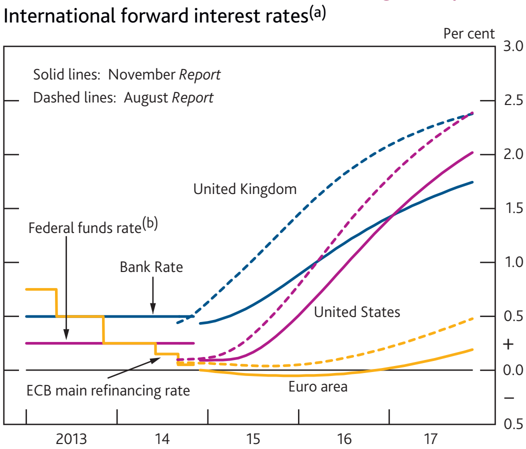
Official interest rates in the United Kingdom and other advanced economies remained at historically low levels. The European Central Bank and the Bank of Japan loosened policy. Short and long-term market interest rates fell in the United Kingdom, United States and the euro area. Financial markets exhibited pronounced volatility during October. Equity prices fell in many countries. The sterling exchange rate depreciated a little but remained well above its March 2013 trough. Corporate credit conditions have generally improved. Mortgage approvals were weaker than expected in Q3; house price inflation moderated.

Table 1.A Monitoring the MPC's key judgements

Developments anticipated in August	Developments since August
Cost of credit	**On track**
• Credit spreads to decline over 2014.	• Credit spreads declined in Q3.
Mortgage approvals	**Weaker than expected**
• Mortgage approvals for house purchase to rise to around 75,000 a month in 2014 Q4.	• Mortgage approvals averaged 64,000 a month in 2014 Q3. Outlook weaker.
House price inflation	**Lower than expected**
• Rises in the main indices of national house prices to average around ½% a month by 2015 Q1.	• Monthly rises in main indices of national house prices slowed in Q3. Expected to be about ¼% in Q4.
PNFC lending	**On track**
• PNFC net lending to be positive in 2014 H2, and to pick up in 2015.	• PNFC net lending fell slightly in 2014 Q3, but expected to be positive in H2.
Evolution of sterling	**Slightly lower than expected**
• Sterling to evolve in line with conditioning assumptions.	• Sterling depreciated by a little over 1%.

Chart 1.1 Market expectations for UK, US and euro-area interest rates have fallen since the August *Report*

International forward interest rates[(a)]



Sources: Bank of England, Bloomberg, European Central Bank (ECB) and Federal Reserve.

(a) The August 2014 and November 2014 curves are estimated using instantaneous forward overnight index swap rates in the fifteen working days to 6 August 2014 and 5 November 2014 respectively.
(b) Upper bound of the target rate range of 0% to 0.25%.

1.1 Monetary policy and financial markets

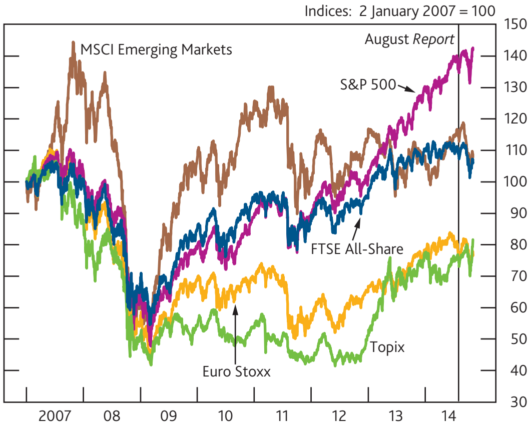
Sentiment among financial market participants about the outlook for the global economy appears to have weakened since August. Market-based measures of interest rate expectations have fallen in both the short term (**Chart 1.1**) and long term. Equity prices fell sharply across the world in late September and early October, although some of those falls have since unwound (**Chart 1.2**). Uncertainty among market participants about the outlook also appeared to have increased: implied volatility, for example in equity markets, picked up from low levels, before falling back (**Chart 1.3**).

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 explained in the February 2014 *Report*, when the Committee does start to raise Bank Rate, it expects to do so at a gradual pace, and probably to a level materially below its pre-crisis average. Short-term market interest rate expectations have fallen by ½ percentage point since the run-up to the August *Report*, and imply that market participants expect Bank Rate to rise gently from late 2015 to 1¾% in three years' time. Economists surveyed by Reuters had a median expectation that Bank Rate would be 2½% at the end of 2017, with the first rise in 2015 Q1.

In the United States, the Federal Open Market Committee concluded its programme of asset purchases following its October meeting. It also reiterated its guidance that it will probably remain appropriate to maintain the current target range for the federal funds rate for a considerable period of time. Market prices imply that interest rates will be slightly lower over the next three years than the implied path at the time of the August *Report*. Rates are expected to increase from around the end of 2015 to around 2% in three years' time.

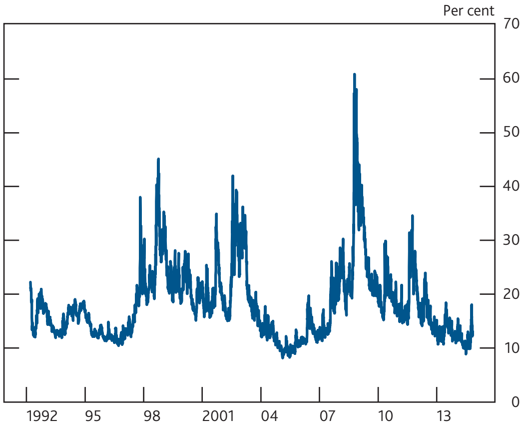
Chart 1.2 Equity prices fell before recovering somewhat
International equity prices[a]



Source: Thomson Reuters Datastream.

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

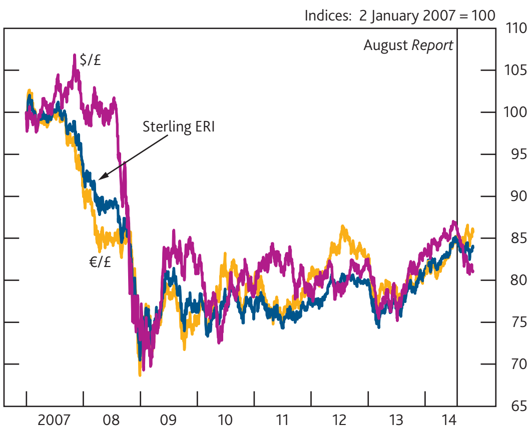
Chart 1.3 Volatility increased temporarily but remains low by historical standards
FTSE 100 short-term implied volatility[a]



Source: Bloomberg.

(a) Calculated from three-month option prices on the FTSE 100, which reflect the premium that investors are prepared to pay to insure against movements in the index.

Chart 1.4 Sterling depreciated slightly, but remains well above its trough
Sterling exchange rates



The European Central Bank's (ECB's) Governing Council announced a further easing in policy. At its September meeting, the ECB announced a 10 basis point cut in its benchmark interest rates.[1] It also announced a programme to purchase asset-backed securities and covered bonds. Assets will be purchased over at least two years, aiming to increase the size of the ECB's balance sheet materially. The ECB also held its first targeted longer-term refinancing operation that offered participating banks financing directly. Market participants expect policy rates to remain close to zero for much of the next three years.

The Bank of Japan's Policy Board also announced an easing in policy. At its October meeting, the Policy Board announced a ¥30 trillion increase in the annual pace of purchases of government bonds, to ¥80 trillion a year. It also announced a threefold increase in purchases of exchange-traded funds and Japanese real estate investment trusts.

Long-term interest rates have fallen further in the United Kingdom and the United States since the August *Report*. With the exception of Greece, where they are almost 2 percentage points higher, long-term interest rates also declined sharply in the euro area. The decline in interest rates in 2014 probably reflects a combination of factors. As discussed in the box on page 11, growing concerns about the global growth outlook appear to be a key factor pushing long-term rates lower since the summer.

Exchange rates

The sterling effective exchange rate (ERI) was a little over 1% lower in the run-up to the November *Report* than at the time of the August *Report* (**Chart 1.4**), although it remained 12% higher than its March 2013 trough. Most of the change since August can be accounted for by a 5% depreciation against the dollar, much of which occurred in early September. A number of US data releases at this time were stronger than market participants had expected, contributing to a generalised appreciation in the dollar ERI.

Corporate capital markets

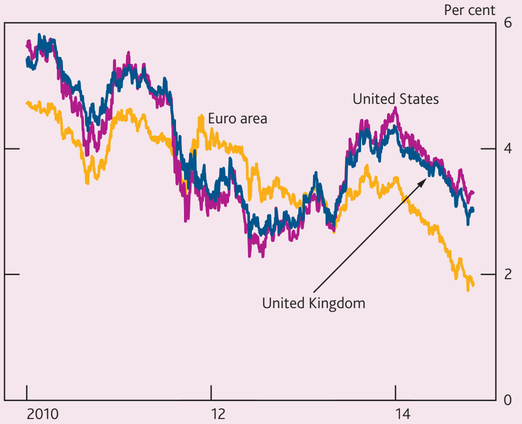
Global equity prices fell sharply in late September and early October (**Chart 1.2**). Market intelligence suggests that correlated falls in equity prices probably reflected concerns among financial market participants about the outlook for global growth. Since mid-October, equity prices have recovered somewhat. In the United Kingdom, in the fifteen working days to 5 November, the FTSE All-Share was almost 5% lower than at the time of the August *Report*, and similar falls were seen in European equity prices. US equity prices are little changed, however, having fully recovered the falls in late September and early October. The market value of

(1) For more information on the ECB's policy announcements in June see the box on page 10 of the August *Report*; www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14aug.pdf.

The fall in long-term interest rates in 2014

Government bond yields have declined sharply across advanced economies since the start of the year. Ten-year spot government bond yields have fallen by almost 1 percentage point in the United Kingdom and United States, and by around 1¼ percentage points in the euro area. In part these falls reflect declines in interest rates over the next few years. But they also reflect falls in interest rates at longer horizons. For example, the implicit nominal cost of government borrowing for five years in five years' time — the five-year, five-year forward rate — has fallen by almost 1½ percentage points in the United Kingdom and the United States since the start of the year (**Chart A**). In the euro area, five-year, five-year forward rates have fallen just over 1½ percentage points and reached all-time lows in October. This box sets out some of the factors that could explain these falls.

Chart A Longer-term interest rates have fallen internationally during 2014
Five-year, five-year forward nominal interest rates[a]



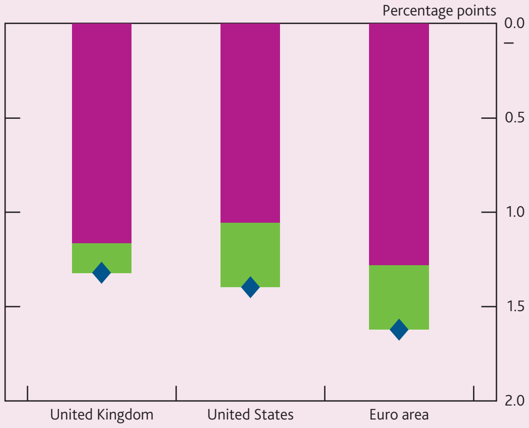
Source: Bloomberg.

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

Nominal long-term interest rates can be decomposed into movements in real interest rates and implied inflation. Most of the fall in long-term rates can be accounted for by lower real rates in the United Kingdom, United States and euro area (**Chart B**), although implied inflation rates have also fallen a little.

The falls in long-term yields could reflect lower expected interest rates. That would be the case if market participants believe that longer-term growth prospects have worsened and expect this to be associated with lower policy rates. The fall in yields could also reflect lower term premia — the compensation that investors require for the risks associated with holding government bonds. Term premia would decline if investors' preference for holding advanced-economy bonds relative to other assets rises or if market participants become less uncertain about the expected path for interest rates.

Chart B Most of the fall in nominal forward rates can be accounted for by lower forward real rates
Contribution to the decline in five-year, five-year forward nominal interest rates since the start of 2014[a][b]



Sources: Bloomberg and Bank calculations.

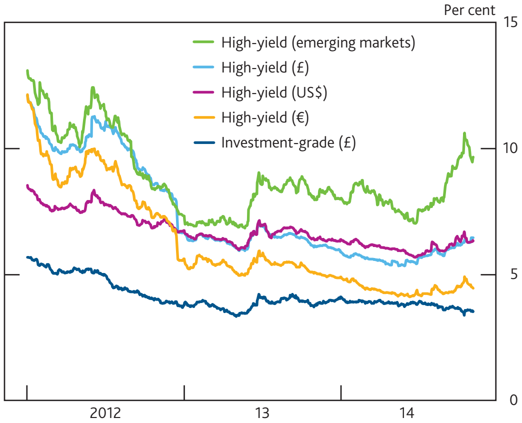
(a) Change between 31 December 2013 and the fifteen working days to 5 November 2014.
(b) Derived from the Bank's government liability curves. The contribution of real rates and implied inflation expectations to the change in nominal rates calculated using inflation swap rates.

At the start of 2014, lower long rates probably partly reflected increased investor preference for holding advanced-economy government bonds relative to other riskier assets. Foreign holdings of US Treasury bonds increased more sharply than expected by market contacts in early 2014, and contacts suggest that this partly reflected weaker growth prospects in emerging economies. It may also be that uncertainty about the outlook for policy rates fell at the start of the year, perhaps reflecting central bank communications about the medium-term path for policy rates: the MOVE index of US interest rate implied volatility, for example, fell back in early 2014, having increased towards the end of 2013.

Since the summer, long-term interest rates may have fallen because expectations for global growth were revised down (Section 2). Discussions with market contacts in October suggest that they place significant weight on this explanation, with the euro area seen as a key contributor. Reduced risk appetite may also be playing a role as uncertainty about the global outlook has risen: consistent with that, market intelligence suggests that UK fund managers have been increasing their holdings of UK government bonds, and reducing holdings of riskier assets.

Overall, the strongly correlated falls in advanced-economy long-term interest rates suggests that some common factors have been pushing down rates. A weaker outlook for longer-term global growth prospects and an increased preference for less risky advanced-economy government bonds may both help explain the fall in rates seen in 2014.

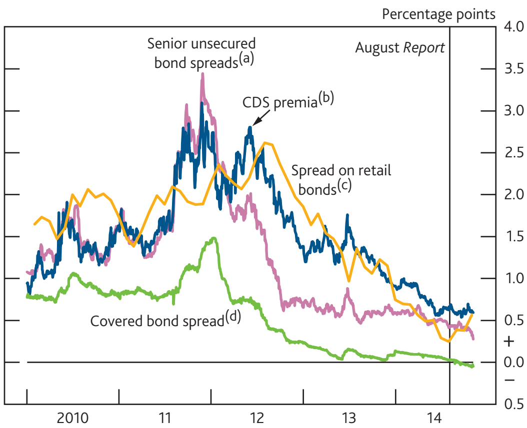
Chart 1.5 Yields on riskier corporate bonds have increased
International corporate bond yields(a)



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 within the indices.

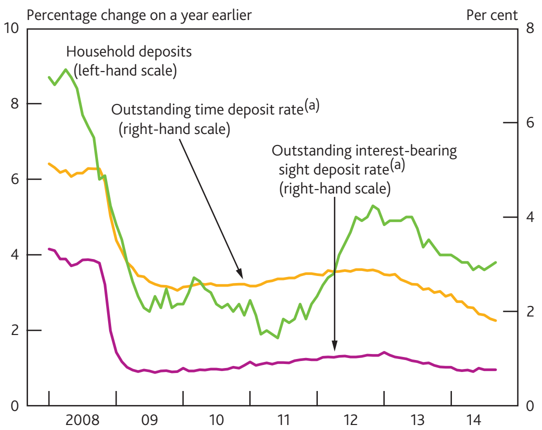
Chart 1.6 UK banks' funding spreads remain low
UK banks' indicative longer-term funding spreads



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 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 a suitable proxy.

Chart 1.7 Household deposits continue to grow despite low deposit rates
Household deposits and deposit rates



(a) Monthly average of UK-resident monetary financial institutions' (MFIs') new sterling household deposit rates.

some commodity producers has weighed on the FTSE All-Share index.

The prices of other risky assets, such as high-yield corporate bonds, have also fallen since the August *Report*. As the price of these bonds has fallen, the yield has increased (**Chart 1.5**). Yields on riskier dollar, euro and sterling corporate bonds have all risen by around ½ percentage point over the past three months; yields on emerging-economy corporate bonds have increased by around 2 percentage points. Yields on investment-grade bonds have changed little since the August *Report*.

The contrasting movements in the yields on investment-grade corporate bonds, and high-yielding corporate bonds and equities, could be a sign that investors are demanding greater compensation for holding some riskier assets. For much of the past few years, returns on high-yielding corporate bonds have been falling, narrowing the spread to investment-grade bond yields, which have been more stable. That is in part a consequence of a 'search for yield' as investors sought to bolster nominal returns by investing in relatively risky assets.

Another sign of a weakening in sentiment is that implied volatility — a gauge of financial market uncertainty — increased from low levels in mid-October, although much of that increase has unwound (**Chart 1.3** shows that for UK equity markets). This follows a period when implied volatility had been low by historical standards across financial markets — in other words, investors have been willing to pay an unusually low premium to insure against movements in asset prices.

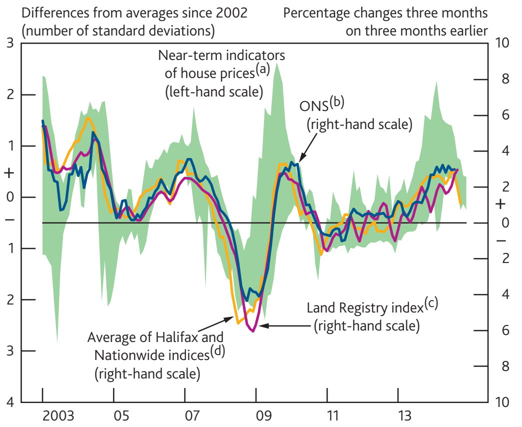
1.2 Bank funding

Conditions in bank funding markets remain benign and banks have several sources of funding to enable lending to the real economy. Since mid-2012, banks and building societies have been able to access the Bank of England and HM Treasury's Funding for Lending Scheme (FLS). But their need to draw funds from the FLS has been reduced by a marked improvement in the availability and cost of wholesale and deposit funding. For example, in the Bank's *Bank Liabilities Survey*, lenders have reported falls in retail and wholesale funding spreads in every quarter since the survey began in 2012 Q4.

Banks' wholesale funding costs have fallen a little further since the August *Report*. Indicative funding spreads have been little changed (**Chart 1.6**), while reference rates, such as swap rates, fell as short-term interest rates declined (Section 1.1). Low wholesale funding costs may partly reflect continued investor appetite for bank debt, but also the relatively limited supply of debt being issued by banks. Banks have also been able to raise retail funding at low cost. For example, household deposits have grown by around 4% in the year to 2014 Q3, despite low rates on both sight and time deposits (**Chart 1.7**).

Chart 1.8 House price inflation moderated a little

House prices and near-term indicators of house prices[a]

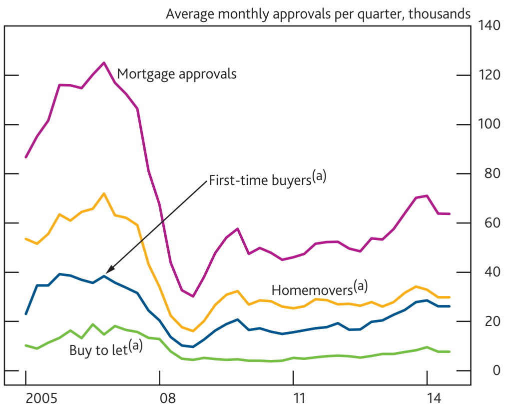


Sources: Halifax, Land Registry, Nationwide, ONS, Rightmove.co.uk, Royal Institution of Chartered Surveyors (RICS) and Bank calculations.

(a) Includes the RICS expected house price three months ahead net balance, the RICS new buyer enquiries less instructions to sell net balance, 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 August 2014.
(c) Data are for England and Wales. Latest observation is September 2014.
(d) Latest observation is for October 2014.

Chart 1.9 Approvals for homemovers particularly weak

Mortgage approvals by type of borrower

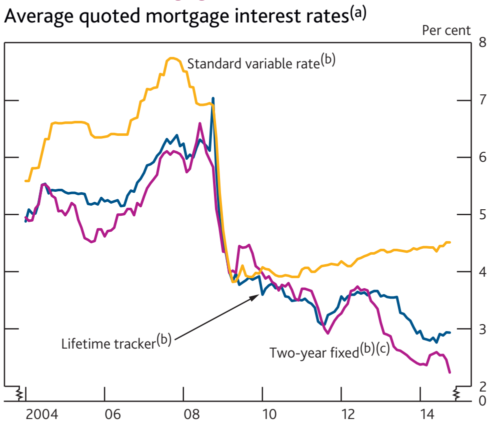


Sources: Bank of England, Council of Mortgage Lenders (CML) and Bank calculations.

(a) An approximation for the split of Bank of England mortgage approvals for house purchase has been calculated using the share in CML mortgage advances of homemovers, first-time buyers and buy-to-let purchases. CML data are non seasonally adjusted.

Chart 1.10 Mortgage interest rates remain low

Average quoted mortgage interest rates[a]



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

The European Banking Authority published the results of a stress-testing exercise on 123 European banks, including a number of large UK institutions, on 26 October 2014. There was no material change in UK banks' funding costs following that.

1.3 Credit conditions

Household lending and the housing market

The average of the Halifax and Nationwide house price indices increased by 2% in Q3, broadly in line with expectations in the August *Report*, but a little lower than the 2.4% increase in Q2 (**Chart 1.8**). House price inflation slowed in October according to the average of lenders' indices, and indicators suggest further slowing in the near term (**Chart 1.8**). The near-term outlook for house price inflation is consequently a little weaker than expected at the time of the August *Report*.

Having disappointed expectations earlier in the year, mortgage approvals were again weaker than expected in Q3: approvals averaged 64,000 a month in Q3, lower than the 70,000 expected at the time of the August *Report*. That implies a softer outlook for net secured lending, which grew by 1.8% in the year to Q3. The outlook for approvals depends on how persistent the factors currently weighing on them prove to be.

Some of the weakness in mortgage approvals could reflect a tightening in the supply of secured credit. According to the Bank's *Credit Conditions Survey* (*CCS*), the availability of secured credit fell in Q3 for the first time since early 2012, driven by a changing appetite for risk and lenders' house price expectations. Some lenders responding to that survey commented that they had tightened credit availability a little in response to recommendations made by the Financial Policy Committee to mitigate risks stemming from the housing market. Operational constraints associated with the implementation of the Mortgage Market Review continued to push down credit availability early in Q3, but that effect is likely to have largely dissipated. Respondents to the *CCS* expected credit availability to increase in Q4.

The weakness in mortgage approvals could also partly reflect demand factors. Household demand for secured credit was reported to have fallen for the first time since late 2011 in the *CCS*. Demand for secured credit from existing homeowners appears particularly weak, with mortgage approvals for homemovers significantly below pre-crisis levels, according to estimates based on CML data (**Chart 1.9**). Some potential homemovers may have been discouraged or constrained by mortgage terms and conditions. Mortgage rates typically increase as loan to value (LTV) ratios rise, and the difference between the interest rates on a 90% LTV mortgage and a 75% LTV mortgage, for example, has increased significantly since the financial crisis. This may have discouraged homeowners who are looking to buy a more expensive property from

Chart 1.11 Household loan growth continues to increase
Loans to individuals

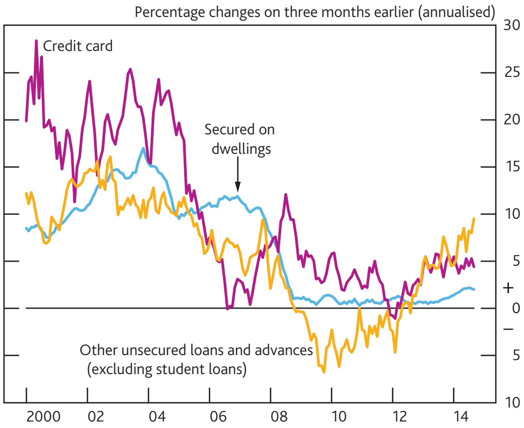
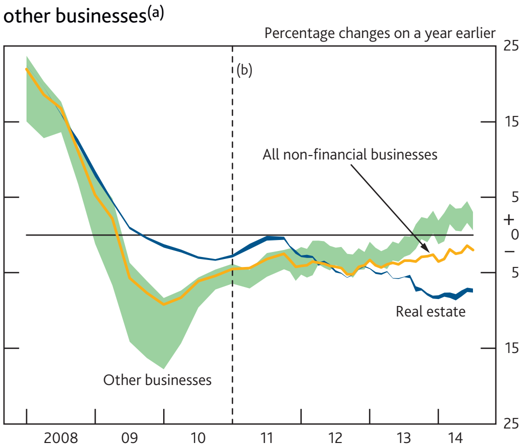
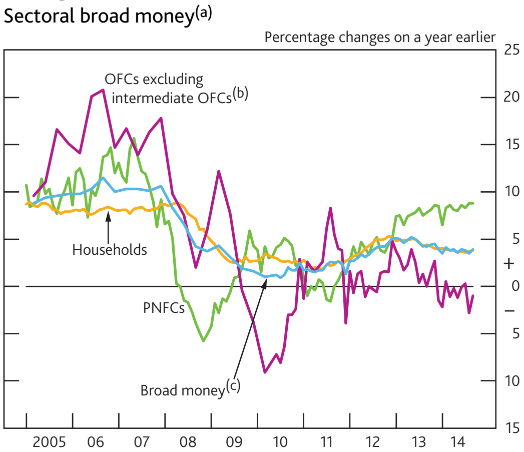


Chart 1.12 PNFC lending outside the real estate sector continues to pick up
Growth in the stock of lending to the UK real estate sector and other businesses(a)



(a) Lending by UK MFIs. Rates of growth in the stock of lending. Non seasonally adjusted. For details on the series included in the swathes see tab 'Chart 1.1 appendix', available at www.bankofengland.co.uk/publications/Documents/other/monetary/lendingtoukbusinessesandindividualsoctober2014.xls.
(b) From January 2011, data are on the SIC 2007 basis. Changes in the SIC codes have led to some components moving between industries, which may affect growth rates in 2011.

Chart 1.13 PNFC money growth remains relatively strong
Sectoral broad money(a)



(a) Monthly data unless otherwise specified.
(b) Quarterly data. Intermediate other financial corporations (OFCs) are: mortgage and housing credit corporations; non-bank credit grantors; bank holding companies; securitisation special purpose vehicles; and other activities auxiliary to financial intermediation. Sterling deposits arising from transactions between banks or building societies and other financial intermediaries belonging to the same financial group are also excluded, quarterly prior to June 2010 and monthly thereafter.
(c) M4 excluding intermediate OFCs, quarterly prior to June 2010 and monthly thereafter.

moving. Existing mortgagors could also be reluctant to move house if they are unable to retain the attractive conditions on their mortgage. According to the NMG survey, around 40% of mortgagors pay an interest rate of less than 2½%, which is low compared with quoted mortgage rates on some new mortgages. And some existing mortgagors may have mortgages on terms, such as on an interest-only basis, that would not be available today.

Some recovery in mortgage approvals is expected over coming quarters, supported by recent falls in some quoted mortgage rates (**Chart 1.10**). Overall, approvals are expected to average around 65,000 per month in Q4, rising to around 70,000 by the middle of 2015. But that outlook is weaker than expected at the time of the August *Report* (Section 5).

Unsecured bank lending to households

Unsecured credit continued to grow in Q3 (**Chart 1.11**), and has risen roughly in line with nominal GDP over the past year. The pickup in unsecured credit growth from very low rates between 2009 and 2012 probably partly reflects an improvement in the cost and availability of credit. That improvement continued in Q3: quoted interest rates on personal loans fell a little further and the *CCS* suggests that unsecured credit availability increased and non-price terms loosened. Unsecured credit growth remains consistent with solid rises in household consumption (Section 2).

Corporate credit conditions

Private non-financial corporation (PNFC) net lending fell slightly in 2014 Q3. Falls in the stock of loans to the real estate sector continued to weigh on PNFC lending. Outside this sector, annual lending growth has been positive for much of 2014 (**Chart 1.12**). Overall net lending is still expected to be positive in 2014 H2, in line with expectations at the time of the August *Report*.

Credit conditions facing businesses generally appear to have improved further. Those facing large businesses continued to ease, with most respondents to the Q3 *Deloitte CFO Survey* reporting that credit was cheap and easily available. According to the *CCS*, credit availability for medium-sized enterprises has also improved, and spreads have fallen. In contrast, credit availability for small businesses fell slightly in Q3, while spreads on lending were little changed.

While growth in bank lending outside the real estate sector has picked up, it remains relatively subdued. That may be partly because some businesses are using other sources of finance. Large businesses can borrow from capital markets, and bond issuance was very strong in Q3, such that total finance raised was positive (**Table 1.B**). Recent trends in sources of external finance for both large businesses and small and medium-sized enterprises are discussed in more detail in the October 2014 edition of *Trends in Lending*.

Monetary policy since the August *Report*

The MPC's central projection in the August *Report*, under the assumptions that Bank Rate followed a path implied by market interest rates and that the stock of purchased assets remained at £375 billion, was that four-quarter GDP growth would be close to, or a little above, its historical average rate for much of the next two to three years. Inflation was expected to 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.

At the MPC's meeting on 3–4 September, the MPC noted that weakness in the euro area had been the most significant development during the month. Euro-area output growth had disappointed and inflation had fallen further. UK CPI inflation had unexpectedly fallen back to 1.6% in July, and Bank staff expected inflation to fall slightly further in coming months. Wage inflation on the average weekly earnings measure continued to be weak. The speed at which labour costs would rise depended, among other things, on the evolution of slack. There continued to be a considerable degree of uncertainty about how much remained.

Against this backdrop, the Committee considered the level of Bank Rate currently appropriate to meet the inflation target. For most members, there remained insufficient evidence of prospective inflationary pressure to justify an immediate increase in Bank Rate. Inflation was below the target and there were few signs of inflationary pressures: import prices were falling, and unit labour costs were currently growing at a rate well below that consistent with meeting the inflation target in the medium term.

For two Committee members, circumstances were sufficient to justify an immediate rise in Bank Rate. While CPI inflation was below the target, the economy continued to grow at a pace consistent with rapid absorption of slack, and survey evidence of tightening in the labour market suggested that wage growth might pick up quite sharply as slack was absorbed. Seven members of the MPC voted to maintain Bank Rate at 0.5%, and two members voted to increase Bank Rate by 25 basis points. The Committee voted unanimously to maintain the stock of purchased assets at £375 billion.

At its meeting on 7–8 October, the MPC noted that the pace of the recovery in the United Kingdom and the United States had been maintained, but pessimism about the global economic outlook had increased over the month. There was evidence of a loss of momentum in the euro area, including in Germany, and euro-area inflation remained very low. Activity in the United Kingdom around the middle of the year had continued to grow at a pace slightly above its long-term average. And upward revisions to investment in the 2014 *Blue Book* suggested that GDP growth was more balanced than it had appeared in the previous vintage of data.

CPI inflation had fallen back unexpectedly to 1.2% in September, and the low rate was consistent with a number of other indicators of price pressures. But the amount of slack in the economy had been diminishing and this was expected in due course to lead to a gradual pickup in inflation back towards the 2% target.

For most members, there remained insufficient evidence of prospective inflationary pressure to justify an immediate increase in Bank Rate. For two members, circumstances remained sufficient to justify an immediate rise in Bank Rate. Seven members of the MPC voted to maintain Bank Rate at 0.5%, and two members voted to increase Bank Rate by 25 basis points. The Committee voted unanimously to maintain the stock of purchased assets at £375 billion.

At its meeting on 5–6 November, the MPC voted to maintain Bank Rate at 0.5%, and the stock of purchased assets at £375 billion.

Table 1.B Bond market issuance strong in Q3
Net external finance raised by PNFCs[a]

£ billions	Quarterly averages					
	2003–08	2009–12	2013	2014 Q1	2014 Q2	2014 Q3
Loans	11.5	-6.2	-2.2	-4.4	-0.6	1.8
Bonds[b][c]	3.4	3.2	3.1	-0.9	0.7	7.5
Equities[b]	-2.1	1.4	-1.2	1.1	3.3	0.7
Commercial paper[b]	0.0	-0.4	0.0	-1.2	-2.4	1.6
Total[d]	12.8	-1.9	-0.4	-5.5	-0.6	13.5
Memo: PNFC loan growth[e]	2.8	-0.7	-0.1	-2.2	0.5	-0.2

(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. Percentage change on a quarter earlier.

1.4 Money

Annual broad money growth was 3.9% in 2014 Q3 (**Chart 1.13**). Household deposits have been growing at a similar pace to overall broad money and other financial corporations' money holdings have been broadly flat. PNFC money growth has been stronger than the aggregate since late 2012. In part, that probably reflects an increase in companies' desired money holdings, perhaps for precautionary purposes. The strength in PNFC money, despite relatively weak bank lending, could also reflect the increased use of finance from non-bank sources (Section 1.3).

2 Demand

UK demand growth rose a little further in Q2. Both business and housing investment growth strengthened significantly, while the solid expansion of household consumption continued. In contrast, world demand growth rose only modestly, weaker than expected in August. Partly reflecting that, net exports weighed on GDP growth in Q2. The pace of domestic demand growth is likely to have been broadly maintained in Q3.

Table 2.A Monitoring the MPC's key judgements

Developments anticipated in August	Developments since August
Consumer spending	**Broadly on track**
• Quarterly consumer spending growth of a little below ¾%.	• Consumption grew by 0.6% in Q2, with similar rates expected in H2 and 2015 Q1.
Investment	**Stronger than expected in Q2, outlook weaker**
• Indicators of business investment consistent with average quarterly growth rates of a little below 3%.	• Business investment growth broadly in line with expectations at 3.3% in Q2, below 3% expected in H2.
• Housing investment picks up gradually, approaching 4% per quarter by turn of the year.	• Stronger than expected at 5.4% in Q2, outlook for H2 weaker.
Advanced economies	**Weaker than expected**
• Quarterly euro-area GDP growth of between ¼% and ½%.	• Q2 weaker than expected, outlook also weaker.
• US GDP growth around ¾% a quarter; non-farm payrolls increasing by a little more than 200,000 per month.	• Employment growth in line, GDP outlook a touch weaker.
Rest of the world	**Data broadly on track, outlook slightly weaker**
• Four-quarter PPP-weighted emerging-economy growth of around 5% on average; Chinese GDP growth slightly above 7%.	• Q2 data were broadly in line with expectations, but the outlook is slightly weaker.
Exports	**Weaker than expected**
• Quarterly UK exports growth at just below 1½% per quarter on average.	• Exports fell in Q2, outlook also weaker.

The strength of domestic demand growth in Q2 is expected to have continued in Q3 (Section 2.1), but is likely to moderate somewhat around the turn of the year. Externally, the outlook for world demand and the associated prospects for net trade have deteriorated. The recovery in the euro area appears to have slowed, with little sign that stronger growth elsewhere in the world will offset the associated reduction in UK export demand (Section 2.2).

2.1 Domestic demand

UK GDP has risen in every quarter since the start of 2013, matching its average pace in the decade prior to the financial crisis. Revisions to official estimates in the 2014 *Blue Book* do not materially alter the estimated pace of recent growth (see the box on pages 18–19). Strong investment combined with solid growth in household consumption have been the key elements driving this expansion, while government spending has been subdued. Broadly, this pattern continued in Q2: private sector domestic demand increased further, while government spending fell.

Household spending

Consumption growth has been strengthening over the past year or so. Quarterly growth was 0.6% in Q2 (**Table 2.B**), roughly in line with expectations at the time of the August *Report* (**Table 2.A**). That was slower than growth rates generally observed in the decade prior to the financial crisis, however.

This rise in consumption growth since the start of 2013 has been driven, in part, by households' willingness to spend more of their income, which has grown only slightly (**Chart 2.1**). Reduced uncertainty among households about income prospects is likely to have been a key driver of their willingness to save less. For example, responses to the GfK consumer confidence survey suggest that households have become much less concerned about the prospect of unemployment, as its level has fallen. And households' confidence about their

Table 2.B Private sector domestic demand growth was strong in Q2

Expenditure components of demand(a)

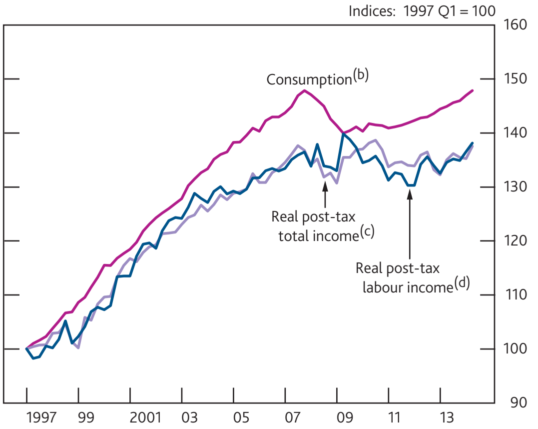
Percentage changes on a quarter earlier

	Averages				2014	
	1998–2007	2008–09	2010–12	2013	Q1	Q2
Household consumption(b)	0.9	-0.6	0.1	0.4	0.7	0.6
Private sector investment	0.6	-3.8	1.3	1.9	1.7	3.9
of which, business investment(c)	*0.5*	*-1.9*	*1.5*	*1.6*	*0.9*	*3.3*
of which, private sector housing investment	*0.9*	*-8.1*	*1.4*	*2.8*	*3.9*	*5.4*
Private sector final domestic demand	**0.9**	**-1.2**	**0.4**	**0.6**	**0.9**	**1.2**
Government consumption and investment(c)	0.8	0.8	-0.1	0.3	0.4	-0.6
Final domestic demand	**0.9**	**-0.7**	**0.3**	**0.6**	**0.8**	**0.8**
Change in inventories(d)(e)	0.0	0.1	0.0	0.3	-0.3	0.1
Alignment adjustment(e)	0.0	-0.1	0.1	-0.1	-0.3	0.1
Domestic demand	**0.8**	**-0.7**	**0.3**	**0.8**	**0.2**	**1.0**
'Economic' exports(f)	1.2	-1.0	0.9	0.1	-0.2	-0.4
'Economic' imports(f)	1.4	-1.2	0.8	0.3	-1.9	-0.3
Net trade(e)(f)	**-0.1**	**0.1**	**0.0**	**-0.1**	**0.6**	**0.0**
Real GDP at market prices	**0.7**	**-0.7**	**0.3**	**0.7**	**0.7**	**0.9**
Memo: nominal GDP at market prices	1.3	0.0	0.8	1.1	0.8	1.9

(a) Chained-volume measures.
(b) Includes non-profit institutions serving households (NPISH).
(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 Household consumption rising steadily despite weak income

Household consumption and real income(a)



(a) Includes non-profit institutions serving households.
(b) Chained-volume measure.
(c) Total available household resources, deflated by the consumer expenditure deflator.
(d) Wages and salaries plus mixed income less taxes plus net transfers, deflated by the consumer expenditure deflator.

own financial prospects is back around long-run average levels, having risen during 2013.

An easing in household credit conditions may also have increased both the willingness and ability of households to spend more in the face of sluggish income growth. Unsecured household lending growth has picked up over this period (Section 1). In addition, some households may have been encouraged to run down precautionary savings balances. This is consistent with results from the 2014 NMG Consulting survey: the proportion of households in the survey reporting that they had put off spending due to concerns about credit availability has fallen since 2012 (**Chart 2.2**). Further results from that survey are discussed in a box on pages 22–23.

Private consumption growth is expected to level off, as the impetus from improved consumer optimism and easier credit conditions starts to fade. Consistent with this, short-term indicators have provided a mixed signal about spending prospects: while information from the Bank's Agents suggests that consumer services output growth remains fairly robust, retail sales growth slowed slightly in Q3. The near-term outlook is broadly similar to that at the time of the August *Report*, with spending growth anticipated to average a little below ¾% per quarter in 2014 H2 and 2015 Q1.

Housing investment

Greater household optimism and easier credit conditions are likely to have boosted housing market activity and investment. Having grown robustly since the start of 2013, housing investment picked up further in 2014 H1, with quarterly growth reaching 5.4% in Q2, stronger than anticipated in the August *Report* (**Table 2.A**).

Much of the strength in housing investment since the start of 2013 can be accounted for by a rise in spending on new dwellings (**Chart 2.3**). This has been associated with a significant increase in the number of housing starts, albeit to levels below those observed prior to the recession. Strong housing investment growth in Q2 also reflected an increase in spending on services associated with the sale and purchase of property, consistent with the rise in the number of housing market transactions around the turn of the year.

Despite the strength of growth in Q2, the outlook for housing investment over the coming quarters is weaker than at the time of the August *Report*. That reflects the weakening in mortgage approvals observed since the start of the year (**Chart 2.4** and Section 1), which is likely to be reflected in lower spending on services related to housing transactions. In contrast, growth in the number of housing starts has remained firm, indicating that the strength of spending on new dwellings is likely to persist in the near term, in line with expectations in August.

Revisions to the National Accounts and the Balance of Payments

The *Blue Book* is an annual ONS publication in which National Accounts data are revised to reflect the incorporation of a wider range of information than is used to produce earlier estimates, and also to reflect any methodological improvements. The 2014 *Blue Book*, published in October, incorporates a broader range of revisions than usual, as it also incorporates changes to EU-wide national accounting standards.(1) Alongside the *Blue Book*, the ONS published the 2014 *Pink Book*, which contains revisions to the Balance of Payments.(2)

Over the months leading up to these releases, the ONS published explanations of the forthcoming methodological changes along with early estimates of their likely impacts up to 2012. Some of these changes, including estimates of likely revisions to the level of GDP were analysed in a box on pages 20–21 of the August *Report*. This box analyses how the *Blue Book* and *Pink Book* revisions affect the interpretation of the way that the economy has evolved since the recession.

Overall, although the *Blue Book* contains some large revisions to the split of income and the mix of expenditure in the economy, there is little news for the MPC's previous interpretation of the recovery or the outlook for GDP growth.

Output and expenditure

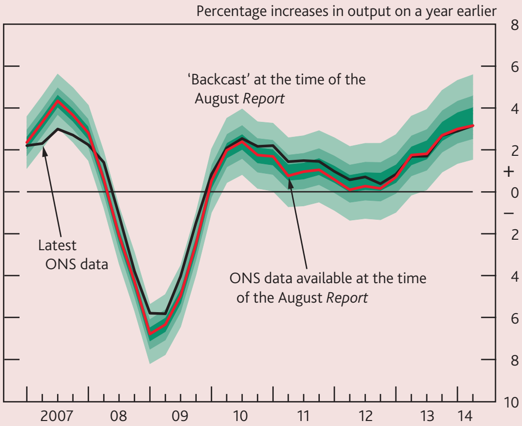
The revisions contained in the 2014 *Blue Book* suggest that the recovery in headline GDP growth since the end of the recession has been slightly stronger than previously estimated, but broadly within the central range of estimates incorporated in the backcast fan (**Chart A**). The majority of the upward revision is due to changes in methodology and the incorporation of improved data sources, and is concentrated between the end of the recession and 2011. Over that period, quarterly growth rates are estimated to have been 0.1 percentage points higher on average.

Since the beginning of 2012, average quarterly growth rates are barely changed, in part reflecting the fact that for more recent years, the ONS is yet to receive and incorporate the full range of information it uses to produce its mature estimates of GDP. In other words, growth since 2012 could still be revised materially.

One of the striking features of the recovery has been the weakness of productivity growth relative to its pre-crisis trend. The revisions suggest that output per hour worked has risen by 1.7% more than previously thought since the end of the recession. Such an upward revision is in line with previous Bank estimates for the role of measurement error in explaining the productivity shortfall, and does little to close the gap with the previous trend.

Chart A Revisions to growth have been within the backcast fan from the August *Report*

MPC's evaluation of GDP growth at the time of the August *Report*, ONS data at that time and latest ONS data(a)



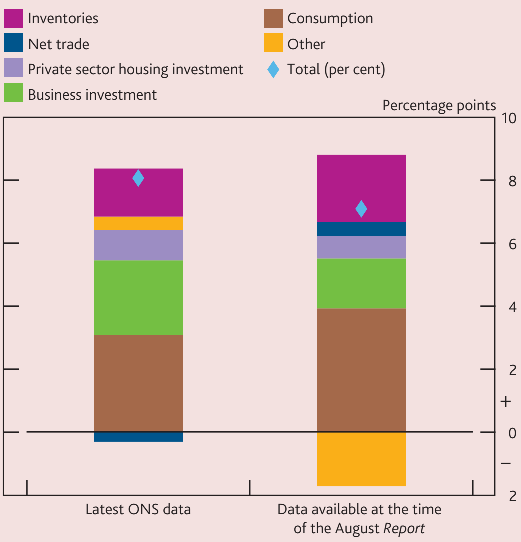
Sources: ONS and Bank calculations.

(a) Chained-volume measures. The fan chart depicts an estimated probability distribution for GDP over the past. See footnote to **Chart 5.1** on page 40 for more details.

The GDP data in the latest vintage exhibit changes to the mix of spending in the economy, relative to previous estimates (**Chart B**). In particular, it now appears that investment played a more significant role in the earlier part of the recovery than previously thought. The upward revisions to the investment data bring growth rates closer to those indicated by contemporaneous survey measures of investment. The revised estimates of investment are also much less volatile than the previous vintage of data. Revisions in the early post-recession period largely reflect methodological changes, but those affecting estimates from 2011 onwards mainly reflect the incorporation of more comprehensive official data from the ONS's annual surveys.

Chart B The recovery in expenditure since the recession has been more weighted towards investment than previously estimated

Contributions to change in GDP since 2009 Q3(a)



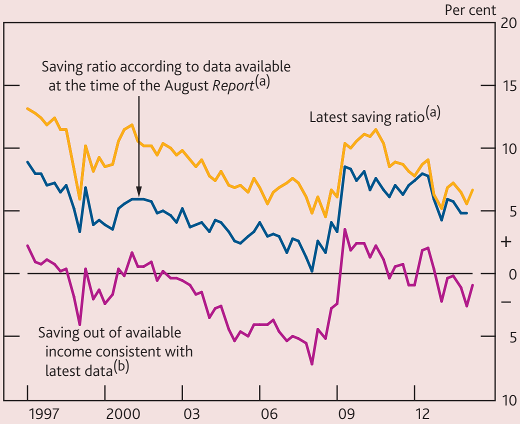
(a) Contribution to GDP growth between 2009 Q3 and 2014 Q2, based on chained-volume measure of expenditure. For details on individual expenditure components see footnotes attached to **Table 2.B**.

Income

The changes incorporated in the 2014 *Blue Book* have had a material impact on the way that income is allocated to different sectors within the National Accounts. Significant revisions to the household saving ratio are one manifestation of this (**Chart C**). The saving ratio has been revised up by around 3.5 percentage points on average since 1997. Of that average revision, the majority relates to a new method used to estimate changes in household pension entitlements (see the box on pages 20–21 of the August *Report* for further details). Other revisions, including those related to the incorporation of new data, have also boosted the saving ratio a little on average over the same period.

Chart C Revisions to the household saving ratio have brought it close to recent lows

Household saving



(a) Percentage of household post-tax income.
(b) Percentage of household post-tax income excluding income flowing into employment-related pension schemes.

Upward revisions to the saving ratio have been smaller since 2011. As a result, the current household saving ratio is much closer to historical lows than previously thought (**Chart C**). But while the new saving ratio remains an important indicator of the long-run sustainability of household spending, it might not be the best gauge against which to judge near-term prospects for consumption. Much of the change in the profile of the saving ratio reflects revisions to the amount of household income recorded as flowing directly into pension funds, rather than revisions to money available to spend. Saving out of available income has been revised little and remains around the middle of its historical range (**Chart C**), despite falling since the end of the recession.

Another consequence of the revisions to income in the *Blue Book* has been a shift up in the share of income measured as flowing to non-financial companies. This reflects improvements to the measurement of spending by non-profit organisations and a reclassification of research and development spending by companies.(3) The profile of non-financial company profits since the recession is, however, broadly unchanged.

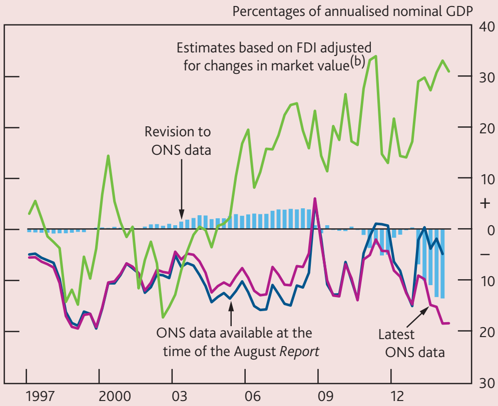
External flows and stocks

Revisions to the Balance of Payments published in the 2014 *Pink Book* show that estimates of the United Kingdom's current account deficit during the financial crisis are now significantly larger than in the previous data vintage; between 2007 Q4 and the start of 2009 Q1 the deficit was revised up by 2¾ percentage points of nominal GDP on average. Although large, these revisions relate primarily to changes in the measurement of financial company profits, rather than net trade, and so do not materially alter the story of the recovery.

As a result of upward revisions to foreign direct investment (FDI) in the United Kingdom, official estimates of the net international investment position (NIIP) have been revised down heavily in the most recent period. As a result, the United Kingdom's NIIP is now estimated to have been substantially negative in Q2 (**Chart D**). The value of FDI assets and liabilities are, however, difficult to estimate accurately. Official estimates use the book or purchase value of these assets, but another approach is to try to adjust for changes in market values, using movements in equity prices. Adopting this approach gives a positive estimate for the United Kingdom's NIIP. The uncertainty around all of these estimates of the NIIP is large.

Chart D The UK net international investment position now appears less favourable, on the official measure

Estimates of the United Kingdom's net international investment position(a)



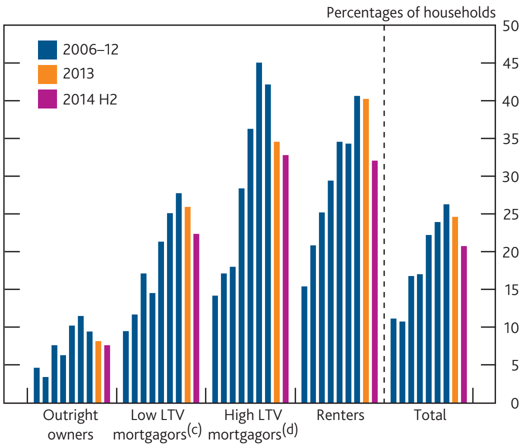
Sources: ONS, Thomson Reuters Datastream and Bank calculations.

(a) Data are non seasonally adjusted.
(b) Underlying data consistent with the *Pink Book 2014*. For details on how FDI estimates are adjusted for changes in market value see footnote (3), on page 23 of the May *Inflation Report*; www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14may.pdf.

(1) Further details on the impact of ESA 2010 implementation on the UK National Accounts can be found at: www.ons.gov.uk/ons/guide-method/method-quality/specific/economy/national-accounts/articles/2011-present/impact-of-changes-in-the-national-accounts-and-economic-commentary-for-2014-quarter-2.pdf.
(2) Further details on the impact of BPM6 implementation on the UK Balance of Payments can be found at: www.ons.gov.uk/ons/rel/naa1-rd/national-accounts-articles/impacts-of-changes-to-the-measurement-of-the-balance-of-payments-as-a-result-of-the-introduction-of-bpm6/index.html.
(3) Upward revisions to the level of non-financial company profits are mainly related to improvements in the data sources used to measure NPISH spending, and a change to the treatment of research and development. See the box on pages 20–21 of the August *Report* for details; www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14aug.pdf.

Chart 2.2 Proportion of households put off spending by credit availability concerns has fallen

Results from the Bank's NMG household survey[(a)(b)]

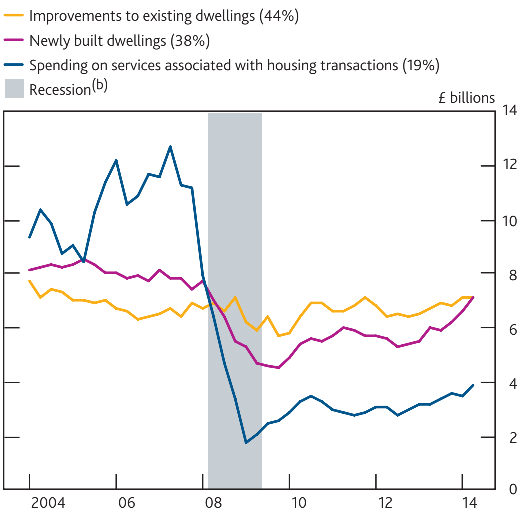


Sources: NMG Consulting survey and Bank calculations.

(a) The 2014 household survey carried out by NMG Consulting on behalf of the Bank took place between 3 and 24 September and had 6,001 online respondents. Typically, the survey is conducted on an annual basis, although an additional survey was undertaken in 2014 H1. Further results are reported in the box on pages 22–23. A more comprehensive range of results will be published in a forthcoming article in the *Bank of England Quarterly Bulletin*.
(b) Respondents were asked: 'Have you been put off spending because you are concerned that you will not be able to get further credit when you need it, say because you are close to your credit limit or you think your loan application will be turned down?'.
(c) Low LTV mortgagors are households with outstanding mortgages worth less than 75% of the current value of their property.
(d) High LTV mortgagors are households with outstanding mortgages worth 75% or more of the current value of their property.

Chart 2.3 New building is driving housing investment

Private sector housing investment components[(a)]



(a) Chained-volume measures. Figures in parentheses are shares in private sector housing investment in 2011. Shares do not sum to 100 due to rounding.
(b) A recession is defined as at least two consecutive quarters of falling output (at constant market prices) estimated using the latest data. The recession is assumed to end once output begins to rise.

Business investment

The latest official estimates of business investment, which were revised up in the 2014 *Blue Book*, suggest that business investment has been rising robustly since as far back as 2010, following a large contraction during the recession (see the box on pages 18–19). Following growth of 3.3% in Q2 — broadly in line with expectations at the time of the August *Report* (**Table 2.A**) — the level of investment was almost 7% above its pre-crisis peak.

It is likely that business investment has been spurred partly by the pickup in overall GDP growth. For example, the acceleration in investment since early 2013 has been concentrated in the service sector (**Chart 2.5**), where output growth has been rising steadily. In contrast, in the manufacturing sector, where investment expanded rapidly prior to 2013 — a period of strong export growth — investment has risen more modestly in recent quarters as output growth has slowed.

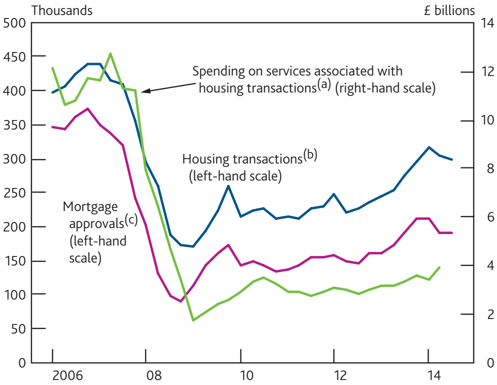
Surveys of investment intentions continue to suggest relatively strong growth, despite falling back slightly since August (**Chart 2.6**). The near-term outlook is for business investment growth to slow, but to remain considerably stronger than its past average rate, supported by conducive financing conditions and expanding domestic demand. Relative to the projection in the August *Report*, however, that support is a little less pronounced and uncertainty about the global outlook is expected to weigh a little more heavily on investment.

Other factors could also hold back investment further out. Previous *Reports* have identified the risk that investment growth could be held back by the presence of excess capital, given that the aggregate capital to output ratio is higher than prior to the recession. But a survey conducted by the Bank's Agents in September found little evidence of excess capital holding back investment growth. Where constraints were reported, those were commonly associated with a desire to improve or protect balance sheets, although for some companies economic uncertainty continued to weigh on capital spending plans.

Government spending

The fiscal consolidation that has been under way since 2010 is likely to continue for some time according to official plans. Short-term movements in government spending can, however, be erratic. In Q2, government spending weighed on demand slightly as a result of weaker government investment, which contracted by almost 15%. But Office for Budget Responsibility projections for government investment for the fiscal year as a whole suggest that the fall in investment is likely to unwind.

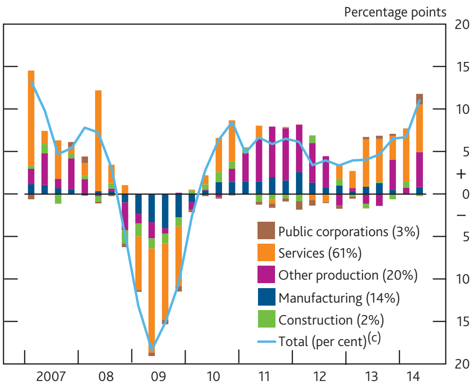
Chart 2.4 Weaker housing market activity is likely to temper near-term housing investment
Housing market activity indicators



Sources: Bank of England, HM Revenue and Customs and ONS.

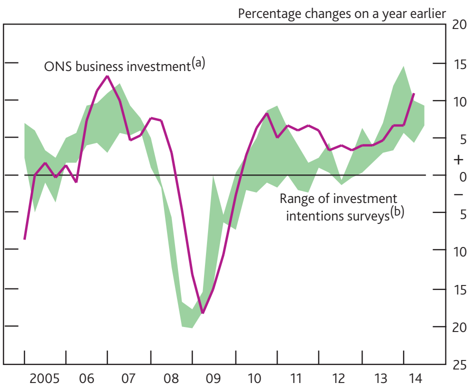
(a) Chained-volume measure. Data available to Q2.
(b) Quarterly number of property transactions in the United Kingdom with value £40,000 or above. Data available to Q3.
(c) Quarterly number of total sterling approvals for house purchase. Data available to Q3.

Chart 2.5 Business investment growth has risen further, driven by the service sector
Contributions to four-quarter business investment growth[a][b]



(a) Chained-volume measures. Contributions may not sum to total due to rounding and seasonal adjustment. Contributions prior to 2011 are indicative estimates.
(b) Figures in parentheses are shares in total business investment in 2011.
(c) Total business investment growth, with the impact of the transfer of nuclear reactors from the public corporation sector to central government in 2005 Q2 removed.

Chart 2.6 Surveys continue to point to robust business investment growth
Business investment and investment intentions surveys



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

(a) Chained-volume measure. Data are to 2014 Q2 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.

The March 2014 *Budget* incorporated an assumption that income tax receipts would rise as the economy recovered further. But income tax receipts between April — the start of the fiscal year — and September were only in line with the equivalent period in 2013. This shortfall relative to expectations probably reflects the composition of recent employment growth, which has been concentrated in lower-paid occupations (Section 3), as well as reflecting weak wage growth more generally (Section 4).

2.2 External demand and UK trade

In contrast to strong domestic demand, external demand has been weaker than anticipated in August. Output growth in the euro area, the United Kingdom's largest trading partner, slowed in Q2. UK exports contracted, and the contribution of net trade to GDP fell materially. Although these data are volatile from quarter to quarter, the near-term outlook for external demand (**Chart 2.7**) and net trade also appear weaker than previously anticipated.

Global demand also affects the UK economy via its impact on world export and commodity prices. Along with supply factors, one of the likely reasons for the decline in several commodity prices, including oil, over recent months is that world demand growth has remained relatively subdued (Section 4).

The euro area

At the time of the August *Report*, euro-area GDP growth had been expected to rise gradually during 2014. But following a modest expansion in Q1, it slowed in Q2 (**Table 2.C**). Weak growth in France combined with small falls in German and Italian output accounted for the majority of this dip (**Table 2.D**). Growth in Spain and Ireland continued.

Some of the weakness in euro-area GDP growth in Q2 is likely to reflect the timing of public holidays and so should prove erratic. But concerns about the prospects for external demand may have also played a role. Perhaps related to that, confidence appears to have deteriorated: improvements in survey measures of consumer and business confidence have reversed somewhat over recent months, although they remain more positive than they were in 2013 (**Table 2.D**). The euro area also continues to face longer-term structural challenges, which are likely to weigh on growth for some time.

Euro-area inflation remains low (**Table 2.D**). Core inflation, which excludes food and energy, has been at or slightly below 1% for the past year, while headline inflation has been falling steadily, reaching 0.4% in October. Indicators of inflation expectations have also fallen. A combination of persistently weak inflation and low growth would make it harder for those euro-area countries that need to improve their competitiveness further and improve their debt positions to do so.

Household balance sheets and responses to changes in interest rates: results from the 2014 NMG Consulting survey

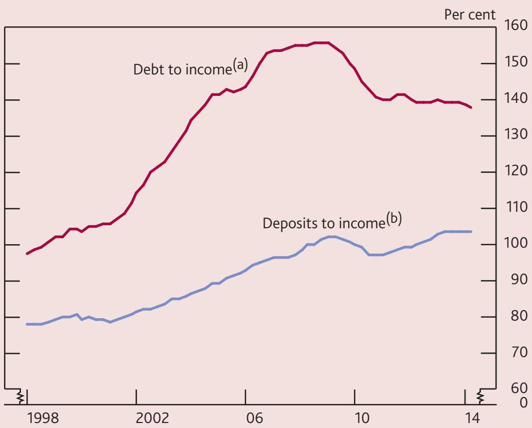
This box looks at some of the results from the 2014 NMG Consulting survey of households, carried out on behalf of the Bank.[1] In particular, it looks at evidence on the distribution of household debt, and how households might respond to a rise in interest rates. Results from the survey will be analysed in more detail in a forthcoming *Quarterly Bulletin* article.

Changes in aggregate household balance sheets and the distribution of debt

In aggregate, it appears that the household sector has improved its balance sheet position since the financial crisis. The stock of household debt has increased slightly since 2007, but income has risen more strongly. As a result, the ratio of household debt to income has fallen from its recent peak, although it remains higher than in the early 2000s (**Chart A**). In contrast, the ratio of household deposits to income is higher than in 2007, and much higher than in the early 2000s, as deposit growth has generally outstripped rises in income (**Chart A**). Consistent with this improvement in aggregate balance sheets, responses to successive NMG surveys suggest that households' concerns about debt have fallen over recent years.

Chart A Aggregate household debt has declined relative to income but remains elevated

Aggregate household deposits and debt to income

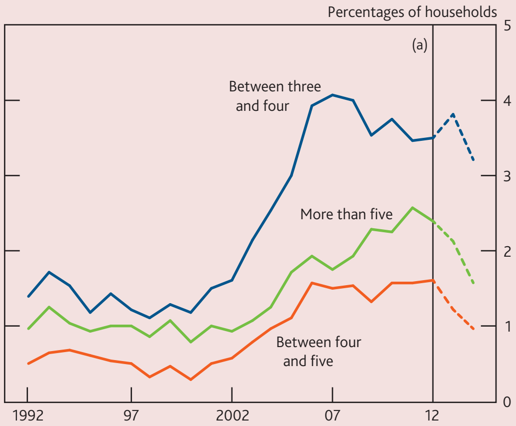


(a) Household financial liabilities as a percentage of the four-quarter moving sum of nominal household post-tax income. Financial liabilities are non seasonally adjusted.
(b) Deposits with UK MFIs and other deposits, as a percentage of the four-quarter moving sum of nominal household post-tax income. Deposit data are non seasonally adjusted.

The NMG survey provides evidence on the distribution of debt, which is important for assessing the extent to which households are vulnerable to income shocks or rises in interest rates. In the run-up to the crisis, the proportion of households with high levels of mortgage debt relative to their incomes — one measure of household vulnerability — increased. Based on a combination of responses to previous household surveys together with more recent NMG survey findings, it appears that the proportion of households with high mortgage debt to income remains elevated relative to the 1990s and early 2000s, despite falling in recent years (**Chart B**).

Chart B The proportion of households with high mortgage debt relative to their income has fallen but remains elevated

Proportion of households with high mortgage debt to gross income ratios



Sources: Living Costs and Food (LCF) Survey, NMG Consulting and Bank calculations.

(a) Data up to 2012 are based on responses to the LCF Survey. Data for 2013 and 2014 are based on responses to the NMG Consulting survey and have been spliced onto the earlier LCF Survey data series.

Another indicator of household vulnerability is debt-servicing ratios, the share of income required to meet monthly debt repayments. The latest survey reported that the proportion of mortgagors with high debt-service ratios remained small, largely reflecting the low level of interest rates. How that proportion changes in the future will depend not only on changes in interest rates but also on how the income of the more vulnerable households changes: responses to the 2014 NMG survey indicates that households with the highest debt-servicing costs relative to their incomes are the most pessimistic about their future income prospects.

Evidence on the response of households to rises in interest rates

The 2014 NMG survey included some questions on household responses to a hypothetical increase in interest rates: higher rates would normally be expected to boost the incomes of households with net savings and reduce the disposable incomes of those with net debts.

In the survey, each household was told what a 200 basis point rise in the interest rates they faced would imply for their interest income and payments, given their reported debt and deposits, and then asked how they would respond. **Table 1** shows the responses of mortgagors and savers. Few savers reported that they would be likely to increase their spending, while more than half of mortgagors said that they would reduce spending. These results are broadly corroborative of previous empirical findings suggesting that the consumption of borrowers is more sensitive to changes in income than that of savers.

Table 1 Borrowers more likely to change behaviour following a rise in interest rates than savers

Responses of households to a hypothetical 200 basis point rise in interest rates(a)(b)

Percentages of households(c)

	All mortgagors	Vulnerable mortgagors(d)	Savers(e)
Cut spending (increase spending)	57	49	10
Save less (save more)	35	21	38
(Do nothing letting interest accumulate)	–	–	48
Work more hours (work less)	18	24	2
Take up employment myself	2	5	–
Someone else in household will take up employment	4	6	–
Get financial help	5	11	–
Request change to loan	23	21	–
Move somewhere cheaper	9	10	–
Move and rent	6	12	–
Other	6	5	2

Sources: NMG Consulting and Bank calculations.

(a) Respondents were told what a 200 basis point rise in the interest rate they faced would imply for their monthly interest payments and receipts.
(b) Responses in parentheses apply only to savers.
(c) The table records the responses of only those mortgagors with net debts. Similarly, only the responses of savers with net savings are included.
(d) Those households spending more than 30% of their pre-tax income on servicing mortgage debt.
(e) Savers were only asked these questions if they had more than £4,999 in savings.

A rise in interest rates might be expected to require those households already spending a high proportion of their income on debt repayments to respond differently to other households. Indeed, the 2014 NMG survey suggests that households spending more than 30% of their pre-tax income on servicing mortgage debt were more likely to say that they would increase the amount they work, in order to boost their income, relative to other mortgagors (**Table 1**). These households were also more likely than other households to report that they had responded to concerns about debt in the past by working more. A slightly smaller proportion of these households said they would cut spending in response to a rise in interest rates than other mortgagors, although the proportion was still large, at around 50%. If these households are unable to boost their incomes by working more, however, they may be forced to cut spending by more than they anticipate, or risk falling behind on their debt repayments.

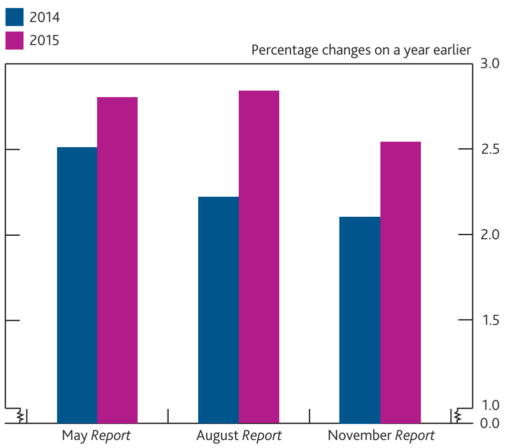
Conclusion

While the aggregate balance sheet position of households has improved since the financial crisis, the evidence from household surveys suggests that the proportion of households with high debt to income ratios remains elevated relative to the 1990s and early 2000s, although it has fallen over recent years. In line with previous findings, the NMG survey suggests that borrowers expect to respond by more than savers to higher interest rates. While a large proportion of all borrowers expect to cut spending in response to higher rates, the NMG survey also suggests that those households most vulnerable to rises in interest rates are more likely than others to respond by seeking to work more, as well as by cutting their spending. The forthcoming *Quarterly Bulletin* article will contain more analysis of the results of the survey.

(1) The NMG survey was conducted online between 3 and 24 September 2014 and had 6,001 respondents. Typically the survey is conducted on an annual basis, although an additional survey was undertaken in 2014 H1.

Chart 2.7 The near-term outlook for external demand has been revised down

Projections for UK-weighted world demand consistent with MPC key judgements(a)(b)



Sources: Eurostat, IMF *World Economic Outlook* October 2014, OECD, ONS, Thomson Reuters Datastream, US Bureau of Economic Analysis and Bank calculations.

(a) Projections for international rates of real GDP growth, weighted according to UK export shares.
(b) Back data constructed using data for the real GDP growth rates of 143 countries weighted according to UK export shares.

The projection for euro-area growth over the coming quarters is weaker than at the time of the August *Report*, with the factors depressing growth likely to outweigh the potential positive impact of ECB policy actions (Section 1) in the near term. That is likely to feed through into weaker UK export demand. The MPC judges that the risk of serious disruption in the euro area — which would weigh on UK domestic demand — remains low (Section 5).

The United States

US GDP grew by 0.9% in Q3, boosted by a strong contribution from net trade. This was stronger than expected at the time of the August *Report*. Labour market indicators since August have been broadly in line with expectations, with US payrolls growing by more than 200,000 per month on average. Meanwhile, unemployment has fallen slightly faster than anticipated in August, as labour force participation has declined a little further.

Table 2.C World demand growth rose only modestly in 2014 H1

GDP in selected countries and regions[a]

Percentage changes on a quarter earlier, annualised

	Averages		2013	2014		
	1998–2007	2012	Q4	Q1	Q2	Q3
United Kingdom	3.0	0.4	2.5	3.0	3.7	2.8
Euro area (39%)	2.3	-0.9	1.0	1.2	0.3	n.a.
United States (18%)	3.0	1.6	3.5	-2.1	4.6	3.5
Japan (2%)	1.1	-0.3	-0.5	6.0	-7.1	n.a.
China (3%)[b]	10.0	7.8	7.7	7.4	7.5	7.3
UK-weighted world GDP[c]	3.0	1.2	2.5	1.4	2.0	n.a.

Sources: Eurostat, IMF *World Economic Outlook* October 2014, Japanese Cabinet Office, National Bureau of Statistics of China, OECD, ONS, Thomson Reuters Datastream, US Bureau of Economic Analysis and Bank calculations.

(a) Real GDP measures. Figures in parentheses are shares in UK goods and services exports in 2013 from the 2014 *Pink Book*.
(b) The earliest observation for China is 2000 Q1. Data are non seasonally adjusted.
(c) Constructed using data for the real GDP growth rates of 143 countries weighted according to their shares in UK exports. The observation for 2014 Q2 is an estimate. For those countries where national accounts data for 2014 Q2 are not yet available, data are assumed to be consistent with projections in the IMF *World Economic Outlook* October 2014.

Table 2.D Euro-area activity and inflation has been well below pre-crisis averages

Euro-area indicators

Per cent

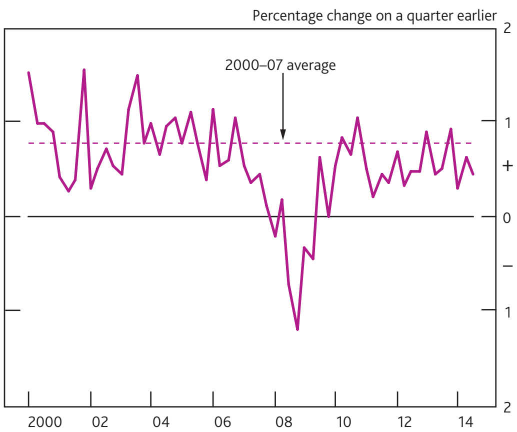
	Averages			2014		
	2000–07	2012	2013	Q1	Q2	Q3
Four-quarter GDP growth:[a]						
Euro area	2.2	-0.7	-0.4	1.0	0.8	n.a.
France	2.1	0.4	0.4	0.8	0.1	n.a.
Germany	1.7	0.6	0.2	2.2	1.3	n.a.
Italy	1.5	-2.3	-1.9	-0.3	-0.3	n.a.
Spain	3.6	-1.6	-1.2	0.5	1.2	n.a.
Ireland	5.6	-0.3	0.2	5.1	6.5	n.a.
Consumer confidence[b]	-9	-22	-19	-11	-8	-10
Industrial confidence[b]	-3	-12	-9	-4	-4	-5
Services confidence[b]	11	-7	-6	3	4	3
HICP inflation[c]	2.2	2.5	1.4	0.6	0.6	0.4
Core HICP inflation[c]	1.7	1.5	1.1	0.8	0.8	0.8

Sources: European Commission and Eurostat.

(a) Chained-volume measures. Growth rates from 2014 Q1 onwards are quarterly estimates.
(b) European Commission seasonally adjusted measure.
(c) Data are non seasonally adjusted. Core HICP excludes food, energy, alcoholic beverages and tobacco.

Chart 2.8 US household spending growth remains below pre-crisis average

US household consumption[a]



Source: Bureau of Economic Analysis.

(a) Chained-volume measure.

There may, however, be less underlying momentum behind the recovery in US growth. In particular, consumption has been weaker than anticipated since the start of the year, with rates of growth below pre-crisis averages (**Chart 2.8**). The near-term outlook for US growth is therefore slightly weaker than it was at the time of the August *Report*, although the risks around that outlook are skewed to the upside (Section 5).

Rest of the world

Japanese output contracted sharply in Q2 (**Table 2.C**), following a rise in the consumption tax. Excluding the impact of that tax rise, core inflation fell to 1%: in response the Bank of Japan expanded its asset purchase programme.

The annualised rate of Chinese GDP growth fell slightly to 7.3% in Q3 (**Table 2.C**), broadly in line with expectations at the time of the August *Report* and the Chinese government's announced target. In the near term, this slightly weaker growth is likely to persist, reflecting continuing weakness in the property market, which remains a key downside risk to the outlook. That outlook is a fraction weaker than it was in August. It also appears more likely that the Chinese authorities may set policy to accommodate at least some of the potential slowdown in growth.

Overall, activity in Q2 in the other emerging economies was also broadly in line with expectations three months ago. In common with the outlook for China, near-term prospects are marginally weaker than expected, but a gradual increase in growth during 2015 is still anticipated as lower oil prices support demand in several of these economies, and the drag from previous policy tightening wanes. Fragilities, however, remain: for example, some countries have large current account deficits and could face rapid capital outflows if financial market sentiment deteriorates (Section 1). And expectations about longer-term growth rates in these economies have been revised down materially since mid-2012.

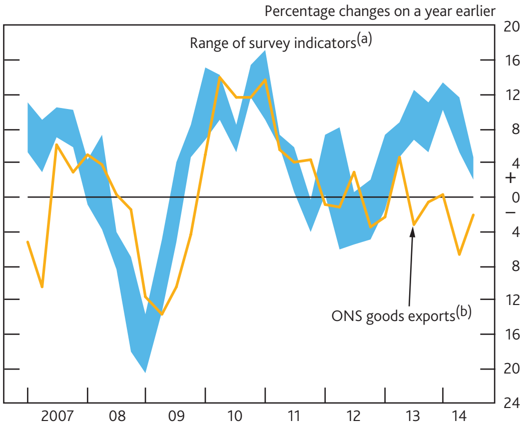
UK trade and the current account

Net trade has made a broadly neutral contribution to UK GDP growth since the financial crisis (**Table 2.B**). Having been strongly positive in Q1, net trade weighed on growth in Q2 as exports contracted. The outlook for net trade is also gloomier than it was in August. Goods exports continued to fall in Q3 and export survey balances have fallen back (**Chart 2.9**), reflecting both the weakening in euro-area demand and also the lagged effect of sterling's appreciation since 2013 Q1. While goods imports were also fairly weak in Q3, import growth is likely to pick up in the near term as robust domestic demand growth continues.

The UK current account deficit widened in Q2 as a result of a further fall in net investment income from abroad (**Chart 2.10**). The ONS's official measure of the United Kingdom's net international investment position (NIIP)

Chart 2.9 Goods exports have fallen and surveys suggest slowing growth in orders

Exports of goods and survey indicators

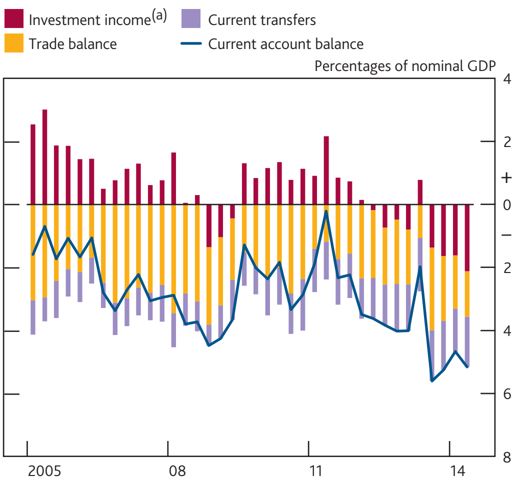


Sources: BCC, CBI, Markit/CIPS, ONS and Bank calculations.

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

Chart 2.10 UK current account deficit remains historically large

UK current account



(a) Includes compensation of employees.

— a measure of the United Kingdom's net foreign assets — remained negative, having been revised down markedly in the 2014 *Pink Book* (see the box on pages 18–19). Estimates of the NIIP are uncertain, however, and depend heavily on the method used to value foreign direct investment (FDI) assets and liabilities (see the box on pages 18–19). On some measures, which use changes in equity prices to proxy for changes in the market value of FDI assets and liabilities, the United Kingdom's net investment position remains positive.

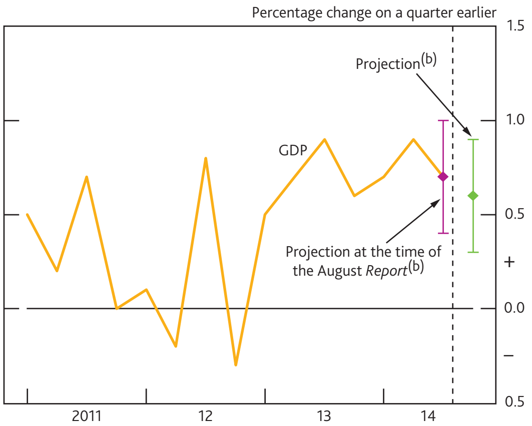
3 Output and supply

Output is estimated to have risen by 0.7% in 2014 Q3. Employment growth slowed in the three months to August. The unemployment rate continued to decline, to 6.0%, largely reflecting a fall in labour force participation. The margin of slack in the labour market is judged to have narrowed slightly in Q3, reflecting lower unemployment. Hourly productivity was broadly flat in the four quarters to Q2.

Table 3.A Monitoring the MPC's key judgements

Developments anticipated in August	Developments since August
Unemployment	**Lower than expected**
• Headline LFS unemployment rate to decline to around 6% by the turn of the year.	• Unemployment rate was 6.0% in the three months to August; expected to be 5¾% by the end of the year.
Participation	**Lower than expected**
• The labour market participation rate to reach 64% in the second half of the year.	• Participation rate fell to 63.4% in the three months to August.
Average hours	**Lower than expected**
• Average hours worked to increase by around ¼% in the second half of the year.	• Average hours fell by 0.1% in the three months to August.
Capacity utilisation	**Broadly on track**
• Indicators of spare capacity within companies to change little.	• Survey indicators, on average, were close to normal levels in Q3.
Productivity	**Stronger than expected**
• Hourly labour productivity to increase by around ½% in the second half of the year.	• Four-quarter growth was stronger than expected in Q2.

Chart 3.1 GDP growth expected to soften in Q4
Bank staff projections for near-term output(a)



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 Q3 at the time of the August *Report*. The green diamond shows the current staff projection for the preliminary estimate of GDP growth for Q4. The bands on either side of the diamonds show uncertainty around those projections based on staff estimates of the root mean squared 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.

3.1 Recent developments in output

According to the ONS preliminary estimate, quarterly output growth was 0.7% in Q3, in line with expectations at the time of the August *Report* (**Chart 3.1**). The final estimate of Q3 growth incorporated in the MPC's GDP fan chart is 0.8%.

Output rose in the services, manufacturing and construction sectors in Q3 (**Chart 3.2**). But the pace of growth eased slightly in both the services and manufacturing sectors. Services output expanded by 0.7%, slightly lower than quarterly growth rates in the first half of the year. Growth in manufacturing output, at 0.4%, was above its pre-crisis average, but below rates seen in most of 2013. As manufacturing tends to be more export-intensive than services activity, this reduced momentum could reflect the impact of weak world demand (Section 2). Output in the construction sector increased by 0.8%, above its historical average rate.

The near-term outlook is slightly weaker than anticipated in August. The Markit/CIPS output index fell in October, to its lowest level since May 2013. And forward-looking survey indicators have also softened (**Chart 3.3**). Bank staff expect the preliminary estimate of GDP growth in Q4 to be 0.6% (**Chart 3.1**). The final estimate incorporated into the MPC's GDP fan chart is 0.7%, only slightly weaker than projected in August, and still close to long-run average growth rates.

3.2 Labour market developments

Labour supply

Changes in the size of the workforce are an important determinant of output growth in the medium term. The ONS has revised up its estimates of the working-age population to incorporate 2011 Census estimates of the overall UK population. This has also led to revisions to estimates of the labour force participation rate. As discussed in a box on page 27, these revisions have had a limited impact on the MPC's view of labour supply.

Revisions to labour market statistics

Labour market data have been revised to incorporate 2011 Census estimates of the UK population.[1] The 16+ population is now estimated to have been 51.4 million at the end of 2013, 0.7% higher than previously estimated. On average, annual population growth is 0.1 percentage points higher per year over the period 2001 to 2011, reflecting higher estimates of net inward migration. There has been a slight downward revision to population growth from 2012 onwards.

Labour Force Survey (LFS) estimates of the whole-economy level of participation are grossed up using estimates of the household population. So an upward revision to the population increases the LFS estimate of the number of people participating in the labour market. These revisions have been largely concentrated in the number of people in employment (**Table 1**).

The revisions to population are proportionally larger than the revisions to participation and employment. In other words, the participation and employment rates have been revised down a little. This is because the Census suggests that a larger proportion of the population were over the age of 65 in recent years. As most older people are retired, these revisions have slightly reduced the overall proportion of people estimated to be participating in the labour market (**Table 1**). And as those older people who are in work tend to work shorter hours, there has also been a small downward revision to estimates of average weekly hours worked.

Table 1 Revisions to participation and employment rates have been very small

Labour market revisions to data for the three months to December 2013

	Revised level[a]	Revision to the level[a]	Revised rate[b]	Revision to the rate[c]
Participation	32,637	149	63.5	-0.1
Employment	30,292	145	72.0	-0.1
Unemployment	2,345	3	7.2	0.0
Average hours[d]	32.0	-0.1	n.a.	n.a.

Sources: ONS and Bank calculations.

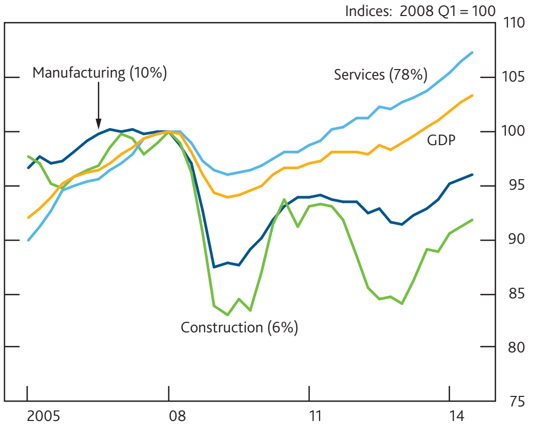
(a) Thousands, except for average hours. Participation, employment, unemployment and average hours of people aged 16 and over.
(b) Per cent. The participation rate is calculated as the economically active 16+ population, as a percentage of the 16+ population. The employment rate is calculated as 16–64 employment, as a percentage of the 16–64 population. The unemployment rate is calculated as 16+ unemployment, as a percentage of the economically active 16+ population.
(c) Percentage points.
(d) Average actual weekly hours per person. Revision to the level is shown as a percentage of the previous vintage of data.

These revisions have little impact on the MPC's view of slack in the labour market. Revisions to the level of population and participation had been largely anticipated, following earlier releases of Census data. And the revisions to average hours and the employment and participation rates do not alter the broad trends over the recent past. Bank staff have adjusted their estimates of trend participation and average hours slightly, in line with the revisions to the data.

(1) For further details, see ONS, 'Revisions to Labour Force Survey estimates due to re-weighting to the Census 2011 population', www.ons.gov.uk/ons/rel/lms/revisions-to-labour-force-survey-estimates-due-to-re-weighting-to-the-census-2011-population/article/index.html.

Chart 3.2 Output increased across sectors

GDP and sectoral output[a]



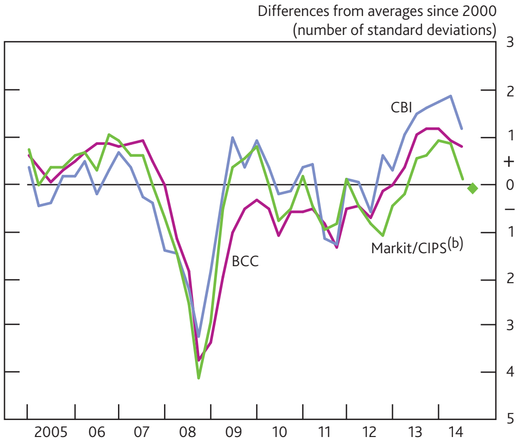
(a) Chained-volume measures. GDP is at market prices. Indices of sectoral output are at basic prices. The figures in parentheses show 2011 weights in gross value added.

The size of the population is affected by migrant flows. Net inward migration was 243,000 in the year to March 2014 (**Chart 3.4**), around 0.4% of the total UK population. That was an increase of 68,000 compared to the same period a year earlier. Around half of this increase was accounted for by a rise in net inflows from the European Union, which could reflect relatively better economic conditions in the United Kingdom, compared with those in many euro-area countries (Section 2). With migrants participating in the labour market at a similar rate to UK nationals, this rise in net migration has supported labour supply growth.

Labour force participation has been weaker than expected in recent months (**Table 3.A**). Participation fell by 108,000 in the three months to August, compared with the previous three months. That partly reflected a rise in the number of people reporting themselves as students who are not actively participating in the labour market. But some of that rise is likely to reflect sampling volatility in the Labour Force Survey (LFS), as one of the cohorts sampled appears to contain more students than usual. The number of people reporting themselves as long-term sick — and therefore not active in the

Chart 3.3 Business expectations of output growth moderated

Survey indicators of business expectations[a]

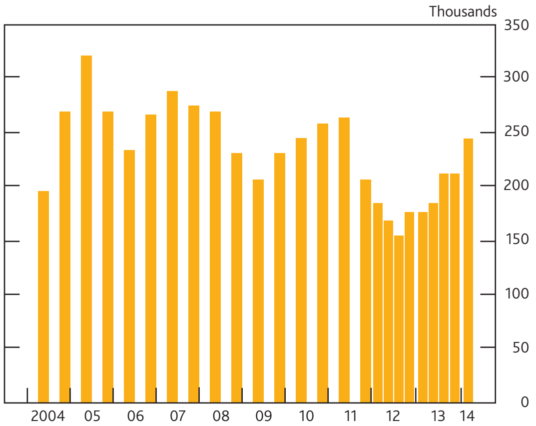


Sources: BCC, CBI, CBI/PwC, Markit Economics, ONS and Bank calculations.

(a) Aggregate measures of business expectations from the BCC, CBI and Markit/CIPS surveys have been produced by weighting together sectoral surveys using nominal shares in value added. The surveys used are: BCC turnover confidence (non-services and services), CBI business optimism (manufacturing, financial services, business/consumer/professional services and distributive trades) and Markit/CIPS orders (manufacturing) and business expectations (services). The BCC data are non seasonally adjusted.
(b) The diamond shows data for October 2014.

Chart 3.4 Net migration has supported labour supply

Net inward migration[a]



Source: ONS International Passenger Survey.

(a) Rolling four-quarter data. Data are half-yearly up to December 2011, and quarterly thereafter.

Table 3.B Employment intentions remain above historical averages

Survey indicators of employment intentions[a]

	Averages				
	2000–07	2010–12	2013	2014 H1	2014 Q3
BCC[b]	19	8	22	29	30
CBI[b]	5.4	-0.4	13.8	27.3	26.0
Agents[c]	0.8	0.3	0.4	1.2	1.4

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

(a) Measures for the Bank's Agents (manufacturing and services), the BCC (non-services and services) and the CBI (manufacturing, financial services and business/consumer/professional services) are weighted together using employee jobs shares from Workforce Jobs. The BCC data are non seasonally adjusted.
(b) Net percentage balance of companies expecting their workforce to increase over the next three months.
(c) End-quarter observation. The scores refer to companies' employment intentions over the next six months. The scores are on a scale of -5 to +5.

labour market — also rose, following a steady decline in recent years.

Bank staff expect some of the recent weakness in the participation rate to unwind over the rest of 2014. As outlined in the box on pages 30–31, the participation rate has been robust in recent years, supported by a number of structural factors. While it is possible that the unexpected fall in the most recent data could suggest weaker prospects for participation, these structural factors are expected to continue to support participation in the near term.

Employment

Weaker participation than expected in recent months has partly been associated with a slowing in employment growth. Employment increased by 46,000 in the three months to August, compared with the previous three months. That followed record rises in employment earlier in the year: overall, employment rose by 736,000 in the year to August.

Total hours worked were broadly flat in the three months to August compared to the previous three months. That reflected the small rise in employment, and a slight fall in average hours (Section 3.3) compared with expectations of a rise at the time of the previous *Report* (**Table 3.A**).

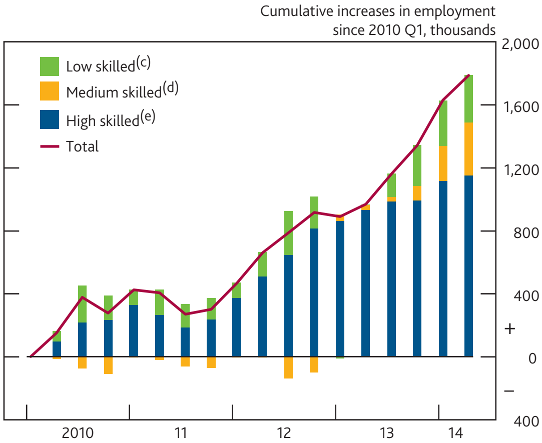
Employment growth is expected to pick up over the rest of the year, as indicators of companies' demand for labour remain robust. Survey indicators of employment intentions, for example, remain well above historical averages (**Table 3.B**).

The makeup of employment can shed light both on the employment outlook, and on the factors underlying recent wage developments. There is some evidence that the composition of rises in employment has changed in recent quarters. Most of the net increase in employment between 2010 and 2013 reflected rises in the employment of older people, more highly qualified people, and those in relatively high-skilled occupations. More recently, however, employment growth has been concentrated among the young and the lower skilled (**Chart 3.5**). These changes in the composition of the workforce are likely to have weighed on the average level of pay in the economy, and therefore reduced average pay growth, in recent quarters (Section 4).

Another indicator of prospects for pay is the extent of churn in the labour market. While the proportion of people voluntarily leaving their jobs remains below its historical average, it recovered somewhat in Q2, suggesting that people are becoming more confident about their labour market prospects (**Chart 3.6**). Within this, the proportion of people moving from one job to another is now approaching pre-crisis levels. That could place pressure on businesses to retain staff by increasing wages, especially as unemployment continues to

Chart 3.5 Recent employment growth has been more concentrated among the lower skilled

Employment growth by occupational skill level(a)(b)

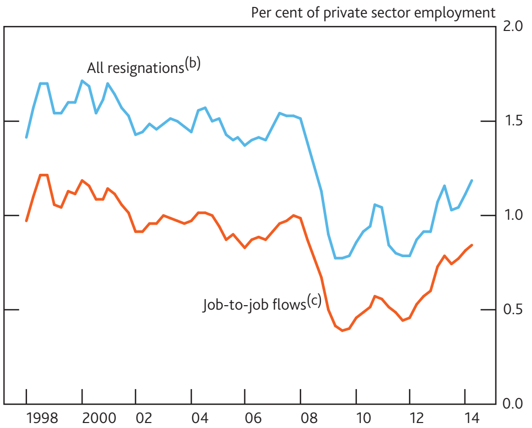


Sources: Labour Force Survey and Bank calculations.

(a) This chart differs from that in the printed version of the *Report*, which incorrectly labelled low-skilled employment as medium-skilled employment and *vice versa*.
(b) Uses the Standard Occupational Classification (SOC) 2000. Seasonally adjusted by Bank staff.
(c) Includes elementary occupations, plant machine operatives, sales and customer services.
(d) Change in total employment less changes in employment in high and low-skilled occupations.
(e) Includes managers, professional and associate professional and technical occupations.

Chart 3.6 Job churn rose in Q2

Resignations and job-to-job flows(a)



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

(a) Two-quarter averages. Based on two-quarter longitudinal microdata that are yet to be updated for the 2011 Census re-weighting of the LFS. Seasonally adjusted by Bank staff.
(b) Number of people who report resigning three months ago, and report being employed, unemployed or inactive.
(c) Number of people who report resigning three months ago, and report being in employment for less than three months.

fall (see Section 4 for a fuller discussion of recent developments in earnings growth).

Unemployment

Largely reflecting the unexpected decline in participation, unemployment continued to fall, and at a quicker pace than expected at the time of the previous *Report*. The unemployment rate was 6.0% in the three months to August.

Further falls in the unemployment rate are likely in the near term. The claimant count — a timely indicator of the unemployment rate — fell to 2.8% in September. Bank staff project an LFS unemployment rate of 5¾% by the end of the year (**Chart 3.7**).

3.3 Indicators of spare capacity

One of the key determinants of inflationary pressure in the economy is spare capacity or slack — that is, the balance between demand and supply. The MPC assesses spare capacity within companies and within the labour market.

Spare capacity within companies

Survey indicators of businesses' capacity utilisation fell slightly in Q3 (**Chart 3.8**), although on average they remained close to normal levels. There continues to be considerable uncertainty about the extent of spare capacity within companies, especially as the range across the survey indicators remains unusually wide.

Robust business investment growth (Section 2) may have helped to limit pressures on capacity as demand has recovered. The Bank's Agents report that investment has eased capacity pressures, particularly in the service sector.

Spare capacity in the labour market

The MPC considers three components of labour market slack: the differences between participation, average hours and unemployment and their respective estimated medium-term equilibrium levels. Each of these components of slack is assumed to influence wage growth, but there is uncertainty about the relative impact of each.

The **participation gap** indicates how far the participation rate is from its medium-term equilibrium, or trend, rate. The box on pages 30–31 discusses a variety of structural factors that are likely to have pushed up trend participation. These factors could continue to support trend participation, but there remains significant uncertainty around its current level.

Bank staff judge that the actual participation rate remains below its trend rate. That reflects the effects of the financial crisis: the past rise in unemployment, for example, may have discouraged some people from searching for work. The participation gap in Q2 is estimated to have been wider than

Explaining recent trends in participation

The participation rate — the proportion of the population that is in work or actively seeking work — is an important determinant of slack in the economy (Section 3) and hence inflation. If the actual participation rate is below its estimated medium-term equilibrium, or trend, rate, that suggests there are some people who could enter the labour market relatively quickly and who may be placing downward pressure on wages. There is significant uncertainty surrounding the trend participation rate. As discussed in the August *Report*, Bank staff revised up their estimate of trend participation, reflecting a number of structural factors. This box discusses those structural factors and the extent to which they are likely to persist.

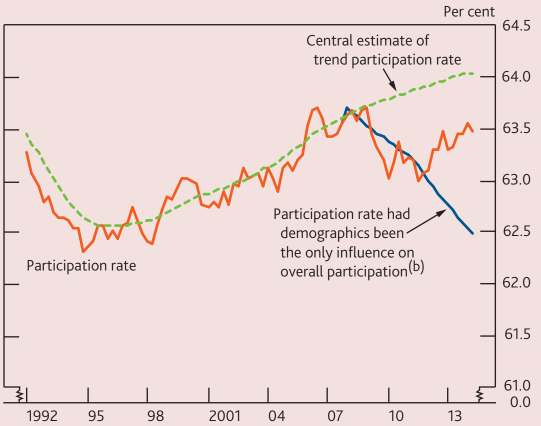
Structural factors affecting participation

The participation rate in the United Kingdom — as well as in some other advanced economies such as Germany and France — has been remarkably resilient in the face of a significant drag from demographic shifts. Had there not been changes in participation rates for individual age groups, the increasing share of older people in the population would by itself have significantly lowered the UK participation rate (shown in the blue line in **Chart A**). This is because the desire to work tends to vary over people's lifetimes. Only 10% of people over the age of 65 are currently either in work or seeking work, compared with around 85% of people between the ages of 25 and 49 (**Table 1**).

That downward demographic drag has been more than offset by a range of factors. For example, the participation rate for women has risen since 2008 (**Table 1**), continuing its longer-term upward trend.

Chart A The participation rate has been resilient in the face of a drag from demographic shifts

Actual and trend participation rates[a]



Sources: ONS and Bank calculations.

(a) Percentages of the 16+ population.
(b) Shows the impact of demographic shifts on the participation rate. Assumes participation rates for each age group are held unchanged at their values in 2007 Q1, while population shares vary.

Table 1 UK participation has been supported by increases in women's and older people's participation

Participation rates by age and sex

	Participation rate in the three months to August (per cent)	Change since three months to January 2008 (percentage points)
Age group[a]		
16–24	62.8	-4.8
25–49	86.2	1.2
50–64	71.6	4.2
65+	10.2	3.0
Sex[b]		
Men	69.3	-1.6
Women	57.7	1.0
All	**63.4**	**-0.2**

Sources: ONS and Bank calculations.

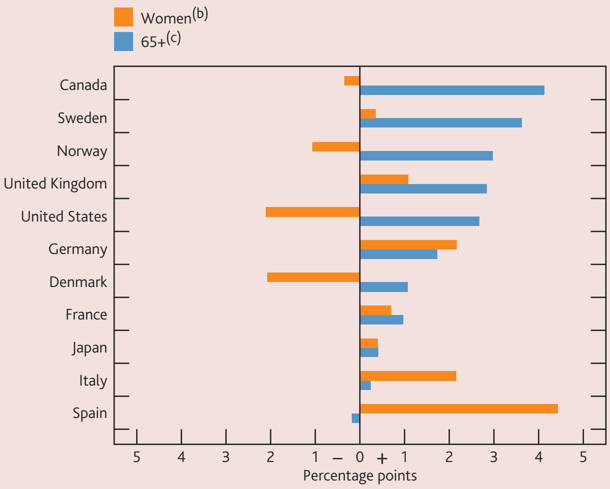
(a) Percentage of population in individual age group.
(b) Percentage of male or female 16+ population.

Older people's participation rates have also increased (**Table 1**), as has been the case in several advanced economies (**Chart B**). Several factors are likely to have encouraged older people to stay in the labour market. Better health and improved longevity, for example, mean that people are able to work for longer.

Changes to policy may also have had an impact. As of 2011, companies no longer have the right to enforce an employee retirement age. That means that people above the age of 65 who wish to continue working can do so. Older people may also be working for longer because the age at which they can receive their state pension has risen. The state pension age for

Chart B Older people's participation has risen in most advanced economies

Changes in women's and older people's participation rates since 2007[a]



Sources: OECD and Bank calculations.

(a) Difference between participation rates in 2013 and 2007.
(b) Economically active women as a proportion of the 15+ population of women.
(c) Economically active people aged 65 and over as a proportion of the 65+ population.

women has been rising since 2010. And, from 2018, the state pension age for both men and women is due to rise further. According to a survey by Saga, out of the respondents that had reported changing their retirement plans, 34% of those aged 50 to 59 and 15% of those aged 60 to 69 have done so because of a change to the state pension age.

Other changes to government policy are likely to have had an effect on incentives to seek work across the population. Since the 1990s, a range of out-of-work benefits have been reformed. These changes may mean that fewer people are leaving the labour market. For example, one feature of the recession in the early 1990s was a large rise in inactivity associated with long-term sickness. That did not happen in the recent recession. Indeed, the number of inactive people reporting themselves as long-term sick has fallen since the introduction of the Employment and Support Allowance in 2008. It is likely that some of these people are participating in the labour market instead.

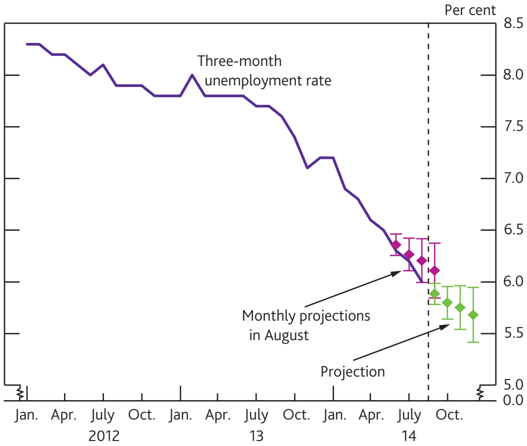
Implications for trend participation

Overall, these structural factors are judged to have pushed up trend participation in recent years (**Chart A**). But there is substantial uncertainty around that judgement, since the impact of structural and cyclical factors on participation cannot be identified directly.

It is possible that some of the strength in participation that has been interpreted as structural in fact reflects cyclical factors. Lower household income growth as a result of the financial crisis may have led more household members to seek work, in order to supplement their family income. Or people may have delayed retirement so as to bolster their prospective pension income, after experiencing losses in the value of their pension during the recession. On the other hand, the impact of structural factors may be larger than assumed in the central case.

The MPC's central projection is consistent with a trend participation rate that is broadly flat over the forecast period, as the impact of structural factors supporting participation continues to offset the drag from demographic shifts. But, given the factors working in opposing directions, there are risks around that projection on both sides (Section 5).

Chart 3.7 Unemployment rate projected to fall further
Bank staff's near-term unemployment projection(a)



Sources: Labour Force Survey and Bank calculations.

(a) The magenta diamonds show Bank staff's central projections for the headline unemployment rate for June, July, August and September, at the time of the August *Report*. The green diamonds show the current staff projections for the headline unemployment rate for September, October, November and December 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.

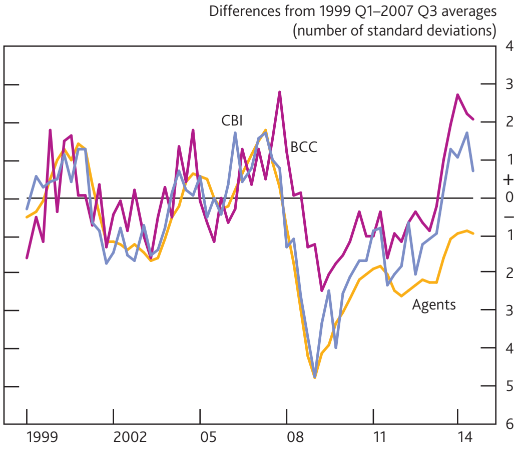
anticipated in August, reflecting the fall in participation. And the gap is judged to have widened slightly further in Q3 (**Chart 3.9**).

The MPC also considers the **average hours gap**, or the difference between average hours and their estimated trend level. One indicator of trend, or desired, hours is the number of hours people in employment would, on average, like to work. LFS microdata suggest that this remains elevated relative to actual hours worked. To some extent, the relative strength of desired hours could reflect the impact of the squeeze on real household incomes and may unwind as income growth starts to recover. Bank staff's estimate of medium-term equilibrium average hours reflects a judgement that around half of the present gap between actual and desired hours represents slack in the labour market.

The average hours gap is judged to have widened slightly in Q3, reflecting the small fall in average hours worked in the three months to August (**Chart 3.9**). That said, the number of people working part-time because they could not find a full-time job — one indicator of people working fewer hours than they would like — was broadly unchanged in the three months to August (**Table 3.C**).

The other component of labour market slack is the **unemployment gap**, or how far the unemployment rate is from its medium-term equilibrium rate. The longer that someone has been out of work, the lower the probability of them finding a job, and hence the less downward pressure

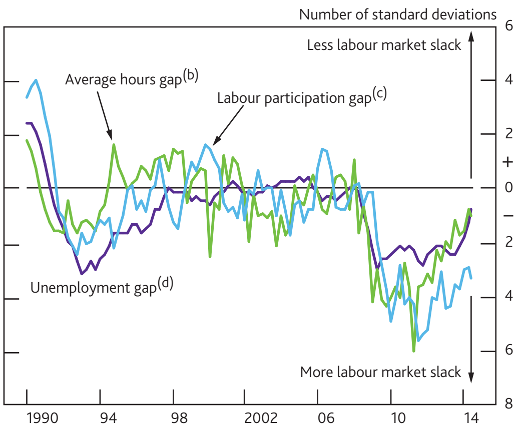
Chart 3.8 Companies' capacity utilisation fell slightly
Survey indicators of capacity utilisation[(a)]



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, business/consumer/professional 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.

Chart 3.9 Some slack remains in the labour market
Components of labour market slack[(a)]



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

(a) Standard deviations are calculated over the period 1992–2007. The final data points are Bank staff's estimates for 2014 Q3.
(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, which has been adjusted for the estimated impact of LFS sampling volatility in 2014 Q2 and Q3.
(d) Difference between Bank staff's estimate of the medium-term equilibrium unemployment rate and the unemployment rate.

Table 3.C Indicators suggest a narrowing in labour market slack
Indicators of labour market slack

	Averages			2014	
	1998–2007[(a)]	2010–12	2013	H1	Q3
Vacancies/unemployed ratio[(b)(c)]	0.41	0.18	0.22	0.30	0.34
People working part-time because they could not find a full-time job[(b)(d)]	2.2	4.3	4.8	4.5	4.4
Agents' scores of companies' recruitment difficulties[(e)]	0.5	-1.1	-0.4	0.7	1.7

Sources: Bank of England and Labour Force Survey.

(a) Unless otherwise stated.
(b) The figure for 2014 Q3 shows data for the three months to August.
(c) Number of 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) End-quarter observations on a scale of -5 to +5, with positive scores indicating greater recruitment difficulties in the most recent three months compared with a year earlier. Average since 2005 Q1.

they would tend to put on wages. So one indicator of the medium-term equilibrium rate is the proportion of the unemployed who have been out of work for more than six months, which fell in the three months to August. But as discussed in the August *Report*, continued weakness in wages could indicate that the longer-term unemployed are currently exerting more downward pressure on wages than previously thought. That could be because recent employment growth has been concentrated in low-skilled occupations (Section 3.2), for which the longer-term unemployed may be better able to compete.

Overall, Bank staff estimate that the medium-term equilibrium unemployment rate fell very slightly in Q3, but remained around 5½%. That is slightly above the estimated long-term equilibrium rate, which is determined by structural, longer-lasting features of the labour market such as the age structure of the population and out-of-work benefits relative to earnings when in work. Changes to out-of-work benefits may have encouraged the unemployed to intensify their search for work. But it is unclear to what extent this has affected the long-term equilibrium rate, as changes to the benefit system in recent years have coincided with a sharp fall in real earnings. There is considerable uncertainty around the long-term equilibrium unemployment rate, but Bank staff continue to judge that it is in the region of 5%.

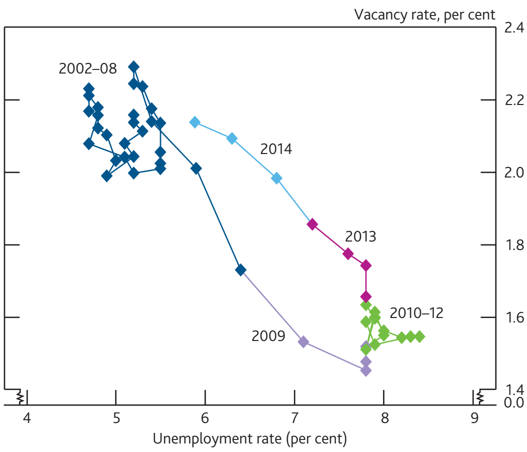
Overall, the unemployment gap is likely to have narrowed slightly in Q3 (**Chart 3.9**). That reflects the fall in the unemployment rate in the three months to August. A smaller unemployment gap is consistent with recent increases in the vacancy rate. The unemployment rate has fallen as the vacancy rate has increased (**Chart 3.10**). That suggests that the degree of mismatch between job vacancies and potential employees — which probably rose during and after the recession, contributing to a rise in medium-term equilibrium unemployment — may be falling back towards pre-recession levels.

Recent developments have had mixed implications for labour market slack. It is likely that there was a slightly greater degree of labour market slack in Q2 and Q3 than was anticipated in the August *Report*, reflecting unexpectedly weak participation relative to trend. Bank staff judge that labour market slack narrowed slightly in Q3, with the fall in the unemployment gap outweighing a slight widening in the average hours and labour participation gaps. Reports from the Bank's Agents that recruitment difficulties have become more widespread (**Table 3.C**) are also consistent with a narrowing in slack.

Judging movements in slack from quarter to quarter with any precision is difficult. This is particularly true at the current juncture given uncertainty about the participation gap, as discussed in the box on page 27. The MPC's best collective

Chart 3.10 Unemployment has fallen as vacancies have increased

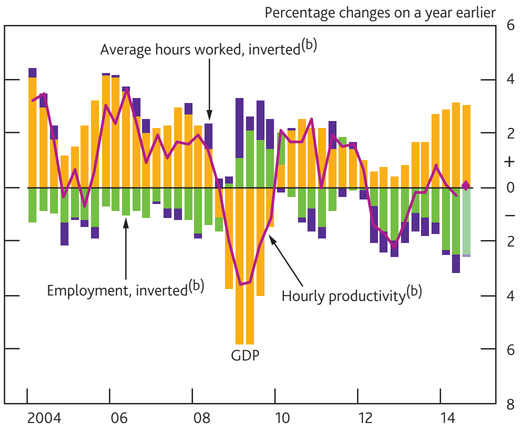
Vacancy and unemployment rates[a]



(a) Vacancies expressed as a percentage of the sum of total employment and vacancies, and unemployment as a percentage of the economically active 16+ population. Vacancies exclude agriculture, forestry and fishing. Data points for 2014 Q3 are based on vacancies data for the three months to September, and Bank staff projections for unemployment and employment. The error bands around those projections are wide.

Chart 3.11 Productivity growth remains weak

Decomposition of hourly labour productivity[a]



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 Q3. The error bands around those projections are wide.

judgement is that slack is currently broadly in the region of 1% of GDP. There is considerable uncertainty around both the current degree of slack and its likely evolution, and there is a wide range of views on the Committee.

3.4 Productivity

Labour productivity growth has been unusually weak since the crisis. As a result, output per hour worked is substantially below where it would have been had its pre-crisis trend continued. Revisions to both GDP and total hours have meant that hourly labour productivity has risen by 1.7% more than previously estimated, since the end of the recession. But that does little to close the productivity shortfall, as discussed in the box on pages 18–19.

Hourly labour productivity fell by 0.3% in the four quarters to Q2 (**Chart 3.11**). That was a smaller fall than had been expected at the time of the August *Report*, reflecting weaker growth in total hours. Four-quarter growth in hourly labour productivity probably picked up a little in Q3, but remained well below its historical average of over 2%.

Productivity growth is expected to pick up gradually as the effects of the financial crisis continue to wane. Increases in demand should allow companies to use their staff more productively. And improved credit conditions are expected to continue to boost investment and improve the allocation of resources across companies. The MPC expects a gradual recovery in productivity growth over the forecast period (Section 5).

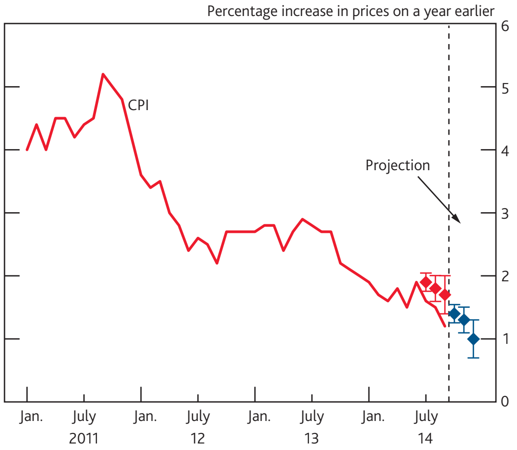
4 Costs and prices

CPI inflation fell to 1.2% in September, much lower than expected at the time of the August *Report*. Consumer prices for food and energy fell, partly reflecting declines in global commodity prices. Earnings growth remained muted and unit labour costs fell in the four quarters to 2014 Q2. Some shorter-term measures of inflation expectations have fallen slightly, but, overall, measures of inflation expectations remain consistent with the 2% target.

Table 4.A Monitoring the MPC's key judgements

Developments anticipated in August	Developments since August
Inflation expectations	**On track**
• Medium-term inflation expectations consistent with the 2% target.	• Medium-term expectations of households, financial markets and professional forecasters are broadly unchanged.
Earnings growth	**Broadly on track**
• Four-quarter AWE growth near 1½% by end of year.	• Wage growth picked up to 0.7% in the three months to August.
Unit wage costs	**Broadly on track**
• Growth in unit wage costs of around 0% a quarter in 2014 H2.	• Broadly in line in Q2.
The exchange rate, utility bills and commodities	**Weaker than expected**
• Sterling ERI, domestic energy bills and commodity prices evolve in line with conditioning assumptions.	• Sterling ERI fell by a little over 1%. US dollar oil prices fell sharply.
Import prices	**Broadly on track**
• Import prices to fall at an annual rate of just under 4% in 2014 H2.	• Import prices estimated to have fallen by slightly more than 4% in the four quarters to 2014 Q3.

Chart 4.1 CPI inflation projected to fall in Q4
Bank staff projection for near-term CPI inflation[a]



(a) The red diamonds show Bank staff's central projection for CPI inflation in July, August and September 2014 at the time of the August *Inflation Report*. The blue diamonds show the staff projection for October, November and December 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.

CPI inflation fell to 1.2% in September, lower than expected in August and well below the MPC's target. Below-target inflation partly reflects declines in energy, food and other import prices (Section 4.1), and these components will continue to weigh on inflation in the months ahead. Beyond the near term, how quickly inflation returns to the MPC's 2% target will depend on: how persistent the recent weakness in global commodity prices proves to be (Section 4.2); the extent to which unit labour costs pick up (Section 4.3); and whether inflation expectations remain consistent with the target (Section 4.4).

4.1 Consumer prices

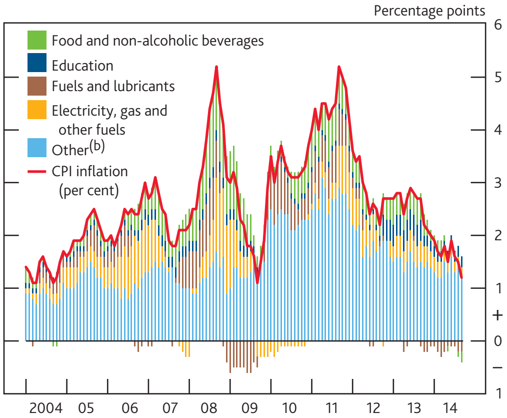
CPI inflation in September was 0.5 percentage points lower than expected at the time of the August *Report* (**Chart 4.1**). Around a third of this downside surprise was due to lower clothing and footwear prices, which showed an unusual pattern this summer with sales concentrated in July rather than June. Around a quarter reflected a greater drag from food and energy prices than had been anticipated. But the remainder was accounted for by unexpected weakness across a range of goods and services.

CPI inflation is now well below the MPC's 2% target. That partly reflects falls in energy and food prices, which, after pushing up the headline CPI inflation rate throughout most of the past decade, are now weighing on it (**Chart 4.2**).

Petrol prices have fallen over the past year, largely reflecting a sharp decline in the price of oil (Section 4.2). Food prices have also fallen, partly due to falling price pressures at the start of the supply chain: agricultural commodity prices have declined sharply over the past six months (Section 4.2). Intense competition between supermarkets is also likely to have pushed down food prices since the start of the year.

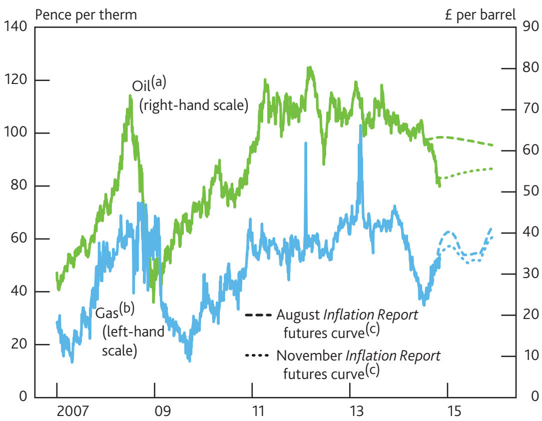
Low inflation does not only reflect lower food and energy prices, however. CPI inflation excluding energy and food fell

Chart 4.2 Food and fuel prices now weighing on inflation
Contributions to CPI inflation(a)



(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 from the goods or services identified in the chart.

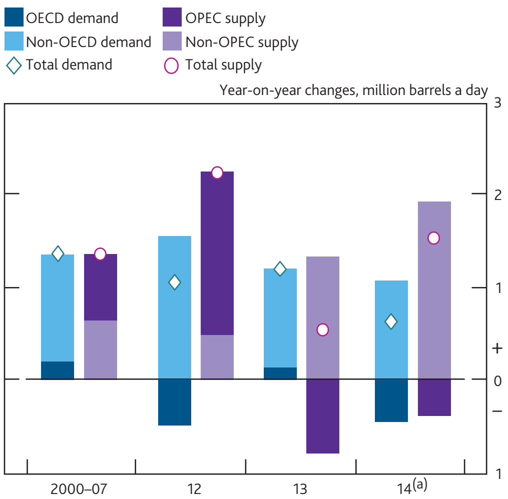
Chart 4.3 Sterling oil prices have fallen sharply
Sterling oil and wholesale gas prices



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

(a) Brent forward prices for delivery in 10–21 days' time converted into sterling.
(b) One-day forward price of UK natural gas.
(c) 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 November *Inflation Report* are averages during the fifteen working days to 5 November 2014.

Chart 4.4 Oil supply growth robust in 2014
Growth in oil supply and demand



Sources: International Energy Agency *Oil Market Report*© OECD/IEA 2014 and Bank calculations.

(a) Data are to 2014 Q3.

to a little below its historical average rate in September. Some of that weakness might reflect sterling's appreciation over the past year and the resultant downward pressure from import prices (Section 4.2). It is also likely, however, that this in part reflects the continuing drag from domestic slack: unit labour cost growth has been weak (Section 4.3).

CPI inflation is projected to tick up in October before falling to 1% in December (**Chart 4.1**), as energy and food price inflation weigh on the headline rate. CPI inflation is then expected to rise gradually towards the 2% target over the forecast period as this drag fades and domestic inflationary pressures pick up (Section 5).

4.2 Global costs and prices

Swings in the prices of commodities, such as oil, gas and agricultural produce, and traded goods and services have had a substantial impact on CPI inflation in recent years. For several years, these prices pushed up inflation, but recent data suggest that they are now pulling it down. The extent to which this continues will depend on developments in global prices, as well as the sterling exchange rate.

Global commodity prices

The main influence of oil prices on UK CPI inflation is through their direct impact on petrol prices. Oil prices have continued to fall since the August *Report* (**Table 4.A**) and are now more than 20% lower than a year ago in both sterling (**Chart 4.3**) and US dollar terms. The oil futures curve has also fallen.

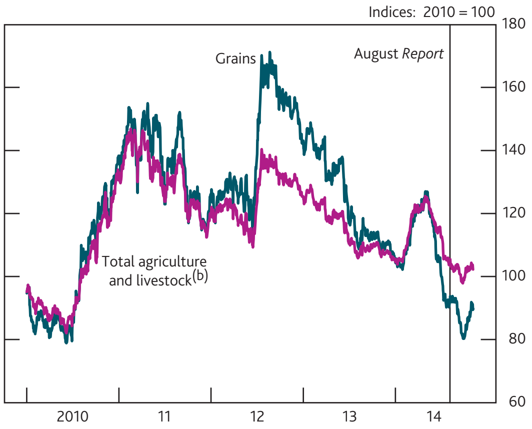
The fall in oil prices probably reflects a combination of weaker demand and increased supply. Weaker growth has weighed on oil consumption across advanced economies (**Chart 4.4**). This is one reason why organisations such as the International Energy Agency and OPEC have revised down their forecasts for oil demand next year slightly. Increased supply growth has predominantly been driven by increased production by non-OPEC countries (**Chart 4.4**), such as the United States, but also some OPEC producers, notably Libya.

The outlook for oil prices is uncertain, although implied volatility in the oil market — like in other financial markets (Section 1) — has been remarkably low. Prices and volatility could pick up if, for example, a worsening in geopolitical tensions limited oil supply. But downside news on demand or further positive news on supply could result in further price falls.

Gas prices also influence CPI inflation, predominantly through their impact on households' utility bills. While the sterling spot price of gas has risen since the August *Report*, the futures curve has shifted down slightly (**Chart 4.3**).

Chart 4.5 Food commodity prices well below recent peaks

US dollar food commodity prices[(a)]

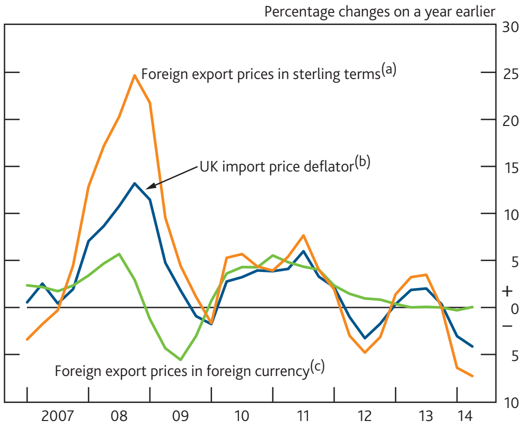


Sources: S&P indices and Thomson Reuters Datastream.

(a) Calculated using S&P US dollar commodity price indices.
(b) Includes grain prices.

Chart 4.6 Sterling's appreciation has weighed on UK import prices

UK import 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 Q2, export prices for Croatia, Cyprus, Finland, Greece, Iceland, Ireland, Latvia, Netherlands, Pakistan, Philippines, Portugal, Slovenia, South Africa, Switzerland and Turkey 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).

Global agricultural commodity prices, particularly grain prices, have fallen sharply over the past six months or so (**Chart 4.5**). Market contacts suggest that this fall is largely the result of increased supply: unusually large harvests, coupled with improved prospects for future harvests, particularly in the United States, have weighed on prices. Falling global agricultural prices have contributed to the decline in UK consumer prices for food (Section 4.1).

Non-energy import prices

Import prices have a direct effect on UK consumer prices through their impact on the cost of finished goods bought by households, as well as an indirect effect through their impact on the cost of inputs for businesses.

Even ignoring fuel, import prices fell by just over 4% in the year to 2014 Q2 (**Chart 4.6**). Sterling's appreciation over the past year has been the primary contributory factor to this fall. But tradables inflation was also weak in foreign currency terms: annual world export price inflation, weighted according to countries' shares in UK imports, was zero in 2014 Q2 (**Chart 4.6**). This has been partly driven by weak euro-area inflation (Section 2).

Bank staff estimates suggest that the appreciation of sterling since its March 2013 trough is eventually likely to reduce the level of UK import prices by around 6%, all else equal. Much of that is likely to be reflected in import prices already. The pass-through to consumer prices, particularly in terms of timing, is more uncertain. Bank staff estimate that upward pressure from past rises in import prices is now being dominated by recent falls such that import prices are pulling down CPI inflation slightly. Overall, the prices of energy, food and other goods and services imported into the United Kingdom are projected, on average, to subtract just under ½ percentage point a quarter from annual CPI inflation in 2015.

4.3 Domestic influences on inflation

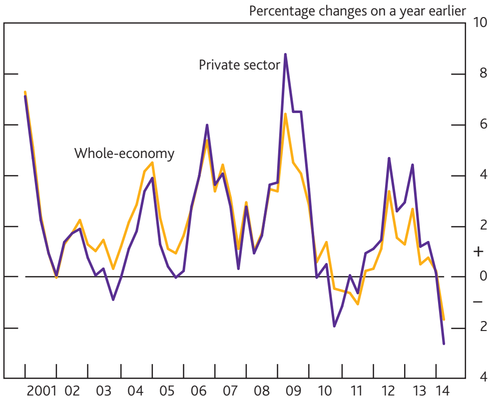
In addition to developments in global prices, the path of inflation depends on domestic influences, such as companies' labour costs — an important part of the cost of producing goods and services — and pricing decisions. Recent data point to very limited inflationary pressure from these sources.

Unit labour costs

Unit labour costs are determined by developments in staff costs, as well as productivity (Section 3). Whole-economy unit labour costs — calculated using compensation of employees, a measure of self-employment income and the Bank's 'backcast' for GDP (which is adjusted for likely future revisions to GDP) — fell by 1.7% in the four quarters to 2014 Q2 (**Chart 4.7**).

Chart 4.7 Unit labour costs have fallen sharply

Whole-economy and private sector unit labour costs[a]

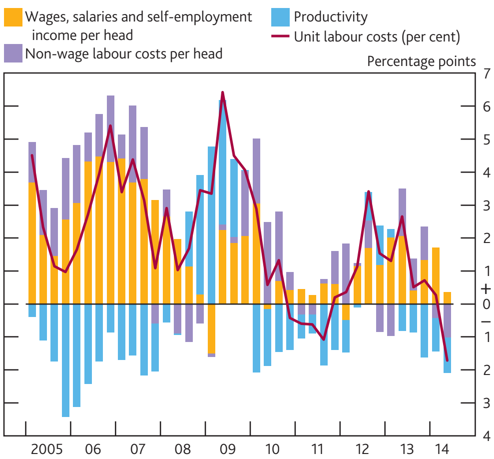


Sources: ONS and Bank calculations.

(a) Calculated as labour costs divided by GDP. Labour costs are compensation of employees, including estimated self-employment income. Self-employment income is calculated from mixed income, assuming that the share of employment income in that is the same as the share of employee compensation in nominal GDP less mixed income. GDP is based on Bank staff's backcast, which involves using survey indicators and past GDP revisions to make a judgement about likely future revisions to the ONS's output data, as discussed in Cunningham, A and Jeffery, C (2007), 'Extracting a better signal from uncertain data', *Bank of England Quarterly Bulletin*, Vol. 47, No. 3, pages 364–75; www.bankofengland.co.uk/publications/Documents/quarterlybulletin/qb070301.pdf. Private sector unit labour costs exclude general government wages and salaries and employers' social contributions and are calculated by using Bank staff's backcast for output generated in the private sector.

Chart 4.8 Non-wage costs have pulled down unit labour cost growth

Decomposition of four-quarter whole-economy unit labour cost growth[a]



Sources: ONS and Bank calculations.

(a) Unit labour costs and self-employment income are defined as in **Chart 4.7**.

Table 4.B Official estimates of wage growth remain weak

Private sector earnings

	Averages				2014		
	2001–07	2008 Q3–2010 Q2	2010 Q3–2012	2013	Q1	Q2	Q3
Official estimates (percentage changes on a year earlier)							
(1) Total AWE[a]	4.3	0.8	2.0	1.4	2.1	0.0	0.9
(2) AWE regular pay[a][b]	3.9	1.6	2.0	1.1	1.5	0.9	1.3
(1)–(2) Bonus contribution[a][c]	*0.4*	*-0.9*	*0.0*	*0.3*	*0.6*	*-0.9*	*-0.4*
Pay settlements[d]	3.3	2.6	2.1	2.1	2.1	2.1	2.2
Memo: Three-month on three-month annualised AWE regular pay[a]	3.9	1.1	1.9	1.3	0.6	1.2	2.2

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

(a) Figures for 2014 Q3 are estimates based on data for July and August and Bank staff projections for September.
(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.

The headline data may overstate the weakness in costs. A significant part of the fall in the headline rate was due to a fall in non-wage labour costs (**Chart 4.8**), which include payments such as pensions contributions. These costs tend to be volatile and hence short-run movements in this component may contain little information about underlying cost pressures. Unit wage costs also fell, however. This weakness may also be overstated because some people deferred receiving their 2013 bonus payments to take advantage of the April 2013 reduction in the top rate of income tax, which has weighed on four-quarter wage growth in 2014 Q2. Looking through these two effects, unit labour costs look to have been broadly unchanged over the four quarters to Q2 — still weak compared with pre-crisis average four-quarter growth of around 2.5%.

A somewhat timelier source of information on domestic wage pressures is the average weekly earnings (AWE) measure. In the private sector, AWE growth has remained well below historical average rates: total pay increased by 1% in the three months to August compared with the same period a year ago, reflecting growth in regular pay (**Table 4.B**). More recently, there are signs of pay growth picking up: annualised private sector AWE regular pay growth is estimated to have risen by 2.4% in the three months to August compared to the previous three months. These shorter-term measures can be volatile, however, and it is possible that this strength partly reflects a redistribution of employee compensation from bonus payments to regular pay in the financial sector following the implementation of the EU bonus cap this year.

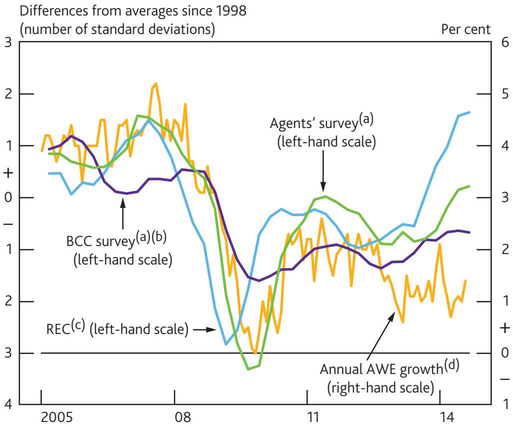
A key influence on the inflation outlook is how wages evolve relative to productivity. In the absence of external price pressures, wages need to grow faster than productivity to meet the MPC's 2% inflation target. The outlook for wages depends, in part, on why wage growth has been weak.

Possible explanations for the weakness of wages

Weak wage growth may be symptomatic of a significant amount of slack in the labour market (Section 3). Indeed, in August the weakness in wages together with evidence of further improvements in labour supply led the MPC to judge that the degree of labour market slack had been greater than previously thought (see the box on page 28 of the August 2014 *Report*). It is unlikely that slack can explain all of the weakness in pay growth, however. For example, surveys point to stronger pay growth than official data (**Chart 4.9**), suggesting that there could be other factors at play.

Weak wage growth could, in part, reflect changes in the composition of the workforce. The average level of pay in the economy depends not only on individuals' wages but also on the composition of employment. If, for example, employment growth is mostly driven by those being paid more than the average wage, that will push up measured average wage

Chart 4.9 Official pay data remain weak relative to survey indicators
Estimates of pay growth



Sources: Bank of England, BCC, KPMG/REC/Markit, ONS and Bank calculations.

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

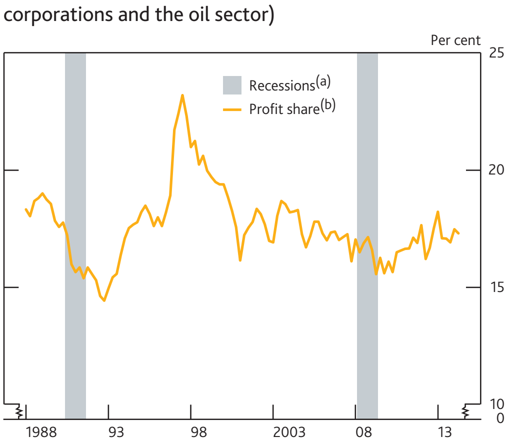
Table 4.C Changing composition of the labour force may have weighed on pay growth
Employment growth and earnings by occupation

Characteristics	Average quarterly changes in numbers of employees (thousands)(a)(b) 2002–07	2008 Q1–2013 Q3	2013 Q4–2014 Q2	Employees' average weekly pay (£)(c) 2013 Q4–2014 Q2
Occupation				
High skilled	60.2	36.5	4.7	701
Medium skilled	-8.7	-5.6	19.9	348
Low skilled	-5.5	-26.2	63.9	285

Sources: Labour Force Survey and Bank calculations.

(a) Uses the Standard Occupational Classification (SOC) 2000. Seasonally adjusted by Bank staff.
(b) The high-skilled category includes managers, professional and associated professional and technical occupations. The low-skilled category includes elementary occupations, plant machine operatives, sales and customer services. The medium-skilled category is calculated as the change in total employment less changes in employment in high and low-skilled occupations.
(c) Non seasonally adjusted LFS gross weekly pay. Averages weighted by share of employees in each occupational category. High and low-skilled categories defined as in (b). The medium-skilled category includes administrative, secretarial, personal services occupations and skilled trades.

Chart 4.10 Companies' margins have been broadly unchanged over the past year
Private sector corporate profit share (excluding financial corporations and the oil sector)



Sources: ONS and Bank calculations.

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

growth. Estimates by Bank staff suggest that, between 2008 and 2013, compositional changes acted to push up average wages. But over the past few quarters, they are likely to have pushed down average wages. For example, employment growth has been concentrated in lower-skilled occupations, where earnings are below average (**Table 4.C**).

It is also possible that improved labour market conditions have yet to feed through into average wages across the economy. There is some evidence that the marginal cost of employing another person has risen — the REC index of starting salaries, despite having fallen slightly in October, continues to point to strong pay growth for new recruits. One reason why that increase in marginal costs may not yet have fed through to increased average wage growth is because of low turnover in the labour market. Until recently, job-to-job flows have been weak and the resignation rate low (Section 3), suggesting a reluctance among employees to move into new jobs in search of higher pay. These flows have begun to pick up and may rise further as confidence about labour market prospects builds.

Near-term outlook for wages and unit labour costs

The Committee's central judgement is that wage growth is likely to pick up in the near term, reflecting a gradual pickup in productivity and further improvements in labour market conditions. Wages are expected to grow a little faster than productivity, such that unit labour cost growth starts to pick up in 2015 (Section 5).

Companies' pricing decisions

A range of measures of companies' margins, such as ONS data on the corporate profit share (**Chart 4.10**), suggest that these are currently close to pre-crisis levels and do not point to either upward or downward pressure on inflation.

Developments in companies' margins may have varied by sector. Contacts of the Bank's Agents suggest that profitability growth in the manufacturing sector was weaker than that in the service sector in 2014 Q3. Although both sectors may have benefited from reduced input costs as a result of sterling's appreciation, the exchange rate will also have put downward pressure on the profits of exporters that set their prices in foreign currency.

4.4 Inflation expectations

Inflation expectations are an important influence on households' and companies' wage and price-setting decisions. Indicators suggest that households', businesses' and professional forecasters' expectations were little changed in 2014 Q3 and, on average, remained close to 2000–07 averages (**Table 4.D**).

The data currently available for Q4 point to a slight fall in households' inflation expectations, perhaps reflecting the

Table 4.D Inflation expectations remain well anchored

Indicators of inflation expectations[(a)]

Per cent	2000 (or start of series) to 2007 averages[(b)]	Averages since 2008	2012	2013	2014 H1	2014 Q3	2014 Q4[(c)]
One year ahead inflation expectations							
Households[(d)]							
Bank/NOP	2.4	3.3	3.5	3.5	2.7	2.8	n.a.
Barclays Basix	2.8	3.1	3.1	2.8	2.4	2.4	n.a.
YouGov/Citigroup (Nov. 2005)	2.5	2.7	2.7	2.7	2.2	2.1	1.9
Companies (2008 Q2)[(e)]	n.a.	0.5	0.5	0.4	0.7	0.6	n.a.
Financial markets (Oct. 2004)[(f)]	2.6	2.7	2.6	3.0	2.9	3.0	2.6
Two to three year ahead expectations							
Households[(d)]							
Bank/NOP (2009 Q1)	n.a.	2.9	3.1	3.3	2.7	2.8	n.a.
Barclays Basix	3.2	3.3	3.3	3.2	2.8	2.7	n.a.
Professional forecasters (2006 Q2)[(g)]	2.0	2.1	2.1	2.2	2.1	2.1	2.1
Financial markets (Oct. 2004)[(h)]	2.8	3.0	2.8	3.1	3.1	3.1	2.9
Five to ten year ahead expectations							
Households[(d)]							
Bank/NOP (2009 Q1)	n.a.	3.3	3.4	3.6	3.1	3.4	n.a.
Barclays Basix (2008 Q3)	n.a.	3.8	3.9	3.8	3.7	3.8	n.a.
YouGov/Citigroup (Nov. 2005)	3.5	3.3	3.4	3.5	3.0	3.0	2.9
Financial markets (Oct. 2004)[(i)]	3.0	3.5	3.1	3.5	3.4	3.4	3.3
Memo: CPI inflation	1.6	3.0	2.9	2.6	1.7	1.5	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 October to 5 November 2014. YouGov/Citigroup data are for October.
(d) The household surveys ask about expected changes in prices but do not reference a specific price index, and the measures are based on the median estimated price change.
(e) CBI data for the manufacturing, business/consumer services and distribution sectors, weighted together using nominal shares in value added. Companies are asked about the expected percentage price change over the coming twelve months in the markets in which they compete.
(f) 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.

recent decline in CPI inflation. Inflation expectations in the October YouGov/Citigroup survey fell by 0.2 percentage points at the one-year horizon, and 0.1 percentage points at the five-year horizon relative to their average levels in Q3 (**Table 4.D**). The October outturns were also below their series averages.

Financial market measures of inflation expectations, based on interest rate swaps, have also fallen a little relative to their Q3 levels (**Table 4.D**). This fall has been most pronounced at the one-year horizon and that may, in part, reflect a revision to expectations following the release of September CPI inflation data. At longer horizons, financial market measures of inflation expectations fell only very slightly. This stability is in contrast to recent falls in long-term inflation expectations in the euro area and the United States.

Overall, the MPC continues to judge that inflation expectations remain well anchored.

5 Prospects for inflation

The UK domestic expansion has continued largely as expected, but the global backdrop has weakened. Some asset and commodity prices have fallen, as have market interest rates. CPI inflation has fallen to 1.2%, in part reflecting falls in energy, food and other import prices, and it is more likely than not that CPI inflation will temporarily fall below 1% at some point during the next six months. Wage and unit labour cost growth remain weak. The expansion in UK output is expected to continue, driven by a gradual pickup in demand abroad, together with a revival in productivity at home. On an assumption that Bank Rate rises gradually to a little under 2%, as the remaining slack in the economy is absorbed and the drag from external prices wanes, a recovery in wage growth should return CPI inflation to the 2% target by the end of the forecast period.

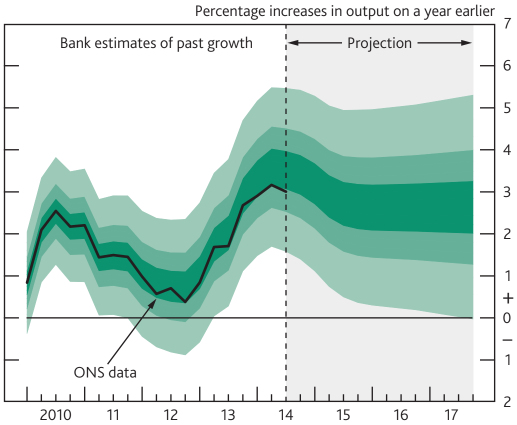
Table 5.A Conditioning path for Bank Rate implied by forward market interest rates[a]

Per cent

	2014	2015				2016				2017			
	Q4[b]	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
November	0.4	0.5	0.6	0.7	0.8	1.0	1.1	1.2	1.4	1.5	1.6	1.7	1.7
August	0.6	0.7	0.9	1.1	1.3	1.5	1.7	1.9	2.0	2.1	2.2	2.3	

(a) The data are fifteen working day averages of one-day forward rates to 5 November 2014 and 6 August 2014 respectively. The curve is based on overnight index swap rates.
(b) November figure for 2014 Q4 is an average of realised spot rates to 5 November 2014, and forward rates thereafter.

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



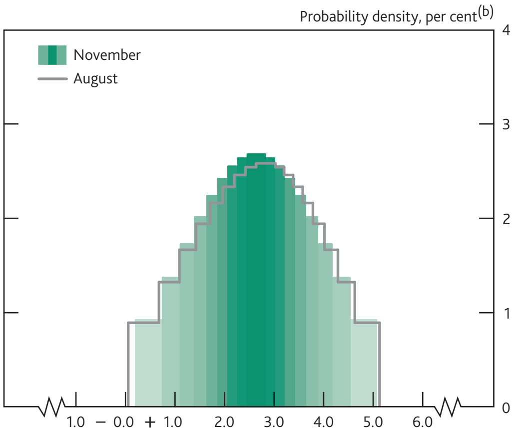
The fan chart depicts the probability of various outcomes for GDP growth. It has been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 billion throughout the forecast period. To the left of the vertical dashed line, the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

The UK expansion has continued, but the global backdrop has weakened, particularly in the euro area. That weakening was associated with falls in market interest rate expectations. The projections in this *Report* are therefore conditioned on a notably lower path for Bank Rate than those in August (**Table 5.A**).[1] Based on that lower path, the Committee's best collective judgement is that four-quarter GDP grows at close to its historical average rate, somewhat above estimated potential supply growth, for most of the forecast period (**Chart 5.1**), as domestic spending supports growth in the face of relatively weak external demand. The central outlook is a little weaker than projected three months ago, but the risks to that outlook are no longer judged to be skewed to the downside (**Chart 5.2**).

CPI inflation has fallen more sharply than expected over the past three months, reaching 1.2% in September. The low level of inflation in part reflects global developments: commodity prices have fallen and import prices more broadly have declined following the previous appreciation in the sterling exchange rate. But domestic price pressures — in particular, unit labour cost growth — also remain low. Based on the same conditioning assumptions as **Chart 5.1**, the Committee judges that inflation will remain subdued for the next year or so before higher labour cost growth and a modest rise in global inflation return it to the target (**Chart 5.3**). Relative to expectations in August (**Chart 5.4**), inflation is projected to be lower in the near term, but similar further out (**Chart 5.5**).

(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/ir14novca.pdf.

Chart 5.2 Projected probabilities of GDP growth in 2016 Q4 (central 90% of the distribution)(a)



(a) **Chart 5.2** represents the cross-section of the GDP growth fan chart in 2016 Q4 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 5.2** 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 August 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 ±0.05 percentage points of any given growth rate, specified to one decimal place.

5.1 Key judgements and risks

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

Key Judgement 1: global growth picks up only gradually following recent weakness, particularly in the euro area

Growth in the euro area — the United Kingdom's largest trading partner — appears to have disappointed again across a range of member countries, including Germany (Section 2). Inflationary pressures have also weakened, partly reflecting lower food and energy prices, and some indicators of inflation expectations have fallen. In response, the European Central Bank (ECB) has announced a series of measures to support growth and raise inflation (Section 1).

The Committee's central projection is that euro-area growth will pick up gradually but will remain below its historical average rate (**Chart 5.6**). The outlook is judged to be weaker than it was three months ago: confidence has fallen back in a number of countries, and recent outturns and indicators of near-term activity suggest that the underlying drivers of growth are not as strong as previously assumed. It is possible that recent outturns contain less news about the medium-term outlook than assumed and growth could pick up faster. But it is also possible that growth and inflation continue to disappoint, exacerbating the adjustment challenges within the euro area. That could increase concerns about some countries' public debt burdens, raising financial market stress and depressing household and business confidence. The MPC judges that the risk of serious disruption

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

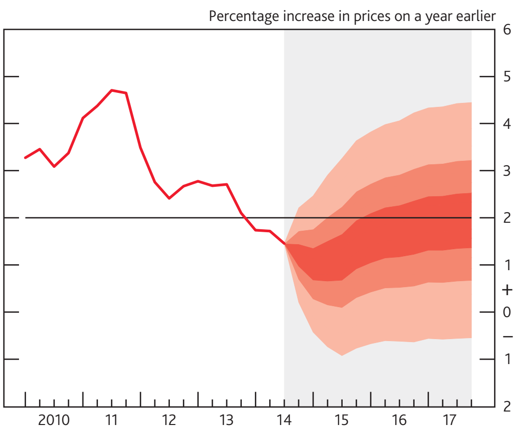
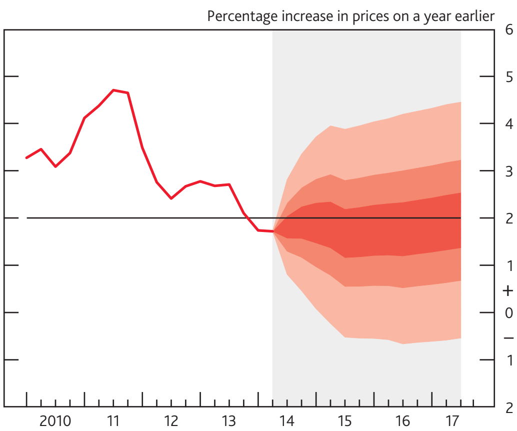
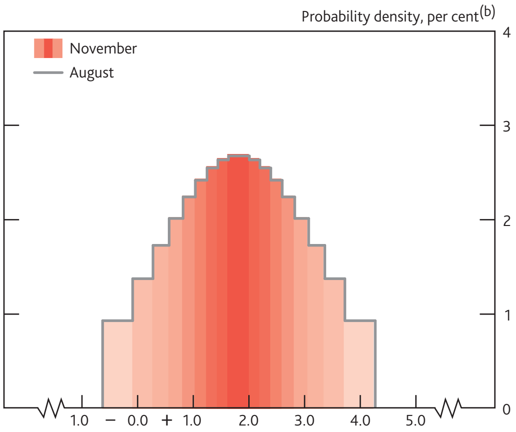


Chart 5.4 CPI inflation projection in August based on market interest rate expectations and £375 billion purchased assets



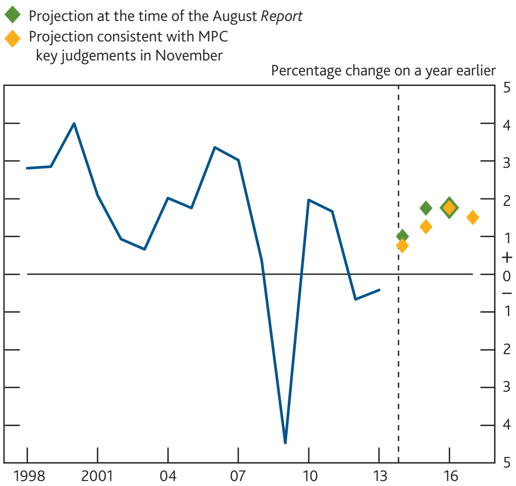
Charts 5.3 and **5.4** depict the probability of various outcomes for CPI inflation in the future. They have been conditioned on the assumption that the stock of purchased assets financed by the issuance of central bank reserves remains at £375 billion throughout the forecast period. If economic circumstances 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 5.5 Projected probabilities of CPI inflation in 2016 Q4 (central 90% of the distribution)(a)



(a) **Chart 5.5** represents the cross-section of the CPI inflation fan chart in 2016 Q4 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 5.5** 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 August 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 ±0.05 percentage points of any given inflation rate, specified to one decimal place.

Chart 5.6 Euro-area growth(a)



Sources: Eurostat and Bank calculations.

(a) Calendar-year growth rates. Chained-volume measure. Projections were only available to 2016 at the time of the August *Report*.

in the euro area — which would weigh on UK trade, financial markets and confidence — remains low, and that such a scenario would take time to develop.

The outlook for growth elsewhere in the world is also a little weaker. In the United States, recent GDP outturns have been slightly better than expected but subdued household consumption growth may suggest a modestly weaker outlook for activity. GDP is projected to grow faster than its current potential rate, although below its average in the decade leading up to the financial crisis; the risks to that path are probably to the upside. In Japan, output fell sharply following a rise in the consumption tax and, excluding the impact of that tax rise, core inflation fell to 1%: in response the Bank of Japan expanded its asset purchase programme.

In China, growth has continued to slow, reflecting efforts to rebalance the economy. Domestic property and credit market developments remain key downside risks to growth. In aggregate, growth in emerging economies is expected to recover only gradually, and those with significant current account deficits and high inflation remain vulnerable to developments elsewhere.

The outlook for growth in UK-weighted world trade — an indicator of demand for UK exports — has weakened. The sterling exchange rate remains less supportive of exports than a year ago. Consistent with those developments, surveys suggest that UK export growth is slowing from an already low base. Over the forecast period, conditioned on a broadly flat path for sterling, export growth recovers as UK-weighted world trade growth picks up. There are risks to that projection stemming from external demand itself, and the share of external demand that UK exporters can achieve. Moreover, despite the projected recovery in export growth, a pickup in import growth implies that the United Kingdom continues to run a trade deficit. In addition, weakness in the euro area is expected to continue to weigh on net income flows to the United Kingdom, which could remain negative following an earlier sustained period of positive returns (Section 2). Although data on the stock of UK assets and liabilities currently appear healthier than the associated income flows might suggest, at least when valued at market prices, a period of sustained large current account deficits would weigh on that balance sheet position.

The UK outlook also depends on developments in global financial markets. In mid-October, the prices of risky assets, such as equities, fell sharply and there was a pronounced rise in volatility, although these movements have since unwound to varying degrees across different markets (Section 1). Longer-term interest rates on government bonds have also fallen — for example, real five-year, five-year forward rates in the United Kingdom are around ½ percentage point lower than at the time of the August *Report*. That probably in part

Table 5.B MPC key judgements[a][b]

Key Judgement 1: global growth picks up only gradually following recent weakness, particularly in the euro area

	Average 1998–2007	Projections			
		2014	2015	2016	2017
World GDP (UK-weighted)[c]	3 (3)	2 (2¼)	2½ (2¾)	2¾ (3)	2¾
World GDP (PPP-weighted)[d]	4	3¼	3¾	4	4
Euro-area GDP[e]	2¼ (2¼)	¾ (1)	1¼ (1¾)	1¾ (1¾)	1½
US GDP[f]	3 (3)	2¼ (2)	2¾ (3)	2¾ (3)	2½

Key Judgement 2: domestic demand growth is sustained by further declines in private sector saving and a gradual revival in average real incomes

	Average 1998–2007	Projections			
		2014	2015	2016	2017
Credit spreads[g]	¾ (¾)[h]	2¼ (2¼)	2 (2)	2 (2)	2
Household saving ratio[i][j]	8¾ (4¼)	6 (4½)	4¾ (3¼)	4½ (3)	4
Business investment to GDP ratio[j][k]	10 (9¼)	10¾ (8¾)	11½ (9½)	12 (10¼)	12¾

Key Judgement 3: a modest recovery in productivity underpins output growth so that the pace at which slack is absorbed slows

	Average 1998–2007	Projections			
		2014	2015	2016	2017
Productivity[l]	2¼ (2½)	¾ (¼)	¾ (1)	1½ (1¾)	1¾
Participation rate[m]	63 (63)	63½ (64)	63¾ (64)	64 (64¼)	64
Average hours[n]	32¼ (32¼)	32¼ (32¼)	32¼ (32½)	32¼ (32½)	32¼

Key Judgement 4: as import costs stop falling, their drag on inflation wanes, and a pickup in unit labour cost growth gradually returns inflation to the 2% target

	Average 1998–2007	Projections			
		2014	2015	2016	2017
UK import prices[o]	¼ (½)	-3½ (-3¾)	-1½ (-1¼)	½ (0)	¾
Unit labour costs[p]	2¾ (2½)	-¾ (½)	2 (1½)	2¼ (2¼)	2¼

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, 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 August 2014 *Inflation Report*, which were only available to 2016.
(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. Constructed using real GDP growth rates of 144 countries weighted according to their shares in world GDP using the IMF's purchasing power parity (PPP) weights. This was not a key judgement variable at the time of the August *Report*, so no corresponding projections are shown.
(e) Chained-volume measure.
(f) Chained-volume measure.
(g) 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.
(h) 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.
(i) Calendar-year average. Percentage of total available household resources.
(j) Due to revisions following the 2014 *Blue Book* (see the box on pages 18–19), the levels for these series are not directly comparable between August and November.
(k) Calendar-year average. Chained-volume business investment as a percentage of GDP.
(l) GDP per hour worked. GDP at market prices is based on the mode of the MPC's backcast.
(m) Level in Q4. Percentage of the 16+ population. Due to revisions following the incorporation of 2011 Census estimates of the UK population (see the box on page 27), the figures for August and November are not directly comparable.
(n) Level in Q4. Average weekly hours worked, in main job and second job. Due to revisions following the incorporation of 2011 Census estimates of the UK population (see the box on page 27), the figures for August and November are not directly comparable.
(o) Four-quarter inflation rate in Q4. Excludes the impact of missing trader intra-community fraud.
(p) Four-quarter growth in unit labour costs in Q4. Whole-economy total labour costs divided by GDP at market prices, based on the mode of the MPC's GDP backcast. Total labour costs comprise compensation of employees and the labour share multiplied by mixed income. The key judgement variable in the August *Report* was unit wage costs, so the August projections shown here are different to those shown in that *Report*.

reflects concerns about global growth prospects. But it is also possible that financial market participants are now demanding greater compensation for holding some riskier assets and less for holding those perceived as relatively safe. By themselves, lower risky asset prices and weaker global activity will bear down on UK growth. In the projection, these forces are largely offset by the support to domestic demand from the lower implied path for Bank Rate.

Key Judgement 2: domestic demand growth is sustained by further declines in private sector saving and a gradual revival in average real incomes

The latest revisions to the National Accounts suggest that the rise in domestic demand since the depths of the recession was more broad-based than previously assumed, with business investment accounting for almost a third of growth. The rise in domestic demand has, however, been associated with a fall in private sector financial savings; a counterpart to the worsening current account deficit and the fiscal consolidation.

The household saving rate is projected to fall sharply in the near term (**Chart 5.7**) as households continue to increase spending steadily ahead of an expected recovery in income growth. It drifts down further over the forecast period, and in 2017 is expected to be 4%, which would be its lowest annual rate since 1988 on the new ONS definition (see the box on pages 18–19). That lower household saving is consistent with the continued low level of interest rates and the improvements in credit availability over recent years. Further out, household spending continues to grow, albeit at rates below past averages, underpinned by a recovery in average real incomes. Four-quarter real pay growth is projected to pick up over 2015, from around zero to a little under 2%. The recovery in real pay growth reflects a balance of tightening in labour market conditions, lower energy, food and other import prices and, further out, faster productivity growth. There are risks around both the extent of the recovery in productivity and pay (Key Judgements 3 and 4) and the extent to which households will want to save, particularly if they become more uncertain about the outlook.

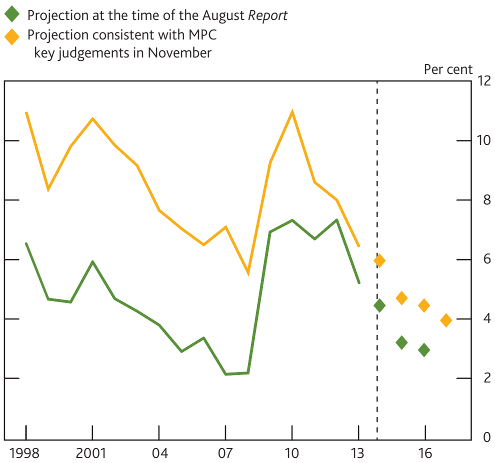
There is also uncertainty about the impact of the modest rises in interest rates on which the projection is conditioned. The MPC's central judgement is that Bank Rate rises will have an impact on spending similar to that seen in the past, but there are risks around that judgement. The impact in part depends on the level and distribution of households' debt and deposits, and the pass-through of Bank Rate increases to mortgage and deposit rates. In recent years, aggregate household debt has fallen relative to income and deposits have tended to grow faster than income. Those households whose debt remains high relative to their income may, however, cut back spending more than they are assumed to do in the central case (see the box on pages 22–23).

Table 5.C 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 Q4 and 2015 H1 if judgements evolve as expected
1: global growth picks up only gradually following recent weakness, particularly in the euro area	• Quarterly euro-area GDP growth averaging a little above ¼%, with credit conditions improving slightly. • Euro-area inflation to be broadly stable for the remainder of 2014, before picking up gradually in 2015 H1. • Quarterly US GDP growth averaging a little above ½%; non-farm payrolls increasing by a little more than 200,000 per month. • Indicators of activity consistent with four-quarter PPP-weighted emerging-economy growth of around 4½% on average; within that, Chinese GDP growth averaging a little above 7%. • Average quarterly growth in UK export volumes of around 1%.
2: domestic demand growth is sustained by further declines in private sector saving and a gradual revival in average real incomes	• Quarterly consumer spending growth of a little below ¾%. • Further fall in household saving ratio. • Quarterly housing investment growth to average 1% in 2015 H1. • Mortgage approvals for house purchase to rise to around 70,000 a month, on average, in 2015 Q2. • Rates of increase in the main indices of national house prices to average around ¼% a month by 2015 H1. • Quarterly business investment growth of around 2½%. • PNFC net lending to be positive in 2014 H2, and pick up in 2015. • Credit spreads to continue to decline.
3: a modest recovery in productivity underpins output growth so that the pace at which slack is absorbed slows	• Headline LFS unemployment rate to decline to around 5½% by mid-2015. • Participation rate to pick up to around 63½% by 2015 H1. • Average hours worked to increase by around ¼% in the six months to 2015 Q2. • Indicators of spare capacity within companies to show little intensification of capacity pressures. • Hourly labour productivity to increase by around ½% in 2015 H1.
4: as import costs stop falling, their drag on inflation wanes, and a pickup in unit labour cost growth gradually returns inflation to the 2% target	• Medium-term indicators of inflation expectations to continue to be consistent with the 2% target. • Four-quarter AWE growth of around 2% in 2015 Q2. • Four-quarter growth in whole-economy unit labour costs rises to around ½% in 2015 H1. • Sterling ERI, domestic energy bills and commodity prices to evolve in line with the conditioning assumptions set out in www.bankofengland.co.uk/publications/Documents/inflationreport/2014/ir14novca.pdf. • Annual rate of decline of import prices of around 2½% by 2015 H1.

Chart 5.7 Household saving ratio(a)



Sources: ONS and Bank calculations.

(a) Calendar-year average. Percentage of total available household resources. Due to methodological changes in the 2014 *Blue Book* (see the box on pages 18–19), the level of the saving ratio is not directly comparable in the August and November *Reports*. Projections were only available to 2016 in the August *Report*.

Housing investment grew robustly in the first half of 2014. More timely indicators have, however, weakened noticeably. In particular, mortgage approvals have failed to pick up to the extent expected earlier in the year, and again disappointed expectations over the past three months. That has been reflected in fewer house sales and a slowing in house price inflation. The central view assumes that mortgage approvals remain weaker than previously assumed for much of the forecast period. Over time, that is likely to be associated with a marked slowing in housing investment growth, which is therefore projected to provide less support to GDP growth than assumed in August.

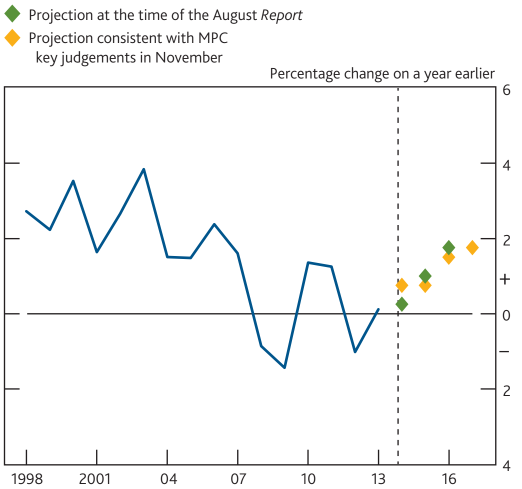
Business investment rose more than 10% in the year to 2014 Q2. Growth is expected to slow, but to remain considerably stronger than its past average rate. Investment is supported by expanding demand and by improved credit conditions. Relative to the projection in the August *Report*, however, that support is a little less pronounced and uncertainty about the global outlook is expected to weigh a little more heavily on investment. The path for business spending is nonetheless associated with a declining corporate financial balance as companies run down deposits or increase borrowing: in the later part of the forecast period companies in aggregate are net borrowers for the first time since the early 2000s. It is possible that companies will not want to move into deficit to that extent, if, for example, they are holding cash balances for precautionary purposes. But it is also possible that the expansion in investment can be funded from other sources: if the net income that the United Kingdom receives on its overseas investments were to rise more than anticipated (Key Judgement 1), the expansion in demand would be consistent with a smaller fall in domestic financial saving.

Key Judgement 3: a modest recovery in productivity underpins output growth so that the pace at which slack is absorbed slows

Ultimately, the expansion in domestic demand will need to be underpinned by growth in the economy's supply capacity. Since the financial crisis, UK supply growth has been modest, reflecting persistent weakness in productivity partly offset by robust labour supply growth. Over the forecast period, potential supply growth is assumed to pick up towards its pre-crisis average rate, as productivity growth picks up.

The past few years have been characterised by very little growth in output per hour worked. As companies, in aggregate, report that they do not currently have excess capacity, this has probably also been associated with unusually low growth in their productive potential. Productivity growth is projected to pick up slowly towards its pre-crisis rate (**Chart 5.8**) as resources are allocated more efficiently within companies and across the economy. Productivity growth is a little weaker than assumed three months ago, however, and there remains considerable uncertainty around the timing and the extent of the productivity recovery.

Chart 5.8 Productivity growth[(a)]



Sources: ONS and Bank calculations.

(a) GDP per hour worked. GDP is at market prices and projections are based on the mode of the MPC's backcast. Projections were only available to 2016 at the time of the August *Report*.

As well as productivity, supply growth depends on the potential number of hours that could be worked by the UK population. That in part depends on population growth, which is assumed to remain broadly steady over the forecast period. It also depends on: the average hours people want to work, which are assumed to remain broadly flat; the speed at which medium-term equilibrium unemployment falls towards its longer-term equilibrium rate (Section 3); and trend labour force participation. That trend — the proportion of the population who would potentially be willing and able to participate in the labour market — is judged to have risen in recent years, despite an expected drag from an ageing population, reflecting, for example, older people staying in the labour force for longer (see the box on pages 30–31). In the projection, the continuing demographic drag is only just offset and trend participation is broadly flat. There are risks around that assumption in both directions. On the upside, the structural forces raising older people's participation could be even stronger than assumed. On the downside, the observed rise in participation could have been a temporary reaction to weak incomes and lower wealth. To the extent that a stronger or weaker outlook for supply growth is matched by demand growth, the implications for inflation may be limited.

The MPC's judgements about the current level of medium-term equilibrium hours also determine its estimate of current slack. Since August, unemployment has fallen closer to its assumed medium-term equilibrium rate, suggesting less slack. Set against that, the proportion of people participating in the labour market has moved further away from its estimated trend rate (Section 3). Overall, the MPC's best collective judgement remains that slack is currently broadly in the region of 1% of GDP. That slack is likely to be absorbed by the end of the forecast period. There is considerable uncertainty around both the current degree of slack and its likely evolution, and there is a wide range of views on the Committee.

Key Judgement 4: as import costs stop falling, their drag on inflation wanes, and a pickup in unit labour cost growth gradually returns inflation to the 2% target

CPI inflation fell to 1.2% in September, considerably weaker than expected three months ago. Several factors have driven inflation below the 2% target. In stark contrast to much of the past decade, the prices of food, energy and other imported goods and services are now putting downward pressure on inflation. Domestic price pressures also appear muted — underlying unit labour cost growth has probably been close to zero (Section 4).

Lower external price pressures in part reflect developments in commodity markets. Dollar oil prices have fallen by around 20% over the past three months, and agricultural commodity prices are also below 2012 peaks. Those falls reflect both the weaker global outlook and positive news about supply (Section 4). The MPC's projections are conditioned on assumptions that commodity prices follow current futures curves. Those imply little change or small rises in prices, such that the negative contribution to inflation from commodities wanes over the next year or so. That contribution could be higher if, for example, a worsening in geopolitical tensions limited oil supply. But continued downside news on global demand or further positive news on supply would probably result in a longer period of falling commodity prices.

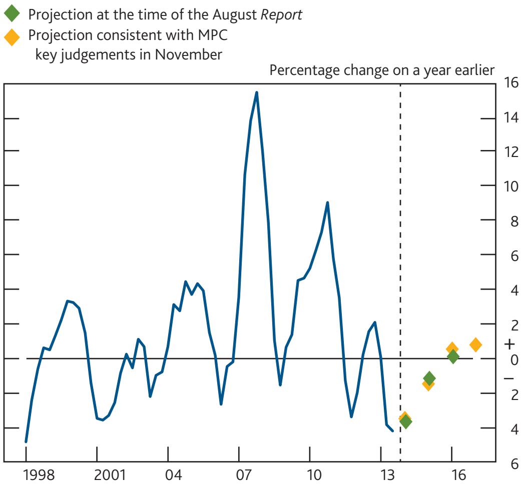
The rise in sterling from its trough in March 2013 has been associated with falling UK import prices more broadly. There is uncertainty about the speed at which lower import prices get passed through to prices in the shops. It is likely that past rises in import prices are only now fully reflected in the prices

Table 5.D Indicative projections consistent with the MPC's modal projections[(a)]

	Average 1998–2007	Projections 2014	2015	2016	2017
Household consumption[(b)]	3¾ (3½)	2 (2¼)	2½ (2¾)	2¾ (2¾)	2¾
Business investment[(c)]	2¼ (2¼)	9½ (12½)	10 (11¼)	8¼ (12)	8
Housing investment[(d)]	3¾ (4½)	13 (9¼)	7½ (13¾)	4¾ (5¾)	1¾
Exports[(e)]	4½ (4½)	-1 (2¼)	4 (5¼)	5½ (4¾)	5
Imports[(f)]	6 (6)	-¾ (1)	5 (5¾)	5¾ (5¼)	5
Real post-tax household income[(g)]	3 (3)	1½ (1¾)	1¼ (1½)	2½ (2½)	2½
Employment[(h)]	1 (1)	2½ (2¾)	1¼ (1¼)	1 (1)	¾
Average weekly earnings[(h)]	4¼ (4¼)	1¼ (1¼)	3¼ (3¼)	3¾ (4)	3¾

(a) These projections are produced by Bank staff for the MPC to be consistent with the MPC's modal projections for GDP growth, CPI inflation and unemployment. Figures show calendar-year growth rates unless otherwise stated. Figures in parentheses show the corresponding projections in the August 2014 *Inflation Report*, which were only available to 2016.
(b) Chained-volume measure. Includes non-profit institutions serving households.
(c) Chained-volume measure.
(d) Chained-volume measure. Whole-economy measure. Includes new dwellings, improvements and spending on services associated with the sale and purchase of property.
(e) Chained-volume measure. The historical data exclude the impact of missing trader intra-community (MTIC) fraud. Official MTIC-adjusted data are not available for exports, so headline exports data have been adjusted by Bank staff for MTIC fraud by an amount equal to the ONS import adjustment.
(f) Chained-volume measure. The historical data exclude the impact of MTIC fraud.
(g) Total available household resources deflated by the consumer expenditure deflator.
(h) Four-quarter growth rate in Q4.

Chart 5.9 Import price inflation[(a)]



Sources: ONS and Bank calculations.

(a) Projections are four-quarter inflation rate in Q4. Excludes the impact of MTIC fraud. Projections were only available to 2016 at the time of the August *Report*.

of some items in the CPI basket. But overall, the MPC judges that import prices (**Chart 5.9**) are pulling down inflation in the second half of 2014, with that drag likely to increase a little in 2015 before slowly waning thereafter. The drag from import prices wanes partly because no further changes in the sterling exchange rate are built in, but also because foreign export price inflation picks up slightly. If world demand remains subdued there is a risk that foreign tradable prices remain flat for longer or even fall.

UK domestic inflationary pressures also remain muted. Wage growth has been weak in recent years reflecting subdued productivity growth, significant labour market slack and, possibly, employees placing more weight on job security than wage growth following the recession. Looking through some volatility, companies' unit labour costs have changed little over the past year.

Cost growth is projected to rise towards more normal rates over the next year or so. Some indicators of pay growth suggest that pay pressures have started to pick up, particularly for new staff, as unemployment has fallen and slack has continued to be absorbed (Section 4). And the Bank's Agents have noted a broadening in reported recruitment difficulties. Those should start to be reflected in average wages across the economy as labour market conditions return to more normal levels: for example, as employees become more willing to move jobs (Section 3). Pay growth is therefore projected to rise to close to 4% by late 2016, reflecting a lessening drag from slack, and also the recovery in productivity growth, which keeps unit labour cost growth contained at around 2%. That rise may come through more quickly if employees become more confident in the sustainability of the UK expansion and push for higher wages in the near term or if there is less slack than the Committee has assumed. On the downside, it remains difficult to account precisely for the recent weakness in wages: if slack has been playing a greater role, it could weigh more on wages over coming years too. Moreover, it is possible that a period of low inflation could itself lead to more moderate wage growth.

5.2 The projections for demand, unemployment and inflation

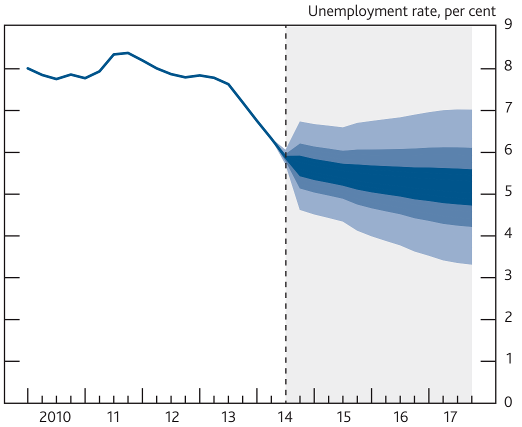
Based on these judgements and the risks around them the Committee judges that four-quarter GDP growth will fall back to its historical average rate (**Chart 5.1**), somewhat above estimated potential supply growth. Over the forecast period, domestic demand growth remains steady, with household and company spending supported initially by lower saving and further out by the recovery in real incomes as productivity growth rises and slack is absorbed. Net exports pull growth down throughout the forecast period. The central outlook for GDP growth is a little weaker than that in August. That in part

Table 5.E Calendar-year GDP growth rates of the modal, median and mean paths(a)

	Mode	Median	Mean
2014(b)	3.5 (3.5)	3.5 (3.5)	3.5 (3.5)
2015	2.9 (3.1)	2.9 (3.0)	2.9 (3.0)
2016	2.6 (2.8)	2.6 (2.7)	2.6 (2.6)
2017	2.6	2.6	2.6

(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 August *Inflation Report*, which were only available to 2016. The November and August 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 and 2015. Without the anticipated upward revisions to past GDP growth, the modal path of the Committee's November projections would imply calendar-year growth of 3.0% in 2014 rather than 3.5%, and 2.8% in 2015 rather than 2.9%.

Chart 5.10 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 Q3, a quarter earlier than the fan for CPI inflation. That is because Q3 is a staff projection for the unemployment rate, based in part on data for July and August. The unemployment rate was 6.0% in the three months to August, and is projected to fall to 5.9% in Q3 as a whole. In the later part of the forecast period, a significant proportion of this distribution lies below Bank staff's current estimate of the long-term equilibrium unemployment rate. There is therefore uncertainty about the precise calibration of this fan chart.

Table 5.F Q4 CPI inflation

	Mode	Median	Mean
2014 Q4	1.2 (1.9)	1.2 (1.9)	1.2 (1.9)
2015 Q4	1.4 (1.7)	1.4 (1.7)	1.4 (1.7)
2016 Q4	1.8 (1.8)	1.8 (1.8)	1.8 (1.8)
2017 Q4	2.0	2.0	2.0

The table shows projections for Q4 four-quarter CPI inflation. The numbers in parentheses show the corresponding projections in the August *Inflation Report*, which were only available to 2016. The November and August 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.

reflects a weaker outlook for housing investment. It also reflects the weaker global outlook and a softer profile for domestic demand more broadly, the latter despite a lower implied path for Bank Rate. Considerable uncertainty about the outlook, stemming in particular from world activity and domestic supply growth, remains. But in light of the weaker central case, the Committee judges the risks around the outlook to be balanced, rather than skewed to the downside as in August (**Chart 5.2**), such that the mean projection is similar (**Table 5.E**).

Although the expansion in demand is associated with some pickup in productivity growth and hence slowing employment growth, the unemployment rate falls further (**Chart 5.10**), to only a little above its assumed long-run equilibrium rate of around 5%. There is uncertainty around both the current degree of slack and how quickly it will be absorbed, but in the central projection slack is broadly absorbed by the end of the forecast period.

Inflation is judged likely to remain close to 1% over the first year of the projection, reflecting past falls in energy, food and other import prices and some continued drag from domestic slack. Thereafter, the profile hinges on the outlook for domestic inflationary pressures. In the central projection, the gradual pickup in productivity growth and declines in slack are associated with a recovery in wage and unit labour cost growth that returns CPI inflation to the 2% target (**Table 5.F**). The near-term projection is considerably lower than it was three months ago. It is more likely than not that inflation will temporarily fall below 1% at some point over the next six months, necessitating an open letter to the Chancellor. Overall, the risks around the central projection are judged to be broadly balanced. While there is a range of views on the Committee, the MPC's best collective judgement is that the risks around the 2% target are broadly balanced by the end of the forecast period (**Chart 5.11**).

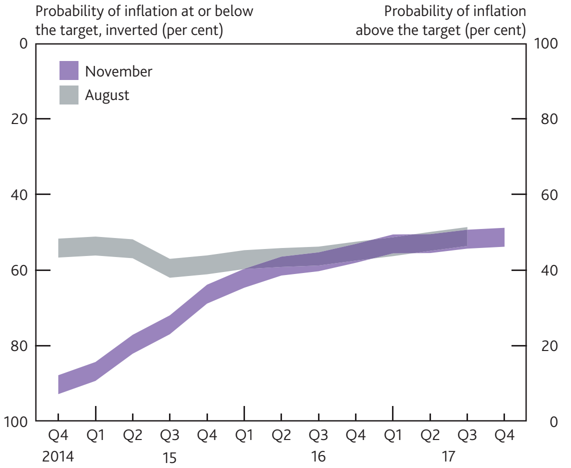
Charts 5.12 and **5.13** show the Committee's GDP and CPI inflation projections under the alternative assumption that Bank Rate remains at 0.5% throughout the forecast period.(1) In that case, GDP growth only falls back to its historical average rate by the end of the forecast period, and it is more likely than not that inflation would be above the 2% target in the second half of the forecast period.

5.3 The policy decision

UK domestic demand growth remained robust in the first half of 2014. But the global backdrop has weakened, particularly in the euro area. CPI inflation fell to 1.2% in September, well

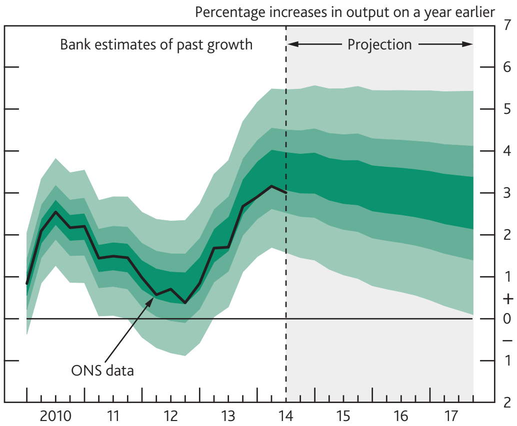
(1) The constant rate projections in this *Report* assume that Bank Rate is 0.5% for the next three years, and then rises towards the market path over the next three years; that path is anticipated by businesses and households.

Chart 5.11 Inflation probabilities relative to the target



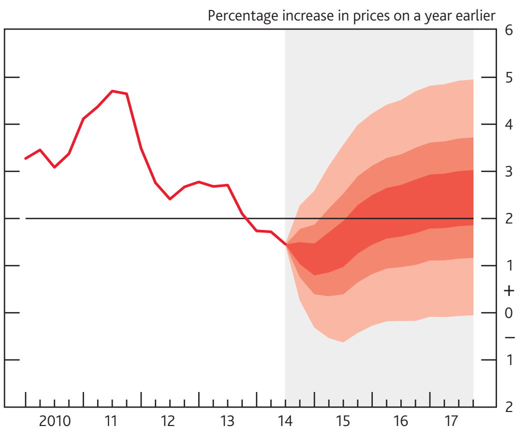
The November and August swathes in this chart are derived from the same distributions as **Charts 5.3** and **5.4** respectively. They indicate the assessed probability of inflation relative to the target in each quarter of the forecast period. The 5 percentage points width of the swathes reflects the fact that there is uncertainty about the precise probability in any given quarter, but they should not be interpreted as confidence intervals.

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



See footnote to **Chart 5.1**.

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



See footnote to **Chart 5.3**.

below the 1.7% expected at the time of the August *Report*. Low inflation in part reflects downward pressure from food, energy and the prices of other imported goods and services, which were previously pushing inflation above the 2% target. But domestic price pressures are also weaker than previously thought.

At its November meeting, the Committee noted that market participants had revised down their expectations for the path of Bank Rate, by around 0.5 percentage points on average over the next three years, since the time of the August *Report*. This was probably in response to the weaker global outlook. The outlook for domestic demand also appeared softer. Taking those together, the central outlook for four-quarter output growth was a little weaker than expected three months ago. Growth was expected to fall back to around its historical average rate and slack to be absorbed over the next three years. That absorption in slack was associated with inflation returning to the 2% target by the three-year forecast horizon. But the near-term profile for inflation was markedly different from that in August, with inflation likely to remain close to 1% over the next twelve months.

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 November 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 and to remain below average historical levels for some time to come. The actual path for monetary policy 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 purchased assets at £375 billion.

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 in October.[1] On average, respondents expected four-quarter GDP growth of around 2.4% over the forecast period (**Table 1**), unchanged from that expected at the time of the August *Report*, and below its historical average rate of 2¾%. The LFS unemployment rate was expected to fall to 5.2% over the next three years, around 0.3 percentage points lower than at the time of the August *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 August *Report*.

Table 1 Averages of other forecasters' central projections[a]

	2015 Q4	2016 Q4	2017 Q4
CPI inflation[b]	1.9	2.1	2.1
GDP growth[c]	2.5	2.4	2.3
LFS unemployment rate	5.5	5.3	5.2
Bank Rate (per cent)	1.2	1.9	2.6
Stock of purchased assets (£ billions)[d]	366	345	315
Sterling ERI	87.8	87.5	86.1

Source: Projections of outside forecasters as of 27 October 2014.

(a) For 2015 Q4, there were 25 forecasts for CPI inflation and GDP growth, 24 for Bank Rate, 23 for the unemployment rate, 20 for the stock of asset purchases and 17 for the sterling ERI. For 2016 Q4, there were 23 forecasts for CPI inflation and GDP growth, 24 for Bank Rate, 21 for the unemployment rate, 19 for the stock of asset purchases and 16 for the sterling ERI. For 2017 Q4, there were 20 forecasts for CPI inflation and GDP growth, 19 for Bank Rate, 18 for the unemployment rate, 17 for the stock of asset purchases and 14 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.

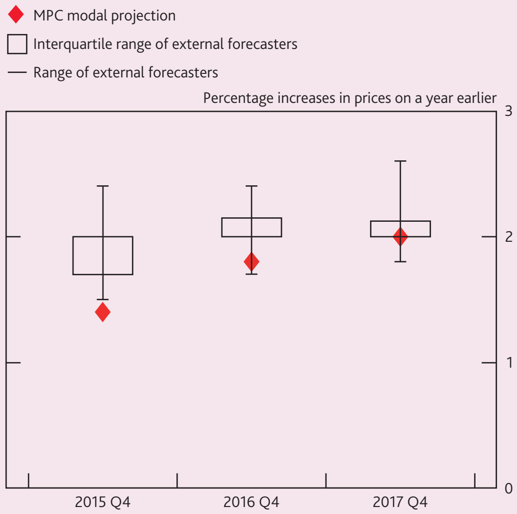
External forecasters' expectations for four-quarter GDP growth were a little weaker than those of the MPC. External forecasters' average central expectation was for growth to slow a little over the three years, from 3% in 2014 Q3 to around 2.3% in three years' time. That is a little weaker than the MPC's central expectation for growth of around 2.6% at the end of the forecast period.

The average of respondents' central expectations for CPI inflation, of around 2%, was a little higher than that of the MPC at the one and two-year horizon, but broadly similar at the three-year horizon (**Chart A**). This may, in part, reflect the timing of the survey: around a quarter of survey respondents' projections pre-date the September CPI inflation release, which showed a fall in inflation to 1.2% (Section 4).

Forecasters expected some tightening in the monetary stance over the forecast period, due to both a higher level of Bank Rate and a lower stock of purchased assets. External forecasters expect Bank Rate rises to be gradual (**Chart B**). The stock of purchased assets was, on average, expected to fall by around £60 billion over the forecast period, less than expected three months ago. Most of that fall is expected to happen in the later part of the forecast period.

Chart A External forecasters expect CPI inflation of around 2% over the forecast period

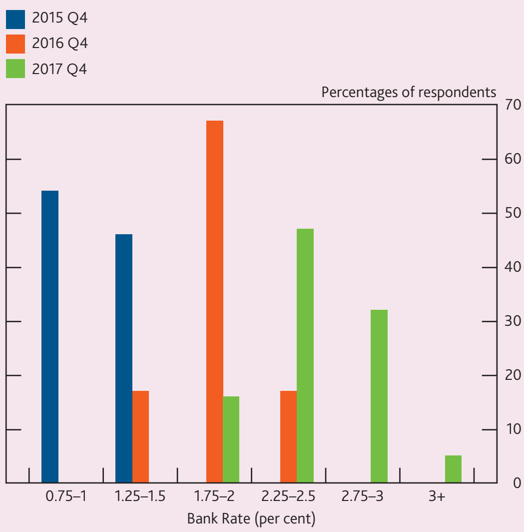
Range of central expectations for CPI inflation



Source: Projections of outside forecasters as of 27 October 2014.

Chart B External forecasters expect Bank Rate rises to be gradual

Forecasters' central projections of the level of Bank Rate[a]



Source: Projections of outside forecasters as of 27 October 2014.

(a) For 2015 Q4 and 2016 Q4, 24 forecasters provided their central projection for the level of Bank Rate. For 2017 Q4, 19 forecasters provided their central projection for the level of Bank Rate.

(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/ir14novofe.pdf.

Index of charts and tables

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Text of Bank of England press notice of 4 September 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, and so to reinvest the £14.4 billion of cash flows associated with the redemption of the September 2014 gilt held in the Asset Purchase Facility.

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

Text of Bank of England press notice of 9 October 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 on 8 October 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 22 October.

Text of Bank of England press notice of 6 November 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 inflation and output projections will appear in the *Inflation Report* to be published at 10.30 am on Wednesday 12 November.

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

Glossary and other information

Glossary of selected data and instruments

AWE – average weekly earnings.
CDS – credit default swap.
CPI – consumer prices index.
CPI inflation – inflation measured by the consumer prices index.
ERI – exchange rate index.
GDP – gross domestic product.
HICP – harmonised index of consumer prices.
LCF – Living Costs and Food Survey.
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.
RPI – retail prices index.
RPI inflation – inflation measured by the retail prices index.

Abbreviations

BCC – British Chambers of Commerce.
CBI – Confederation of British Industry.
CCS – Credit Conditions Survey.
CEIC – CEIC Data Company Ltd.
CFO – chief financial officer.
CIPS – Chartered Institute of Purchasing and Supply.
CML – Council of Mortgage Lenders.
ECB – European Central Bank.
ESA – European System of National and Regional Accounts.
EU – European Union.
FDI – foreign direct investment.
FLS – Funding for Lending Scheme.
FTSE – Financial Times Stock Exchange.
GfK – Gesellschaft für Konsumforschung, Great Britain Ltd.
IMF – International Monetary Fund.
LTV – loan to value.
MFIs – monetary financial institutions.
MPC – Monetary Policy Committee.
MSCI – Morgan Stanley Capital International Inc.
MTIC – missing trader intra-community.
NIIP – net international investment position.
NPISH – non-profit institutions serving households.
OECD – Organisation for Economic Co-operation and Development.
OFCs – other financial corporations.
ONS – Office for National Statistics.
OPEC – Organization of the Petroleum Exporting Countries.
PNFCs – private non-financial corporations.
PPP – purchasing power parity.
PwC – PricewaterhouseCoopers.
REC – Recruitment and Employment Confederation.
RICS – Royal Institution of Chartered Surveyors.
S&P – Standard & Poor's.
SIC – Standard Industrial Classification.
SMEs – small and medium-sized enterprises.
WEO – IMF *World Economic Outlook*.

Symbols and conventions

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

n.a. = not available.

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

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

ISSN 1353-6737
Printed by Park Communications Limited