

Inflation Report

August 2008



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 objective of maintaining high and stable growth and employment.

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

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

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

The Monetary Policy Committee:

Mervyn King, Governor

Charles Bean, Deputy Governor responsible for monetary policy

John Gieve, Deputy Governor responsible for financial stability

Kate Barker

Tim Besley

David Blanchflower

Spencer Dale

Andrew Sentance

Paul Tucker

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

The entire *Report* is available in PDF at www.bankofengland.co.uk/publications/inflationreport/2008.htm.

PowerPoint™ versions of the charts in this *Report* and the data underlying most of the charts are provided at www.bankofengland.co.uk/publications/inflationreport/2008.htm.

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Overview

In the United Kingdom, output growth eased in the second quarter and surveys pointed to further slowing in the third. Consumer spending appeared to decelerate as households' real incomes were squeezed. Residential and business investment prospects deteriorated. Global economic activity was a little firmer than expected, but the near-term outlook for the advanced economies remained subdued. Under the assumption that Bank Rate moves in line with market yields, the Committee's central projection is for output to be broadly flat over the next year or so, after which growth gradually recovers. But there is a risk that the slowdown may be more pronounced.

CPI inflation rose markedly. Energy and import cost pressures increased. Some measures of household inflation expectations rose. Earnings growth remained moderate. In the central projection, higher energy, food and import prices push inflation substantially higher over the next few months. Inflation then falls back sharply to a little below the 2% target in the medium term, as the contribution from energy, food and import prices wanes and the margin of spare capacity increases. But considerable uncertainty surrounds this outlook. The main risks to inflation — from a more pronounced slowdown in demand on the downside, and from the possible impact of a prolonged period of elevated inflation on pay pressures and inflation expectations on the upside — have both increased since the *May Report*. Overall, the balance of risks to inflation is judged to be on the upside.

Financial markets

Financial market participants' expectations of the near-term paths of policy rates in the advanced economies rose as the prospects for inflation deteriorated, and international equity prices fell. Credit conditions tightened further. In the United Kingdom, lenders' concerns over credit quality increased against a backdrop of softening demand and falling property prices. Access to funding markets remained tight and the process through which UK banks raised new capital proved difficult. Banks and other financial institutions continued to restrain the growth of their balance sheets, pushing down on money and credit growth.

Domestic demand

Household spending appeared to slow in the first half of this year. But the extent of the moderation is uncertain, with surveys of retailers suggesting an earlier and sharper slowdown than implied by official estimates. The picture painted by the surveys seems more consistent with the pronounced squeeze on real take-home pay and the reduced availability of credit.

Increases in domestic energy and import prices are likely to erode households' purchasing power further over the next year or so. Tight credit conditions, accompanied by marked weakness in the housing market, are also likely to weigh on household spending. A period of muted consumption growth is therefore in prospect.

The outlook for investment deteriorated. Investment in dwellings declined in 2008 Q1, as the housing market weakened sharply and house builders scaled back construction. Pronounced falls in a range of activity indicators suggest that dwellings investment is likely to exert a sizable drag on GDP growth in the near term. Business investment plans have also been scaled back, reflecting the weaker and more uncertain outlook for demand and the tightening of credit conditions.

Government spending made another firm contribution to nominal domestic demand growth in early 2008. Conditioned on the fiscal plans set out in *Budget 2008*, the public sector's contribution to nominal demand growth is assumed to decline over the forecast period.

Overseas trade

The expansion of global economic activity in the first half of 2008 was somewhat stronger than expected. But the near-term prospects for activity in the advanced economies remained fragile. Rapid output growth in the euro area in the first quarter looks set to be followed by a period of subdued economic activity. In the United States, GDP advanced at a moderate rate in the second quarter, but weakness in housing and labour markets persisted. By contrast, output growth in Asia and commodity-exporting economies remained robust.

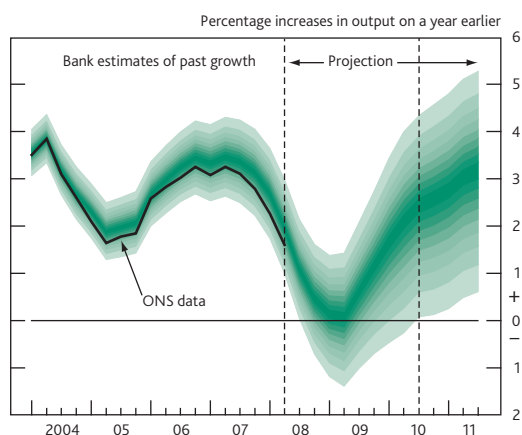
The United Kingdom's main overseas markets seem likely to slow, bearing down on the demand for UK exports. But the improvement in competitiveness associated with the depreciation of sterling over the past year should help to support export volumes and slow import growth.

The outlook for GDP growth

According to the ONS's preliminary estimate, quarterly GDP growth eased to 0.2% in 2008 Q2. Subsequent data on industrial production suggested that growth in the second quarter may have been weaker than provisionally estimated, and business surveys and reports from the Bank's regional Agents point to broadly flat output in the third quarter.

Chart 1 shows the Committee's best collective judgement for four-quarter GDP growth, assuming that Bank Rate follows a path implied by market yields. In the central projection, output is broadly flat in the early part of the forecast. That

Chart 1 GDP projection based on market interest rate expectations



The fan chart depicts the probability of various outcomes for GDP growth. To the left of the first vertical dashed line, the distribution reflects the likelihood of revisions to the data over the past; to the right, it reflects uncertainty over the evolution of GDP growth in the future. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that the mature estimate of GDP would lie within the darkest central band on only 10 of those occasions. The fan chart is constructed so that outcomes are also expected to lie within each pair of the lighter green areas on 10 occasions. Consequently, GDP growth is expected to lie somewhere within the entire fan on 90 out of 100 occasions. The bands widen as the time horizon is extended, indicating the increasing uncertainty about outcomes. See the box on page 39 of the November 2007 *Inflation Report* for a fuller description of the fan chart and what it represents. The second dashed line is drawn at the two-year point of the projection.

reduces pressures on resources both in the labour market and within businesses. Sluggish real income growth and constraints on the ability of households to borrow dampen consumer spending, while the weak outlook for demand and the housing market lead to falls in business and residential investment. Thereafter, economic growth gradually picks up, as the restraining effect of higher energy prices on demand and output dissipates, credit conditions ease and the lower level of sterling continues to support net trade. But the balance of risks around this central projection is judged to be on the downside, particularly in the medium term. The outlook over the first part of the projection is noticeably weaker than in the *May Report*.

Costs and prices

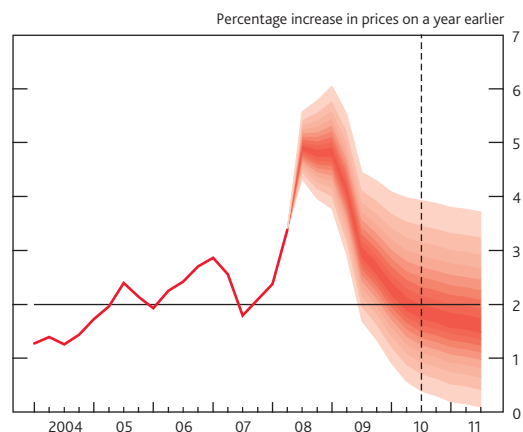
CPI inflation increased to 3.8% in June, reflecting sharp increases in food and petrol prices. Wholesale prices of oil and gas rose sharply in the period following the *May Report*, but have subsequently fallen back. Non-energy import price inflation also picked up, partly reflecting the lagged effects of sterling's substantial depreciation. CPI inflation is expected to pick up sharply over the next few months, in part reflecting the announcements already made about higher retail gas and electricity prices.

Manufacturing and service sector output prices rose, and near-term pricing intentions of businesses remained elevated, particularly in the manufacturing sector. But reports from the Bank's regional Agents indicate that some consumer-facing businesses are finding it harder to pass on price increases. Given the outlook for slowing demand, these businesses may be forced temporarily to absorb some of the increases in input costs in order to support sales.

However, in order to continue in operation, companies will over time have to pass the burden of higher non-labour costs on to households. That will occur through some combination of lower nominal wage growth, higher prices and lower employment growth, implying a reduction in the purchasing power of households' incomes. Real pay growth has already moderated and looks set to slow further, as increased non-wage costs lead businesses to put downward pressure on labour costs in a loosening labour market. But if employees resist the required adjustment in real wages, that would lead to a more pronounced slowing in output and employment.

Measures of expected inflation one year ahead rose. The rise in near-term inflation expectations is consistent with households expecting the rise in inflation to be temporary. But there is a risk that, when forming their medium and longer-term inflation expectations, households and businesses extrapolate from observed inflation outturns and that these higher inflation expectations become embedded in wage and

Chart 2 CPI inflation projection based on market interest rate expectations



The fan chart depicts the probability of various outcomes for CPI inflation in the future. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that inflation over the subsequent three years would lie within the darkest central band on only 10 of those occasions. The fan chart is constructed so that outcomes of inflation are also expected to lie within each pair of the lighter red areas on 10 occasions. Consequently, inflation is expected to lie somewhere within the entire fan chart on 90 out of 100 occasions. The bands widen as the time horizon is extended, indicating the increasing uncertainty about outcomes. See the box on pages 48–49 of the May 2002 *Inflation Report* for a fuller description of the fan chart and what it represents. The dashed line is drawn at the two-year point.

price-setting. Movements in measures of longer-horizon inflation expectations have been mixed: some measures have remained broadly unchanged; others have moved up a little. An increase in longer-horizon expectations would be costly to reverse and would probably require a more pronounced slowdown in economic activity in order to achieve the inflation target.

The outlook for inflation

Chart 2 shows the Committee's best collective judgement of the outlook for CPI inflation, assuming that Bank Rate follows market yields. In the central projection, higher energy, food and import prices push inflation substantially further above the 2% target in coming months. Inflation then falls back sharply to a little below target in the medium term, as the contribution from energy, food and import prices wanes and the margin of spare capacity increases. The projection for inflation in the near term is markedly higher than in the *May Report*.

The inflation outlook is unusually uncertain. There are significant risks on both sides of the central projection. On the downside, the key risk is the possibility that the higher level of energy prices and the dislocation in credit markets lead to a deeper and more prolonged period of subdued demand. That would open up a larger margin of spare capacity which could cause inflation to undershoot the target. On the upside, the main risk is the possibility that the period of inflation well above target prompts an increase in medium-term inflation expectations that feeds into wage and price-setting. Both risks are judged to have increased since the *May Report*. Overall, the balance of risks around the central projection for inflation is judged to be on the upside. There is a range of views among the Committee on both the central projection and the balance of risks.

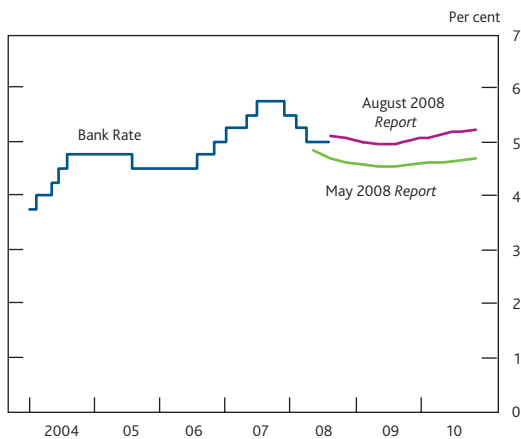
The policy decision

At its August meeting, the Committee noted that the immediate prospect was for CPI inflation to move substantially further above the 2% target, and for output to be broadly flat. The weakness of economic activity would open up a margin of spare capacity, which was likely to be necessary in order to return inflation to the target in the medium term and to ensure that longer-term inflation expectations remained close to the target. There were significant risks to the inflation outlook relating to the extent of the slowdown and to the persistence of the pickup in inflation. In the light of those risks, the Committee judged that maintaining Bank Rate at 5% at its August meeting was appropriate in order to meet the 2% target for CPI inflation over the medium term.

1 Money and asset prices

Since the *May Report*, the MPC has maintained Bank Rate at 5%. Concerns about the outlook for inflation led to higher market interest rates. But financial market participants also became more concerned about the outlook for activity and its potential impact on banks' balance sheets. Equity and property prices fell as banks and other financial institutions continued to restrain the growth of their balance sheets, tightening credit conditions and reducing underlying money and credit growth.

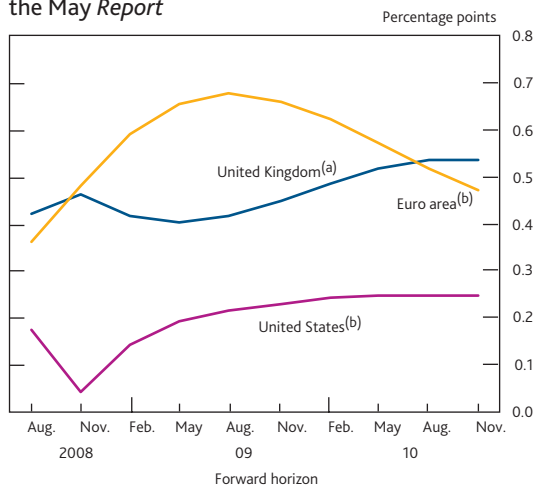
Chart 1.1 Bank Rate and forward market interest rates^(a)



Sources: Bank of England and Bloomberg.

(a) The August and May 2008 curves are based on fifteen working day averages to 6 August and 7 May respectively. At short maturities, the May curve is based on general collateral gilt repo rates, while the August curve is based on overnight index swap (OIS) rates. That change reflects increased liquidity in the OIS market, but has little quantitative impact on the curve. At longer maturities both curves are based on instruments that settle on Libor, adjusted for credit risk.

Chart 1.2 Changes in forward market interest rates since the *May Report*



Sources: Bloomberg and Bank calculations.

(a) The difference between the August and May 2008 curves shown in **Chart 1.1**.
(b) Differences between US and euro-area overnight government forward rates in the fifteen working days to 6 August and 7 May 2008.

1.1 Financial markets and asset prices

Interest rates

Since the *May Report*, the MPC has maintained Bank Rate at 5%. The box on page 10 summarises the reasons for the MPC's policy decisions in June and July. In the run-up to the Committee's August decision, market participants expected interest rates to be roughly constant over the next two years (**Chart 1.1**). That was higher than in May, reflecting the perceived deterioration in the near-term inflation outlook. By contrast, a Reuters survey of economists' interest rate expectations indicated that Bank Rate was expected to fall by around 0.75 percentage points by the end of 2009.

Official interest rates were unchanged in the United States and Japan, while the European Central Bank raised rates by 0.25 percentage points in July. As in the United Kingdom, forward rates rose internationally, reflecting increased inflationary pressures (**Chart 1.2**). Increased uncertainty about the near-term macroeconomic outlook was also reflected in a substantial rise in forward implied interest rate volatility.

The spread between expected policy rates and the rates that banks charge on loans to each other fell a little over the past three months in both the United Kingdom and the euro area, despite the heightened macroeconomic uncertainty and a marked deterioration in financial sector equity prices. In part, that may reflect the actions of some central banks, including the Bank of England, to improve liquidity and confidence in the banking system. Banks nevertheless remained reluctant to lend to each other (without collateral) for anything other than short periods. Reflecting that, market participants expected the spread between interbank rates and expected policy rates to fall back only gradually.

The continued reluctance to lend may, in part, reflect recent developments in the United States and their implications for the rest of the world. A further deterioration in the US housing market has affected sentiment towards the major players in

Monetary policy since the May Report

The MPC's central projection in the *May Report*, under the assumption that Bank Rate followed a downward path implied by market yields, was for GDP growth to slow markedly through 2008. CPI inflation was projected to rise further above the 2% target, before moving back to around the target in the medium term.

In the lead up to the Committee's meeting on 4–5 June, market expectations of UK interest rates had risen substantially. Equity prices had fallen by around 4½%, with financial sector stocks accounting for a major part of the decline. The sterling effective rate was broadly unchanged.

In the euro area, the first estimate of Q1 GDP growth had been unexpectedly strong, but indicators for the second quarter had been consistent with slower growth. In the United States, GDP growth had been revised up slightly to 0.2% in Q1, but the housing market had continued to deteriorate and the risk of a protracted slowdown in output growth had not changed materially.

In the United Kingdom, the latest estimate for Q1 GDP growth was 0.4%. The official estimate of consumption growth had been surprisingly strong, in contrast to survey data and anecdotal information that had continued to suggest a weaker picture. Indicators for the second quarter had pointed to some further slowing in GDP growth. Broad money growth appeared to have slowed over the previous few months.

CPI inflation had risen to 3% in April, reflecting upside news across a range of prices. With the further rise in oil prices, it was likely that inflation would rise to a peak later in 2008 that was well above its current level. But it remained most likely that inflation would, at some point over the next year or so, move back towards the 2% target. So far, there was little evidence that wage growth was being driven upwards by higher short-term inflation. However, household measures of inflation expectations had risen further.

Most members concluded that developments in the past month had moved the risks to inflation in the medium term further to the upside. It was possible that a somewhat greater degree of slack would now be necessary to ensure inflation returned to the target. For those members there was therefore no case for a reduction in Bank Rate. For one member, however, the news on short-term inflation developments had been more than outweighed by the prospect of slowing activity growth and its likely impact on medium-term CPI inflation.

Given these considerations, eight Committee members voted to maintain Bank Rate at 5%. One member preferred a decrease in Bank Rate of 0.25 percentage points.

In the month leading up to the MPC meeting on 9–10 July, the near-term outlook for inflation had worsened, there had been downside news for activity, and the financial sector remained fragile. Forward market interest rates had risen in the first part of June, but had later fallen back following weak data on activity, the housing market and equity prices.

In the United States, a number of indicators were pointing to a much stronger outturn for GDP in Q2 than had been expected at the time of the *May Report*. But consumer confidence and non-farm payrolls had fallen further. In the euro area, business surveys had weakened, and HICP inflation had increased. Oil prices had ended the month some 10% higher in dollar terms.

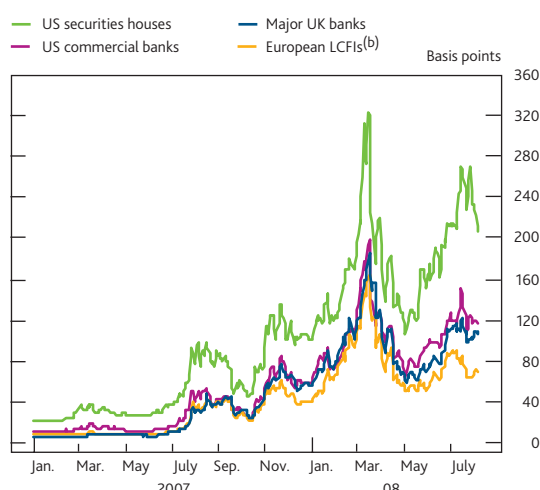
UK GDP growth had been revised down a little to 0.3% in Q1, and the latest monthly output data and survey indicators were pointing to a further slowing in the second quarter. The housing market had continued to weaken rapidly. That accorded with the reduced availability of secured credit to households reported in the Bank's *Credit Conditions Survey*. The growth rates of broad money and credit had slowed sharply in the past few months, a possible sign of future weakness in economic activity.

CPI inflation had risen to 3.8% in June, higher than the Committee had been expecting. Some survey-based measures of household inflation expectations had also risen. But there were still few signs of rising labour cost inflation.

All members agreed that, relative to the central projections in the *May Report*, the path of inflation in the near term would be higher and the slowdown in activity more pronounced. Most members judged that the risks to inflation in the medium term were most likely to be balanced by maintaining Bank Rate at 5% this month. One member felt that an immediate increase in Bank Rate was needed to keep medium-term inflation expectations anchored and ensure the Committee's credibility in light of the current and prospective increase in CPI inflation. For another member, the news on the month had reinforced the case for an immediate reduction in Bank Rate in order to avoid inflation undershooting the target in the medium term.

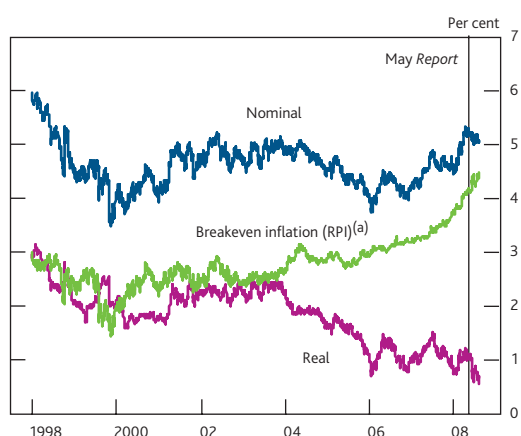
Seven Committee members voted to maintain Bank Rate at 5%. One member preferred to raise Bank Rate by 0.25 percentage points and one member preferred a reduction of 0.25 percentage points.

At its meeting on 6–7 August, the Committee voted to maintain Bank Rate at 5%.

Chart 1.3 Credit default swap premia^(a)

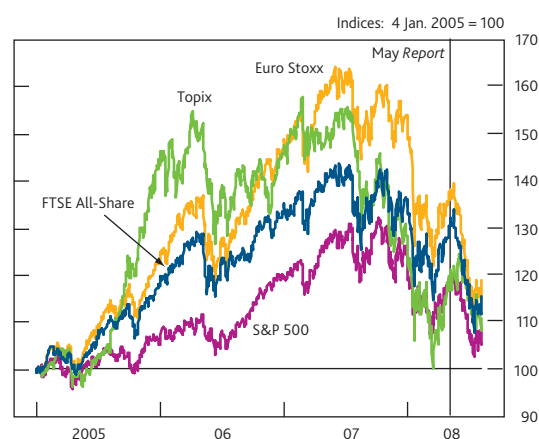
Sources: Markit Group Limited, Thomson Datastream, published accounts and Bank calculations.

(a) Asset-weighted average five-year premia.
(b) Large complex financial institutions.

Chart 1.4 UK ten-year forward rates

Sources: Bloomberg and Bank calculations.

(a) Implied instantaneous RPI inflation, based on differences between interest rates prevailing on nominal and index-linked bonds.

Chart 1.5 Changes in international equity prices since 4 January 2005^(a)

Source: Thomson Datastream.

(a) In local currency terms.

the mortgage market, including the government-sponsored enterprises, Fannie Mae and Freddie Mac. Increasing loan defaults and a rapid withdrawal of deposits led to IndyMac — the second largest independent lender in the United States — being taken over by the Federal Deposit Insurance Corporation in early July. Concerns about the outlook for the financial sector were also evident in the United Kingdom as the near-term macroeconomic outlook worsened. Equity prices of financial companies fell sharply over the past three months, and credit default swap premia — which provide a measure of the cost of insuring against default — picked up since May (Chart 1.3). Recent developments in bank lending behaviour are discussed in Section 1.2.

Ten-year nominal forward rates have edged down since the May Report (Chart 1.4). That fall was more than accounted for by a decline in real interest rates. Breakeven inflation rates — the difference between the return on nominal and inflation-indexed government debt — rose over the past three months, continuing a trend seen since 2004. A key issue for the MPC is the extent to which that signals an increase in medium-term inflation expectations, as discussed in Section 4.2.

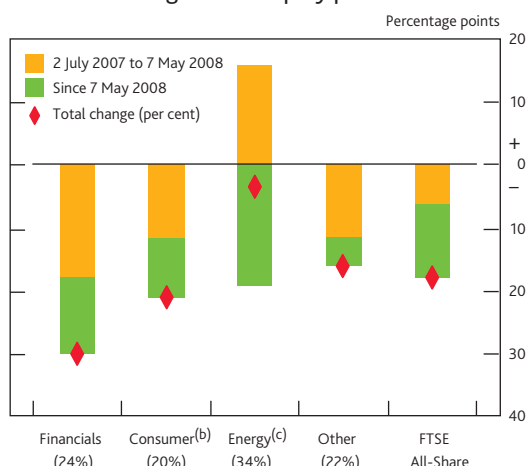
Equity prices

Equity prices have fallen sharply in the United Kingdom and elsewhere (Chart 1.5). In the fifteen working days to 6 August, the FTSE All-Share index was around 12% lower than the starting point for the May Report. That reflected a more broadly based decline across sectors than had been seen over the previous nine months (Chart 1.6). Equity prices in the consumer goods and services sectors fell by more than 10% over the past three months, while house-building companies experienced even sharper declines, with prices down around 40% over the same period. And even equity prices in the energy sector, which had outperformed the market earlier in the year on the back of higher energy prices, fell back.

In part, the broad-based nature of the decline in equity prices since the May Report suggests a pickup in the risk premium demanded by investors, reflecting increased uncertainty over the outlook. But earnings expectations have also fallen, reflecting weaker demand prospects and higher costs. According to IBES, in the lead up to the August Report, equity analysts expected corporate earnings to grow by 3.7% in 2008, down from 6.5% at the time of the May Report. The July Merrill Lynch Fund Managers' Survey was somewhat more downbeat, with a net balance of 58% of respondents believing that equity analysts' earnings forecasts for the coming year were too optimistic.

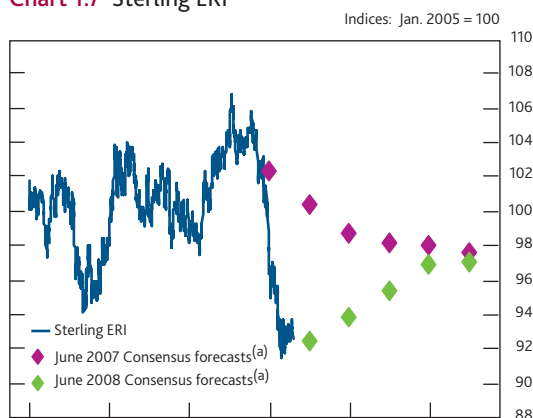
Exchange rates

The sterling ERI has been broadly stable over the past three months. In the fifteen working days to 6 August, it was 0.3%

Chart 1.6 Changes in UK equity prices^(a)

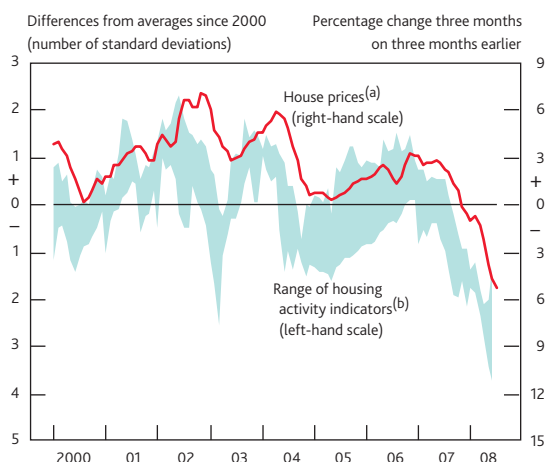
Sources: Thomson Datastream and Bank calculations.

- (a) Sectors based on Thomson Datastream classifications. The weight of each sector in the FTSE All-Share is shown in parentheses.
(b) Includes consumer goods and services.
(c) Includes oil, gas, utilities and mining.

Chart 1.7 Sterling ERI

Sources: Bloomberg, Consensus Economics and Bank calculations.

- (a) Based on surveys dated 11 June 2007 and 9 June 2008. Derived from bilateral US dollar, euro and yen exchange rates, weighted by UK trade shares.

Chart 1.8 Residential property market activity and prices

Sources: Bank of England, Halifax, Home Builders Federation (HBF), Nationwide and Royal Institution of Chartered Surveyors (RICS).

- (a) Average of Halifax and Nationwide. The published Halifax index has been adjusted in 2002 by the Bank of England to account for a change in the method of calculation.
(b) The swathe includes: HBF site visits, HBF net reservations and RICS new buyer enquiries net balances; the RICS sales to stock ratio; and the number of loan approvals for house purchase. HBF data are seasonally adjusted by Bank staff.

higher than the starting point for the *May Report*. That stability contrasts with the substantial depreciation between August 2007 and May 2008.

Movements in exchange rates will reflect changes in: relative interest rates; market participants' views about the sustainable level of the exchange rate; and risk premia. The majority of the fall since August 2007 cannot be attributed to changes in relative interest rates between the United Kingdom and abroad. And Consensus forecasts suggest that market commentators' views about the medium-term level of sterling have changed little since last summer (**Chart 1.7**). That suggests they believe that much of the fall in the ERI reflects a, possibly temporary, increase in the sterling risk premium.

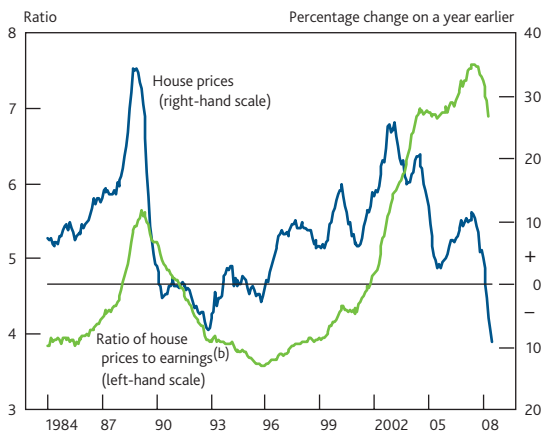
Property prices

Residential property market conditions have weakened markedly in the past three months. The average of the Nationwide and Halifax price indices fell by 4% in Q2. Prices fell further in July, leaving them around 9% down on a year earlier. The decline in prices was widespread, with the Royal Institution of Chartered Surveyors (RICS) survey measure of house price changes indicating that almost all chartered surveyors had seen prices fall over the past three months.

The fall in house prices coincided with a sharp deterioration in measures of housing market activity (**Chart 1.8**). The number of loan approvals for house purchase in June, for example, was nearly 70% lower than a year earlier. In part that reflected the tightening in credit supply (Section 1.2). But it probably also reflected potential buyers staying out of the market in anticipation of further price declines. The RICS measure of the ratio of sales to stocks — an indicator of overall market tightness — also continued to fall, suggesting further weakness in house prices over the coming months.

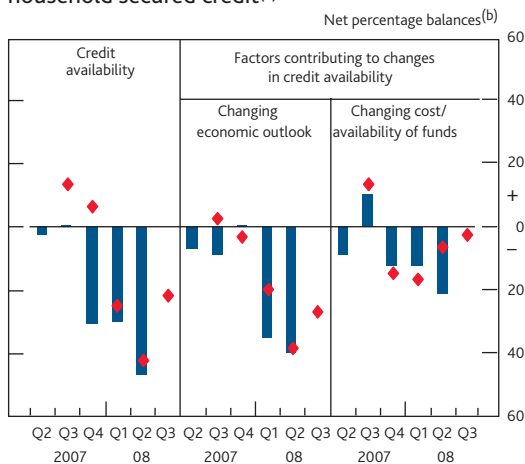
Over the past decade there has been a substantial rise in the ratio of house prices to earnings. The recent fall in house prices has begun to reverse that trend (**Chart 1.9**), and further decreases are likely in the near term. But the medium-term outlook is highly uncertain. Some factors underpinning past increases in the house price to earnings ratio, such as the growth in the demand for housing due to demographic changes, may persist. But others, such as the increased availability of credit for borrowers with little or no deposit, have reversed, and are unlikely to return to the levels seen in recent years.

Conditions in the commercial property market have also continued to deteriorate. Commercial property prices fell by a further 4.1% in the three months to June, according to the Investment Property Databank. That left prices around 20% lower than their peak a year ago. Derivatives contracts implied

Chart 1.9 House prices and earnings^(a)

Sources: Halifax, Nationwide, ONS and Bank calculations.

- (a) Average of the Halifax and Nationwide measures from 1991 onwards. Prior to that, the Halifax measure is used as the Nationwide measure is not available at a monthly frequency. The published Halifax index has been adjusted in 2002 by the Bank of England to account for a change in the method of calculation.
- (b) Average house price divided by average annual earnings. Average annual earnings based on the 2007 annual survey of hours and earnings (ASHE) and the average earnings index (AEI).

Chart 1.10 Credit Conditions Survey: availability of household secured credit^(a)

- (a) The blue bars show responses over the previous three months. The red diamonds show expectations over the next three months. Expectations balances have been moved forward one quarter so that they can be compared with the actual outcomes in the following quarter.
- (b) A positive balance indicates that more credit is available, or that the changes in the factors described served to increase credit availability.

that market participants expected prices for commercial property to fall by a further 5% in 2008 H2.

1.2 Credit conditions

Bank lending behaviour

The supply of credit to both households and businesses has continued to tighten since the *May Report*. That tightening reflected three key pressures on lenders: the elevated cost and difficulty in accessing funding; the pressure on banks to continue deleveraging, by reducing the scale of lending as well as raising new capital; and the adverse impact on bank assets — such as residential mortgages — of weaker economic prospects.

Access to funding markets remained tight and the process through which UK banks raised new capital proved difficult. Nevertheless, lenders expect funding conditions in Q3 to be less of a factor in dampening the availability of overall household secured credit than they were in Q2, according to the Bank's latest *Credit Conditions Survey* (Chart 1.10).

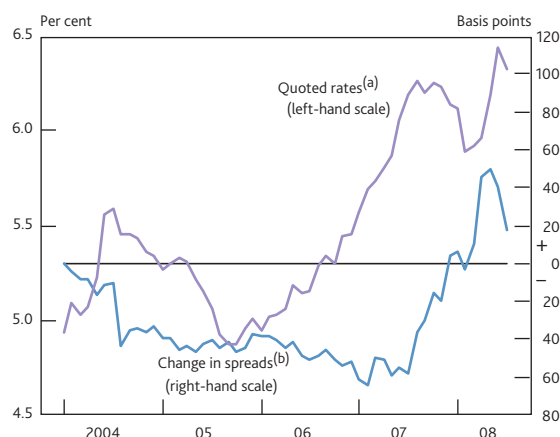
Since the turn of the year, however, lenders have become more pessimistic about the economic outlook. Weaker household incomes and corporate profits increase the risk of loan defaults. Measures of household and corporate stress remain low relative to their historical peaks (Section 2). But they have picked up, in some cases quite sharply, and lenders expect a further increase in Q3, according to the *Credit Conditions Survey*. Falling property and other asset prices also reduce the value of banks' collateral, increasing the expected loss for a given level of defaults and potentially weakening their risk-weighted capital positions.⁽¹⁾ According to the *Credit Conditions Survey*, losses sustained on defaulting loans rose in Q2, with an expected further increase in Q3. Prospects in the housing market were reported to be a particular concern: the net balance of lenders indicating that the outlook for house prices was likely to affect the availability of household credit adversely rose substantially in the latest *Survey*.

Although the *Credit Conditions Survey* provides a qualitative indication of lenders' intentions, it does not provide a direct measure of the scale of these effects. The MPC's assessment of the impact of tighter credit supply on output and inflation is set out in Section 5. The rest of this subsection reviews the recent tightening in credit conditions in more detail.

Price and quantity of household credit

Quoted mortgage rates — the rates advertised by lenders — provide the timeliest information on the cost of household secured borrowing. In July, quoted rates on new tracker and

(1) For a more detailed discussion of the implications of recent regulatory changes on banks' risk-weighted capital, see Box 7 on page 65 of the April 2008 *Financial Stability Report*.

Chart 1.11 Quoted mortgage rates and spreads

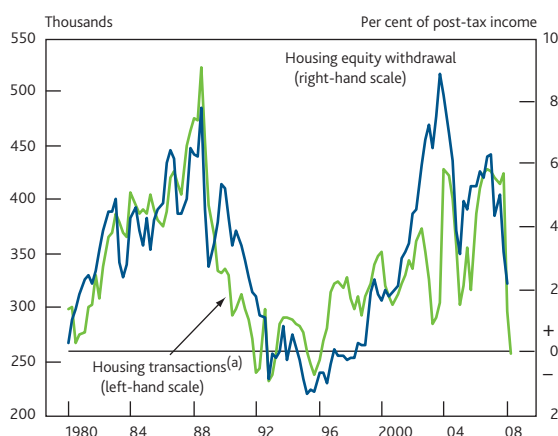
Sources: Bank of England and Bloomberg.

(a) Weighted average of fixed-rate and tracker products. Fixed-rate products are based on 75% loan to value ratio, assuming the share of fixed-rate borrowing for two, three and five-year fixed-rate mortgages is 54%, 18% and 28% respectively.

(b) Change in spreads since January 2004. Quoted rates as defined in footnote (a) relative to a 'risk-free' rate of similar maturity. For tracker rates, that is assumed to be Bank Rate. For the fixed-rate products, yields on government bonds of similar maturities are used (based on the final observation in the previous month).

Table 1.A Household credit: effective mortgage rates

	Changes between Aug. 2007– Mar. 2008	Changes between Mar.– June 2008	Total changes Aug. 2007– June 2008
Average rates on new lending			
of which:			
Fixed	4	16	20
Variable	-26	2	-24
Average rates on outstanding stock			
of which:			
Fixed	23	9	32
Variable	-53	-16	-69

Chart 1.12 Housing equity withdrawal and housing transactions

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

(a) Number of residential property transactions in the United Kingdom with a value of £40,000 or above per quarter from 2005 Q2. Prior to that date, the series has been assumed to grow in line with quarterly Land Registry data on transactions in England and Wales.

fixed-rate mortgages were around $\frac{1}{4}$ of a percentage point higher than three months earlier. That increase was more than accounted for by the rise in short-term risk-free rates. The average spread of quoted mortgage rates over risk-free rates — which provides a measure of the role the banking sector plays in the price of credit — was a little lower than three months earlier (**Chart 1.11**).

Average (effective) rates data on secured and unsecured borrowing are less timely than those for quoted rates, but are based on the weighted sum of drawn loans, rather than just advertised rates. In June, average mortgage rates on new and existing borrowing were little changed compared to March (**Table 1.A**). But quoted mortgage rates tend to be a good lead indicator of average mortgage rates on new lending. So the rise in quoted mortgage rates since April suggests some increase in average borrowing rates in the coming months.

Lenders have increasingly been tightening the supply of household credit through non-price terms, such as more stringent loan to value (LTV) requirements. According to the latest *Credit Conditions Survey*, those requirements, along with credit scoring criteria, were tightened by more in Q2 than lenders had previously expected. Lenders expected to tighten LTV requirements further in Q3, albeit to a more moderate degree.⁽¹⁾

Annual growth in secured lending — which accounts for around 85% of the stock of lending to individuals — fell to 7.5% in Q2, and has been easing since September 2007. In part that reflected the tightening in credit supply. But recently it may also have reflected reduced demand from borrowers. Within household borrowing, housing equity withdrawal (HEW) — borrowing that is secured on, but not invested into, the housing stock — fell particularly sharply as a share of household income in Q1. The recent decline in HEW has coincided with the sharp decline in housing transactions (**Chart 1.12**). That is likely to reflect the fact that HEW often occurs when a house is sold. The substantial falls in mortgage approvals (Section 1.1) suggest markedly weaker lending growth in the coming months.

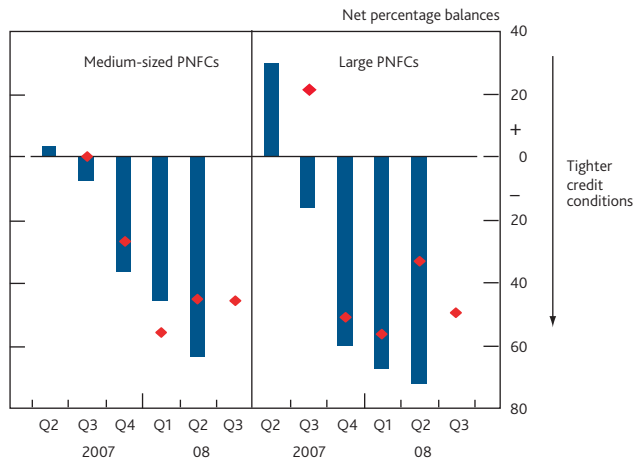
Price and quantity of corporate credit

The latest *Credit Conditions Survey* indicated that lenders continued to tighten the supply of credit to businesses in Q2 (**Chart 1.13**). Those results were consistent with the latest *Deloitte CFO Survey* of major UK companies, which suggested that companies were finding corporate credit more expensive and difficult to obtain. Recent reports from the Bank's regional Agents paint a similar picture.

These reports remain somewhat at odds with the data on average borrowing rates and lending growth to private non-financial corporations (PNFCs). According to these data, the average rate on new loans to PNFCs was around one and a half percentage points lower than in August 2007 (**Chart 1.14**).

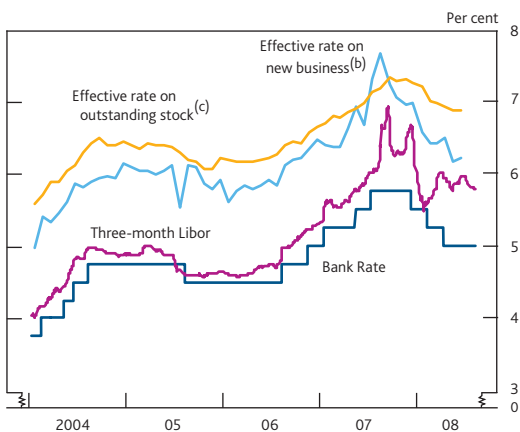
(1) This sentence differs from the printed version of the *Report*, which incorrectly reported the Q3 expectation.

Chart 1.13 Credit Conditions Survey: spreads on lending to businesses^(a)



(a) The blue bars show responses over the previous three months. The red diamonds show expectations over the next three months. Expectations balances have been moved forward one quarter so that they can be compared with the actual outturns in the following quarter.

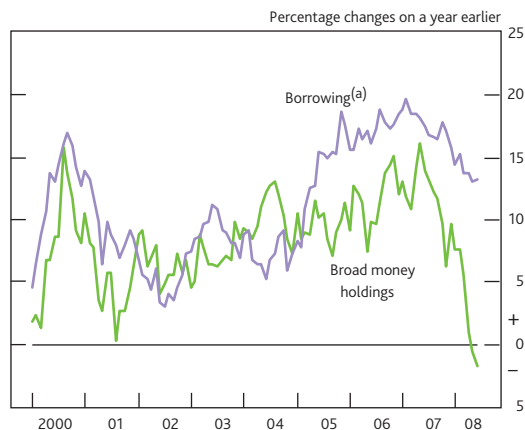
Chart 1.14 Interest rates facing businesses^(a)



Sources: Bank of England and Bloomberg.

- (a) Bank Rate and three-month Libor series show daily data to 6 August. Monthly effective rates data are available to June 2008.
 (b) Average rate paid by new borrowers on loans, calculated using data on interest rate flows and the stock of new borrowing. Excludes overdrafts due to data availability.
 (c) Average rate paid by existing borrowers on overdrafts and other loans, calculated using data on interest rate flows and the outstanding stock of borrowing.

Chart 1.15 PNFCs' broad money holdings and borrowing



(a) Excludes effects of securitisations and loan transfers.

Annual growth in lending to PNFCs (excluding the effects of securitisations and loan transfers) also remained relatively strong compared with the average growth rate over the past decade (Chart 1.15).

In part, this apparent puzzle probably reflects a change in the composition of new lending, with banks cutting back on high interest rate loans to riskier borrowers. A significant tightening of non-price lending terms, such as loan covenants — the restrictions attached to most corporate loans — has resulted in a reported improvement in average loan quality, with further improvement expected in Q3. That could help to explain the decline in average corporate borrowing rates, but does not help to explain the robust rates of lending growth.

Another part of the explanation is that businesses have been drawing down previously committed lines of credit. In the Bank's *Credit Conditions Survey*, lenders have reported an increase in drawdowns over the past six months, and expect that to continue in Q3. The use of such credit lines, with interest rate spreads agreed prior to the start of the financial dislocation, could help to explain both the decline in average interest rates and the continued robust growth in lending.

Strong growth in businesses' borrowing from banks may also reflect a shift away from non-bank financing by some borrowers. Investment-grade corporate bond yields have risen substantially over the past year, and the cost of equity issuance has increased.

1.3 Monetary aggregates

The MPC monitors the quantities of money and credit closely, both because they are intimately linked to the medium-term path of nominal spending growth and because they are potentially useful summary indicators of the wide range of price and non-price factors affecting overall credit conditions. As the box on page 16 describes, the growth rates of money and credit have declined rapidly in recent months, after adjusting for transactions by financial companies which are unlikely to have implications for nominal demand. That sharp slowing is consistent with other evidence that a tightening in the supply of money and credit is under way, as banks and other lenders reprice risk and reduce the scale of their borrowing relative to their capital.

Overall nominal spending and inflation are associated with measures of aggregate, not sectoral, money and credit growth. However, the sectoral data can give insights into the factors affecting households and businesses. In accounting terms, weaker aggregate money growth in 2008 Q2 was largely the result of a sharp contraction in PNFCs' money holdings (Table 1.B). Compared with a year ago, money holdings of

Money, credit and deleveraging

Banks and other financial institutions have been seeking to reduce the scale of their borrowing relative to their capital base — both by raising new capital and by reducing the amount of new lending to households and companies. Evaluating the likely scale of that 'deleveraging', and its implications for nominal spending, is a key challenge for the MPC. The quantities of money and credit form a central part of that assessment, as this box discusses.

The quantities of money and credit are important for two reasons. First, money and credit are intimately linked to the medium-term path of nominal spending. And inflation is ultimately determined by the evolution of nominal spending relative to the supply capacity of the economy. So a good understanding of the trends affecting money and credit is essential for assessing the medium-term outlook.⁽¹⁾

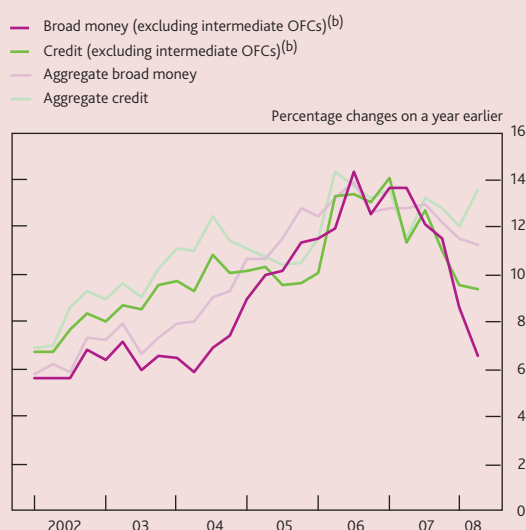
Second, money and credit are key indicators of developments in the financial sector. Although the MPC monitors a variety of measures of credit conditions, a number of the most important ways in which credit conditions have been tightened recently — in particular, variations in non-price lending criteria — are not readily observed. Money and credit growth can provide potentially useful indicators of these otherwise-unobservable variables, since the demand for money and credit itself depends on those terms.

Annual growth in aggregate broad money and credit remained robust in Q2. But a sizable part of that reflected volatile transactions undertaken by financial companies specialising in intermediating between banks, which are unlikely to have implications for nominal spending.⁽²⁾ Excluding these transactions, annual money and credit growth has slowed markedly since 2007 (Chart A).

The implications for nominal spending will in part depend on whether there has been an accompanying reduction in households' and businesses' willingness to hold money balances. Lower money balances associated with a shift in portfolio preferences, for example, may have fewer implications for spending. But that is unlikely to have been a key factor recently — if anything, heightened uncertainty about the macroeconomic outlook is likely to have pushed up individuals' desired liquidity levels. More plausibly, the sharp decline in growth rates corroborates the message from the Bank's *Credit Conditions Survey* and elsewhere that a marked tightening in the supply of money and credit is under way, as banks and other financial institutions deleverage.

The MPC's projections assume that the reduction in banks' balance sheet growth bears down on spending in a number of

Chart A Broad money and credit^(a)



(a) Non seasonally adjusted quarterly data.

(b) The measures exclude the bank deposits of, and borrowing by, intermediate OFCs, such as: mortgage and housing credit corporations; non-bank credit grantors; bank holding companies; and other activities auxiliary to financial intermediation.

ways over the forecast period (Section 5). If that tightening were to accelerate, that would pose downside risks to the outlook for nominal spending. In assessing the extent of that risk, the MPC will continue to monitor developments in money and credit growth closely.

(1) See King, M (2007), 'The MPC ten years on', *Bank of England Quarterly Bulletin*, Vol. 47, No. 2, pages 272–85.

(2) See Burgess, S and Janssen, N (2007), 'Proposals to modify the measurement of broad money in the United Kingdom: a user consultation', *Bank of England Quarterly Bulletin*, Vol. 47, No. 3, pages 402–14.

Table 1.B Broad money and M4 lending^(a)

Percentage changes on a year earlier

	2005	2006	2007	2008	
				Q1	Q2
Broad money (M4)	11.0	12.7	12.8	11.7	11.4
<i>of which:</i> ^(b)					
Households	8.4	8.1	8.1	8.8	8.6
Private non-financial corporations	9.6	11.6	11.9	5.5	-1.7
Other financial corporations	19.5	26.2	24.1	21.3	24.2
M4 lending	12.3	14.6	14.5	13.4	14.3
<i>of which:</i>					
Households	10.8	10.0	9.7	8.6	7.7
Private non-financial corporations	13.7	17.2	17.7	13.8	13.2
Other financial corporations	14.7	24.2	22.8	23.2	28.8

(a) M4 lending data exclude the effects of securitisations and loan transfers. Annual growth rates are averages of monthly data. The 2008 Q1 and Q2 growth rates are for the last month of the quarter.

(b) The term 'adjusted' was incorrectly included in the printed version of this table.

PNFCs fell by 1.7%. That is consistent with the deteriorating outlook for the corporate sector as businesses have to meet higher costs in the face of slowing demand.

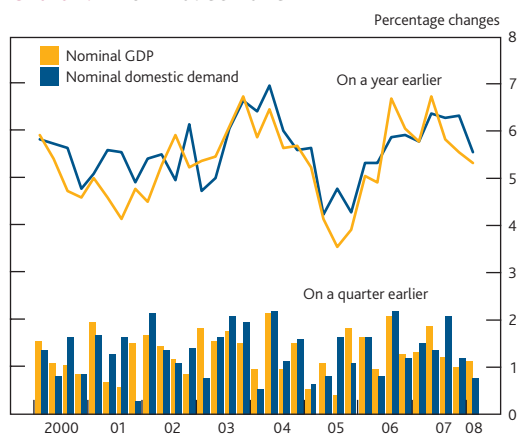
Growth in other financial corporations' (OFCs') deposits and borrowing picked up sharply in Q2. However, that pickup almost entirely reflected a sharp rise in banks' intra-group transactions, which are unlikely to be closely linked to nominal spending. Removing these transactions, OFCs' money and credit growth slowed sharply.

Household borrowing growth has continued to fall back, but money holdings have continued to expand steadily (**Table 1.B**). That may reflect a number of factors, including a possible increase in precautionary balances or the relatively favourable interest rates available on time deposits.

2 Demand

GDP growth fell back in 2008 H1. Surveys suggested that a key driver of that slowing was a sharp weakening in household spending, driven by a pronounced squeeze in real incomes, tighter credit conditions and a decline in asset prices. But official estimates of retail sales growth remained firm for much of the period, weakening only towards the end of H1. Business and dwellings investment reduced GDP growth in Q1, and survey indicators for Q2 and beyond deteriorated. Global economic activity was a little firmer than expected in the first half of the year, helping to support export demand. The near-term outlook for growth in Asia remains robust. But conditions in the advanced economies are fragile.

Chart 2.1 Nominal demand^(a)



(a) At current market prices.

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

	Averages		2007		2008
	2006	2007 H1	Q3	Q4	Q1
Household consumption ^(b)	0.7	0.7	0.9	0.4	1.1
Government consumption	0.3	0.6	0.3	0.2	0.9
Investment	2.3	-0.3	2.7	2.2	-1.5
<i>of which, business investment</i>	3.0	0.4	2.6	3.1	-1.8
<i>of which, dwellings investment^(c)</i>	1.6	1.7	-1.6	-1.4	-0.8
Final domestic demand	0.9	0.6	1.0	0.7	0.6
Change in inventories ^{(d)(e)}	0.0	0.1	0.2	-0.1	-0.1
Alignment adjustment ^(e)	0.0	0.1	0.4	0.1	-0.9
Domestic demand	0.8	0.8	1.5	0.7	-0.3
'Economic' exports ^(f)	0.9	0.2	1.3	-1.2	0.7
'Economic' imports ^(f)	1.0	0.2	4.5	-0.8	-1.1
Net trade ^(e)	-0.1	0.0	-1.0	-0.1	0.5
Real GDP at market prices	0.8	0.8	0.6	0.6	0.3

(a) Chained-volume measures.

(b) Includes non-profit institutions serving households.

(c) Whole-economy dwellings investment.

(d) Excludes the alignment adjustment.

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

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

Monetary policy affects inflation via its influence on nominal demand. Four-quarter nominal GDP growth was relatively robust in 2006–07, but slowed to 5.3% in 2008 Q1 (**Chart 2.1**), close to its average over the past decade. With inflation rising sharply (Section 4), a stable path for nominal demand growth implies slowing real spending growth.

Quarterly real GDP growth has indeed slowed, falling to 0.3% in Q1 and 0.2% in Q2, according to the provisional estimate from the ONS (Section 3.1). There is, however, considerable uncertainty over the expenditure composition of that slowdown. Surveys suggested that household spending growth slowed markedly in the first half of the year. But official data suggested that retail sales growth has until recently remained firm (Section 2.1).

The expenditure-based measure of GDP was also rather stronger than the output-based measure in Q1. That was reflected in an unusually large contribution from the 'alignment adjustment' (**Table 2.A**) — the statistical adjustment used by the ONS to bring quarterly growth of the two GDP measures into line. At this stage of the data cycle, estimates of output are generally more accurate than expenditure data, suggesting that some of the higher spending growth may eventually be revised away. In view of the strength in official estimates of household spending relative to other indicators, one candidate for downward revision is household consumption.

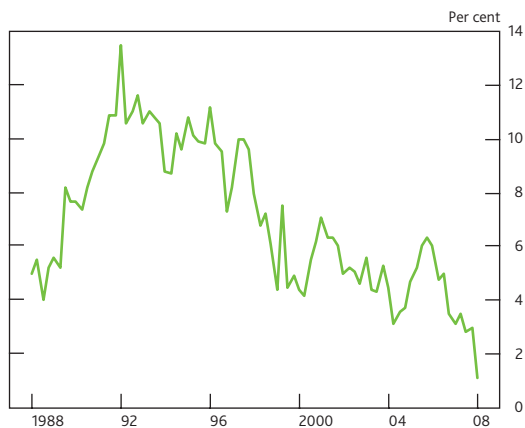
With domestic demand growth slowing, an important factor bearing on prospective GDP growth is the outlook for world demand. Recent developments are discussed in Section 2.2.

Chart 2.2 Real post-tax labour income^(a)

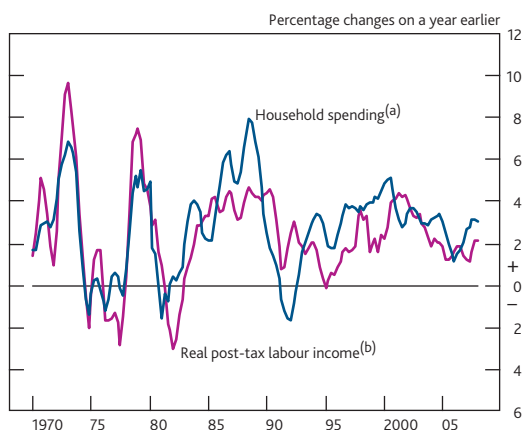
Sources: ONS (including Labour Force Survey) and Bank calculations.

(a) Wages and salaries plus mixed income less taxes (including income taxes and Council Tax) plus net transfers (general government benefits minus employees' National Insurance contributions), deflated using the consumer expenditure deflator (including non-profit institutions serving households).

(b) Real post-tax labour income divided by LFS employment.

Chart 2.3 Household saving ratio^(a)

(a) Percentage of households' total post-tax income.

Chart 2.4 Household spending and real post-tax labour income

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

(a) Chained-volume measure, includes non-profit institutions serving households. Four-quarter moving average.

(b) Defined in footnote (a) of Chart 2.2. Four-quarter moving average.

2.1 Domestic demand

Household spending

Sharp rises in energy, food and import prices have squeezed households' real take-home pay growth, and will continue to do so in the months ahead (Section 4). The housing market has deteriorated markedly, asset prices have fallen and credit supply remains tight (Section 1). This subsection discusses the impact of these developments on household spending, before considering the disjunction between the official data on spending and other indicators.

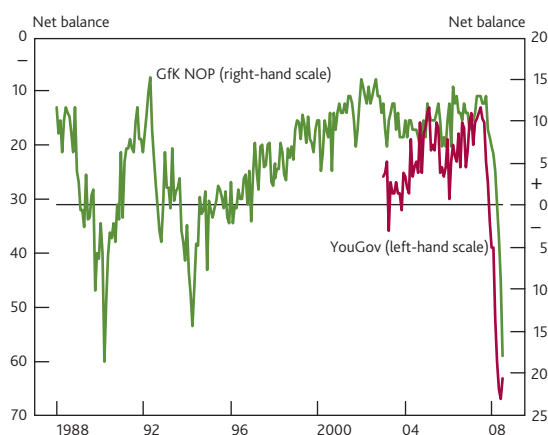
Influences on household spending

Households' real income has been squeezed over the recent past. Real post-tax labour income fell by 0.5% in 2008 Q1, and income per head fell by nearly 1% (Chart 2.2). The combination of weak income growth and firm official data on household spending drove the official estimate of the household saving ratio down to 1.1% in 2008 Q1 (Chart 2.3).

Households' real labour income is likely to be squeezed further in the coming months as domestic energy prices rise and employment growth slows. In the MPC's central projection, real take-home pay is expected to be broadly flat over the next year (Section 5). In the past, subdued labour income growth has typically been associated with weak consumer spending (Chart 2.4).

Households may seek to maintain spending by running down savings or by increasing borrowing if they expect incomes to rebound rapidly. But proxy measures of households' near-term income expectations have deteriorated. Surveys suggest that households expect their financial situation to weaken sharply over the next twelve months (Chart 2.5). Another indicator of income expectations is household spending on durable goods, such as cars and televisions. As durables usually last for a considerable period of time, spending on such items is likely to be more sensitive to changes in income expectations than other elements of consumption. Overall durable spending was firm in 2008 Q1, but more timely data suggest that private new car registrations fell sharply in Q2 and fell further in July.

The tightening in credit conditions for certain types of household will also impede their ability to sustain spending, by making it harder and more expensive to finance consumption through borrowing, and by increasing the costs of servicing debt. The downward pressure on consumption growth is likely to be amplified by the falls in equity and house prices, although the mechanisms through which this takes place are rather different. Lower equity prices reduce households' net wealth. But lower house prices need not, at least in aggregate. Those wishing to trade down are made worse off when house prices fall. But those wishing to trade up or enter the market for the first time benefit. So the impact on spending varies across households.

Chart 2.5 Survey indicators of income expectations^(a)

Sources: Research carried out by GfK NOP on behalf of the European Commission and YouGov.

(a) Net balances of respondents thinking that their household's financial situation will improve over the next twelve months. Data are non seasonally adjusted.

Table 2.B Mortgage arrears, repossessions and personal insolvencies

	Series high		2007		2008
			H1	H2	H1
Stock of mortgage arrears ^(a)					
Three to six months	1.82	(1994 H1) ^(b)	0.59	0.62	0.75
Six to twelve months	2.07	(1992 H2)	0.31	0.35	0.42
More than three months	3.70	(1995 H2) ^(b)	1.02	1.10	1.33
Repossessions ^(c)					
	0.40	(1991 H2)	0.11	0.11	0.16
Insolvencies ^(d)					
	0.12	(2006 H2)	0.12	0.10	0.10

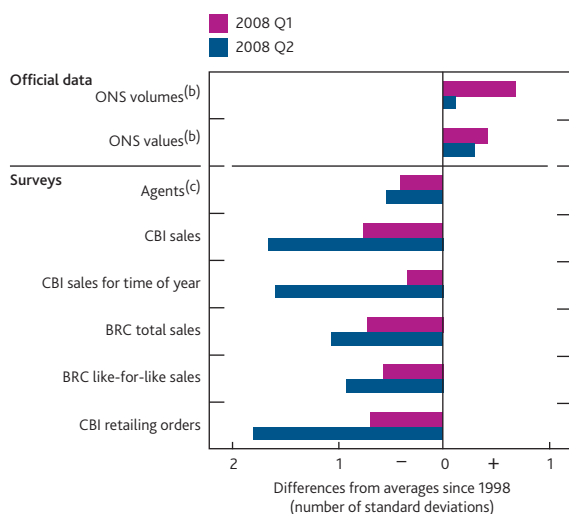
Sources: Council of Mortgage Lenders, The Insolvency Service, Labour Force Survey and Bank calculations.

(a) Mortgages in arrears at half-year end as a percentage of outstanding mortgages.

(b) Earliest observation.

(c) Flow of repossessions per half year as a percentage of outstanding mortgages.

(d) Flow of insolvencies per half year as a percentage of population aged 16+. Population in 2008 H1 estimated using data to May 2008.

Chart 2.6 Indicators of retail sales growth^(a)

Sources: Bank of England, BRC, CBI and ONS.

(a) Averages of monthly data, unless otherwise stated.

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

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

Nevertheless, the sharp weakening in housing market conditions is likely to amplify the impact of tighter credit supply on household spending. Lower house prices reduce the amount of housing equity that homeowners are able to withdraw to finance consumption. Many existing homeowners have built up cushions of equity in their homes in recent years, which should help insulate them from this effect. But not all homeowners have a significant amount of housing equity. And sharper declines in house prices would reduce existing cushions of equity further. More importantly, falling house prices have led lenders to tighten the supply of credit further, particularly to higher-risk households, making it more difficult for them to access housing equity or remortgage. That is likely to put downward pressure on the spending of those households, by reducing the resources available for consumption and by increasing the incentive to hold precautionary savings to help cope with unexpected fluctuations in future incomes.

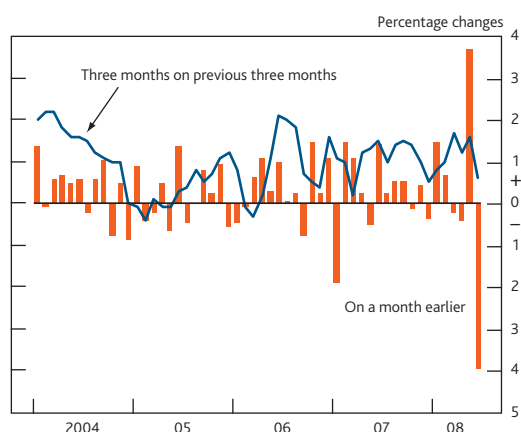
Indicators of households' financial stress, such as mortgage arrears, remain well below their historic peaks (**Table 2.B**). However, most have picked up recently, some quite sharply. And lenders expect loan defaults to rise further in the near term, as Section 1 discusses. Personal insolvencies are close to their all-time high, as a proportion of the adult population. But legislative changes in 2004 are likely to have contributed to the pickup in recent years.

Recent spending data

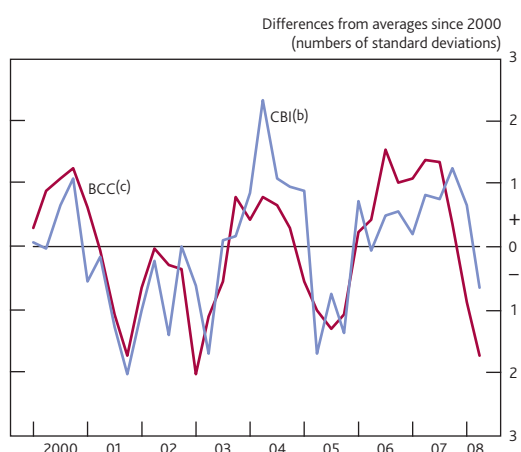
Survey measures of household spending on goods fell sharply in the first half of the year (**Chart 2.6**), consistent with the squeeze on incomes, lower asset prices and tighter credit supply outlined above. The *CBI Distributive Trades Survey* suggested a further marked deterioration in July.

In sharp contrast, official estimates of retail spending remained robust for much of the period. The estimate of retail sales growth in Q1 was above the post-1998 average; and growth eased only a little in Q2 as a whole (**Chart 2.6**). But, as **Chart 2.7** shows, the monthly outturns were exceptionally volatile in May and June. That may reflect unusual weather patterns, or difficulties with seasonal adjustment as a result of evolving spending patterns around the late May bank holiday. Such volatility complicates the assessment of the underlying trend: while annual spending growth in Q2 overall was still a little above the average of the past decade, monthly growth in May and June taken together was close to zero.

It is unclear why the official data and business surveys have been giving such different messages. Differences in coverage between the data and the surveys, for example, can only account for a small part of the gap that has opened up between the measures. With such a consistent picture across both the surveys and the key determinants of consumer spending, the MPC currently places rather greater

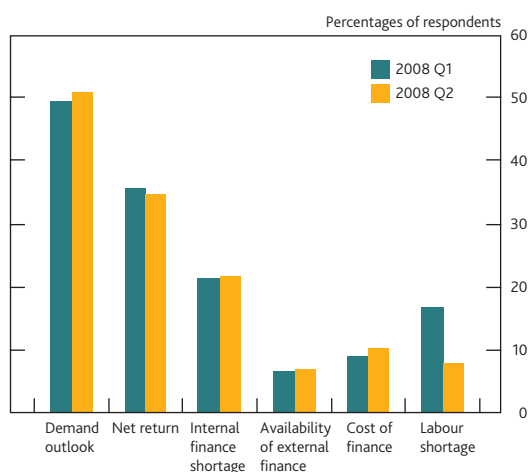
Chart 2.7 Official retail sales estimates^(a)

(a) Volume measure at 2000 prices.

Chart 2.8 Investment intentions (plant and machinery)^(a)

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

- (a) Measures weight together sectoral surveys using shares in real business investment.
 (b) Net percentage balances of companies who plan to increase investment in plant and machinery over the next twelve months.
 (c) Net percentage balances of companies who say they have revised up their planned investment in plant and machinery over the past three months. Data are non seasonally adjusted.

Chart 2.9 Factors likely to hold back investment^(a)

Sources: CBI, CBI/PwC and ONS.

- (a) Measures weight together sectoral surveys using shares in real business investment. Companies are asked for their twelve-month forecast of factors likely to limit capital expenditure authorisations. Financial services companies are not asked to distinguish between a shortage of internal, and availability of external, finance, so their single response is used for both questions.

weight than usual on these indicators in judging the near-term outlook.

The divergence between survey indicators and official estimates of household spending on services is less marked. Four-quarter growth in households' spending on services eased in Q1 according to both the official data and reports by the Bank's regional Agents. The Agents' score for consumer services turnover fell further in Q2, as households cut back on leisure spending.

Investment

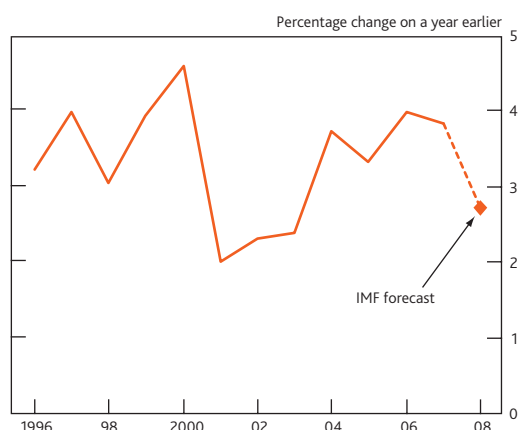
The marked deterioration in residential and commercial property markets is likely to exert a considerable drag on investment growth in the near term. Both residential and commercial property prices continued to fall in Q2, and loan approvals for house purchase fell by nearly 70% in the year to June (Section 1). Property accounts for a sizable proportion of overall investment spending: private sector investment in buildings, including dwellings, business offices and retail space, makes up some 40% of total investment. Investment in dwellings has been particularly weak, falling by 0.8% in 2008 Q1 (**Table 2.A**), and is likely to fall further in the near term, albeit to a lesser extent than so far seen in the United States. The sensitivity of GDP to developments in the construction sector is discussed in the box on pages 26–27.

Businesses' intentions to invest in plant and machinery were also marked down in Q2 (**Chart 2.8**), suggesting that these elements of business investment growth will weaken further in the near term. The Bank's regional Agents report that the weakening outlook for demand, and the uncertainty surrounding the extent of that slowdown, have been the main factors pushing down on investment intentions. That is consistent with survey evidence that the demand outlook is the most important factor constraining companies' investment plans (**Chart 2.9**).

Businesses' investment plans are also likely to be affected by the tightening in credit conditions over time. The latest *Credit Conditions Survey* indicated that lenders had continued to tighten the supply of credit to businesses (Section 1). So far, however, borrowing growth has remained firm and the proportion of companies highlighting the cost of finance as a factor likely to constrain their investment remains relatively low (**Chart 2.9**). The corporate insolvency rate for England and Wales picked up slightly in the year to 2008 Q2 to 0.57%, compared with 0.55% in Q1. That remains significantly below its 1993 peak of around 2.6%. But lenders expect corporate loan defaults to pick up further, according to the latest *Credit Conditions Survey*.

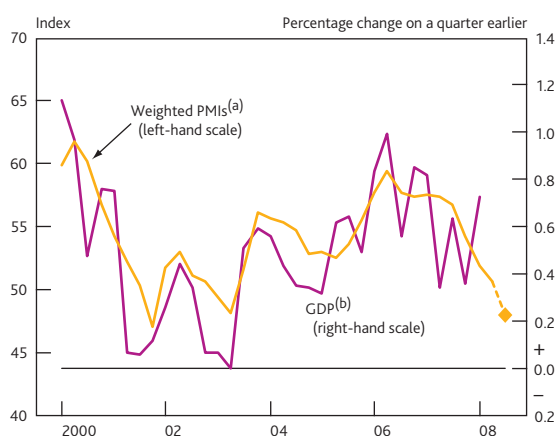
Government spending

Four-quarter growth in nominal government consumption increased to 7.7% in 2008 Q1, while nominal government

Chart 2.10 UK-weighted world GDP^(a)

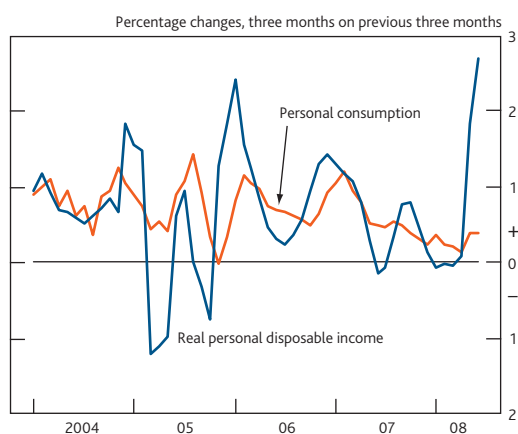
Sources: IMF, ONS and Bank calculations.

(a) Volume measure. Weighted using 2006 nominal export shares. The IMF forecast for 2008 is based on the *World Economic Outlook Update*, released on 17 July 2008.

Chart 2.11 Indicators of euro-area output

Sources: Eurostat, Markit Group Limited and Reuters.

(a) Quarterly averages of monthly manufacturing and services business activity indices weighted by nominal shares of industrial production and services in gross value added. The diamond shows the outturn for July.
(b) Chained-volume measure.

Chart 2.12 US personal consumption and real personal disposable income

Source: US Bureau of Economic Analysis.

investment growth fell back to 13.1%. The MPC's projections are based on the plans set out in *Budget 2008*, together with subsequent Government announcements. Those plans incorporated a slowing in government spending growth over the next three financial years and downward revisions to near-term revenue projections, largely reflecting the weaker outlook for demand. However, annual growth in central government tax receipts in the first quarter of the financial year was only around half the rate assumed in *Budget 2008* for the year as a whole.

2.2 External demand and net trade

UK-weighted world GDP growth is estimated to have eased a little in 2007 (**Chart 2.10**). Global economic activity in 2008 H1 was a little stronger than expected at the time of the *May Report*. But the near-term prospects for growth in the advanced economies remain subdued. By contrast, growth in Asia and the commodity-exporting countries has been robust.

The euro area

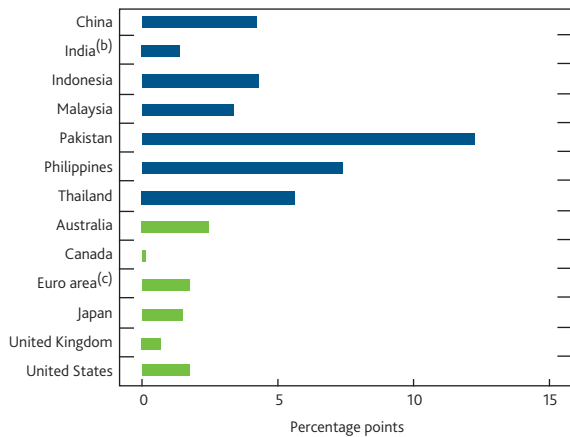
In the euro area — the destination for around half of UK exports — quarterly growth in Q1 was relatively firm at 0.7%. At that stage, euro-area demand appeared to have been less affected by the tightening in credit supply than in the United States. For example, business investment held up, despite the tightening in conditions reported in the ECB's *Bank Lending Survey*. However, survey indicators suggest that underlying output growth is likely to slow in the near term (**Chart 2.11**). Real labour incomes will be squeezed by rises in energy and other costs, as in the United Kingdom. The higher prevalence of wage indexation in some euro-area countries may mean that more of the adjustment to higher non-labour costs comes through lower employment growth than through lower nominal wage growth.

The United States

Recent activity data in the United States have been slightly stronger than expected at the time of the *May Report*. Quarterly GDP growth was 0.5% in 2008 Q2, largely driven by stronger net trade. As **Chart 2.12** shows, real personal disposable income growth picked up sharply in Q2, reflecting the temporary boost from tax rebates (equivalent to around 0.8% of total annual household income). But consumption growth picked up only modestly, perhaps because households chose to 'smooth through' the temporary increase in income.

The US outlook remains fragile. Households' real labour income will continue to be squeezed by higher inflation. Increases in unemployment, tighter credit conditions and lower asset prices are also likely to push down spending growth. Credit supply for companies remains tight, and residential investment is likely to continue to fall, given the further deterioration in the housing market. But low official interest rates should boost spending in due course.

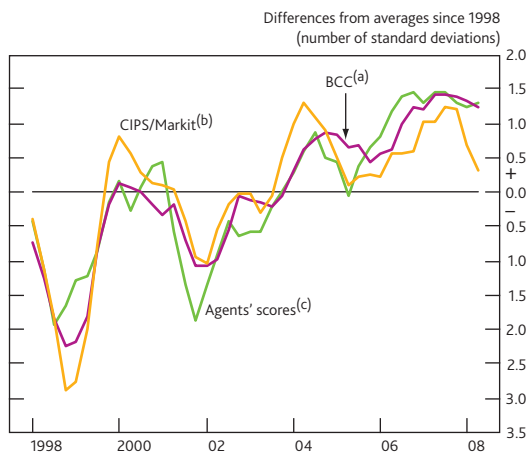
Chart 2.13 Change in consumer price inflation in selected countries (2007 Q2–2008 Q2)^(a)



Source: Thomson Datastream.

- (a) The inflation estimates are based on overall CPI measures, unless otherwise stated, and are non seasonally adjusted.
 (b) CPI for industrial labourers.
 (c) The figure for June 2008 is based on the preliminary CPI estimate.

Chart 2.14 Survey indicators of goods exports



Sources: Bank of England, BCC and CIPS/Markit.

- (a) Net percentage balance of manufacturing companies saying that export orders increased on the quarter. Four-quarter moving average.
 (b) Net percentage balance of manufacturing companies saying that export orders increased this month compared with previous month. Four-quarter moving average of monthly data.
 (c) Manufacturing companies' reported annual growth in production for sales to overseas customers over the past three months.

Asia

Growth in developing Asia has continued to be strong. For example, four-quarter GDP growth in China was 10.1% in 2008 Q2. But that has been accompanied by a rather larger pickup in inflation than in most advanced economies (**Chart 2.13**). In part, that may reflect the large share of spending devoted to food, prices of which have accelerated. But it may also reflect the pressure of demand on supply. Some developing Asian countries have recently tightened monetary policy to reduce the pace of demand growth. For example, China has increased its reserve ratio requirements, and India and Indonesia, among others, have raised their official interest rates.

Quarterly GDP growth in Japan has picked up in recent quarters. But activity may weaken again in the near term, as lower real labour income growth feeds through into household spending and export demand eases.

Net trade

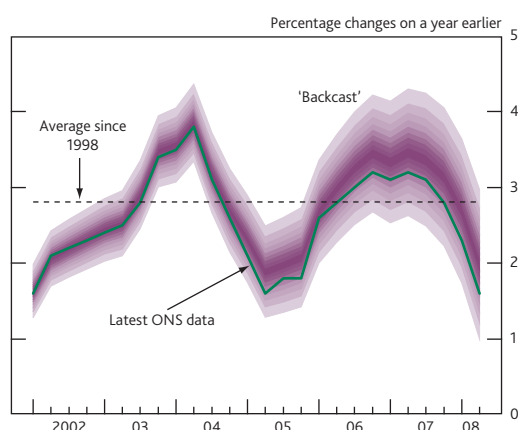
Net trade boosted GDP growth in 2008 Q1, more than offsetting the fall in domestic demand (**Table 2.A**), as imports fell and export growth picked up. In part, that probably reflects the lower value of sterling, which has fallen by around 11% since mid-2007. A lower value of sterling discourages spending on imports by raising import prices. And contacts of the Bank's regional Agents reported that they expected to be able to boost export margins and volumes as a result of the depreciation.

Net trade is likely to provide some further support to GDP growth in the near term. Surveys of export demand remained above their averages over the past decade (**Chart 2.14**), although the CIPS/Markit survey fell quite sharply in Q2. And weaker domestic demand growth should continue to bear down on import growth in the coming months.

3 Output and supply

Output growth eased further in 2008 Q2, and business surveys point to broadly flat output in the third quarter. Measures of capacity utilisation within businesses fell back, and there were signs of increased slack in the labour market. The slowdown in demand, coupled with further increases in businesses' non-wage costs, is likely to reduce employment growth.

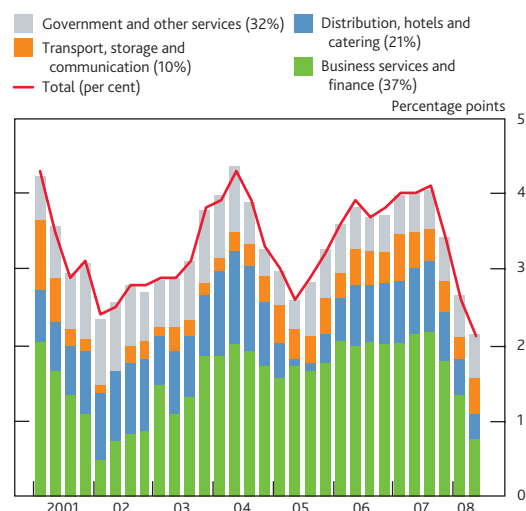
Chart 3.1 GDP at market prices^(a)



Sources: ONS and Bank calculations.

(a) Chained-volume measures. The fan chart depicts an estimated probability distribution for GDP growth over the past. It can be interpreted in the same way as the fan charts in Section 5 and forms the first part of the fan chart shown in **Chart 5.1** on page 37. For more information, see 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. When calculating growth rates, the level of output prior to 2003 is set to equal the ONS data. The post-1998 average is calculated using the latest ONS data.

Chart 3.2 Contributions to four-quarter service sector output growth^(a)



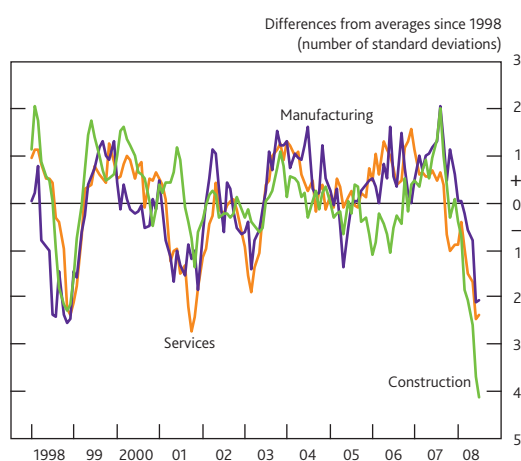
(a) Chained-volume measures. Figures in parentheses are shares in services in 2003. The bars in the chart do not sum precisely to total services growth because of rounding differences.

Prospects for near-term output growth have deteriorated considerably over the past three months. Official estimates of GDP growth eased again in 2008 Q2, and surveys point to further slowing in Q3 (Section 3.1). Over time, that should reduce the degree of inflationary pressure in the economy. But the scale and pace of that effect will also depend on movements in potential supply. The balance between output and potential supply is determined by the degree of capacity utilisation within businesses (Section 3.2), and by the degree of slack in the labour market (Section 3.3).

3.1 Output

According to the ONS preliminary estimate, quarterly output growth eased by 0.1 percentage points in 2008 Q2, to 0.2%. Four-quarter GDP growth slowed to 1.6%, more than one and a half percentage points below its peak a year earlier (**Chart 3.1**). The largest contribution to this slowdown came from the service sector, reflecting weaker growth in business services and distribution, hotels and catering (**Chart 3.2**). And output in the production and construction sectors was estimated to have declined in Q2.

Estimates of output growth are subject to revision. For example, recent revisions to output growth in 2007 mean that the economic slowdown since the middle of last year now appears a little more pronounced. And the latest industrial production data show that production sector output fell by 0.8% in Q2 — rather more than estimated by the ONS at the time of the preliminary GDP release. That suggests the estimate for output growth in Q2 may be revised down in the next GDP release, unless there are offsetting revisions elsewhere. To capture the range of uncertainty around early estimates of output, the MPC draws on a number of indicators, including past patterns in the official data and surveys of output growth, to produce a 'backcast' for GDP growth (**Chart 3.1**). The slowdown embodied in that 'backcast' is similar to that in the latest ONS data.

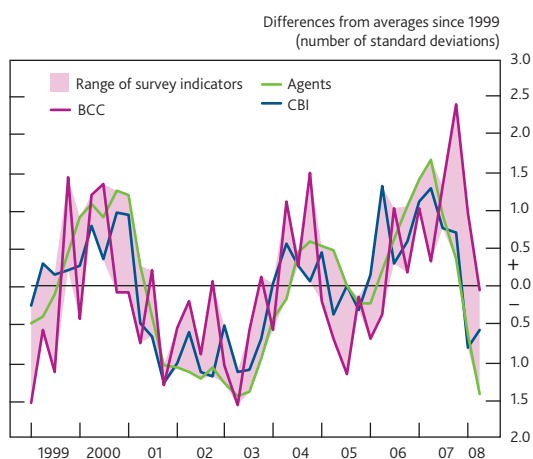
Chart 3.3 CIPS/Markit indicators of output growth

Source: CIPS/Markit.

Table 3.A Indicators of near-term output growth^(a)

	Averages 1989–92	Averages 1998–2006	2007 Q4	2008	
				Q1	Q2
Services					
BCC ^(b)	3	19	18	14	-7
CBI/PwC financial services ^(c)	1	20	-23	-31	-44
CBI consumer services ^(c)	n.a.	7	18	-11	-15
CBI business and professional services ^(c)	n.a.	22	20	-2	4
Manufacturing					
BCC ^(b)	-9	7	27	8	-5
CBI ^(c)	-2	3	9	0	-7
Construction					
Experian ^(d)	43	55	57	50	41

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

^(a) Dates refer to the period in which the survey was conducted.^(b) Percentage balance of respondents reporting domestic orders to be 'up' relative to 'down' over the past three months. Balances are non seasonally adjusted.^(c) Percentage balance of respondents expecting volume of output/business to be 'up' relative to 'down' over the next three months. The CBI 'consumer' services and 'business and professional' services averages are since 1998 Q4.^(d) Quarterly averages of monthly construction activity index.**Chart 3.4** Measures of capacity utilisation^(a)

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

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

The near-term outlook

Survey measures of near-term output growth have fallen sharply in recent months. In the service sector, the CIPS/Markit output balance fell markedly during Q2 (**Chart 3.3**), and remained subdued in July. Other service sector surveys painted a similar picture (**Table 3.A**).

Survey measures of manufacturing and construction sector output growth have also fallen sharply in recent months (**Chart 3.3** and **Table 3.A**). For example, the latest BCC domestic manufacturing orders balance fell to its lowest level since 2001 Q4. And the Experian survey measure of construction activity dropped to its lowest level since 1991. The sharp slowdown under way in the construction sector is likely to exert a sizable drag on GDP growth in the near term (see the box on pages 26–27).

It is difficult to map the readings from business surveys into a precise estimate for prospective GDP growth, for several reasons. First, business surveys do not cover all sectors of the economy, and are subject to sampling variation. Second, the survey balances are based on qualitative rather than quantitative assessments, and so may not always adequately reflect the magnitude of the changes in activity. That may be particularly pertinent if specific subsectors are disproportionately affected by economic developments. And third, survey responses can sometimes be affected by changes in sentiment that do not reflect changes in activity. As a result, there have been times in the past when business surveys pointed to a sharp fall in output growth which did not subsequently materialise in the official data. Taken at face value, the marked declines in the surveys up to July point to broadly flat output in Q3. But that is subject to a considerable margin of error. The MPC's assessment of the outlook for GDP growth is presented in Section 5.

3.2 Capacity pressures within businesses

The extent to which weaker output growth reduces the degree of inflationary pressure in the economy depends in part on changes in the balance between output and potential supply. One factor influencing that balance is capacity utilisation within businesses. The latest survey measures suggest that capacity utilisation has fallen back markedly since the second half of 2007 (**Chart 3.4**).

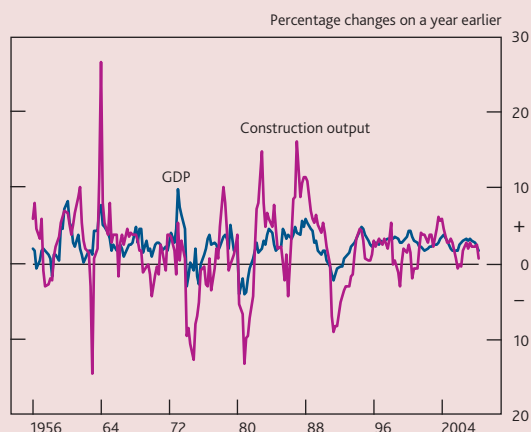
Looking ahead, the tightening in credit conditions and increases in energy prices over the past year may bear down on potential output growth in a number of ways.⁽¹⁾ For example, the increased cost and reduced availability of credit is likely to affect the creation of new businesses, hindering competition and productivity growth. Tighter credit conditions are also likely to discourage existing businesses from investing in new

⁽¹⁾ This issue is discussed in greater detail in the box on page 28 of the May 2008 Report.

The sensitivity of GDP growth to developments in construction

The construction sector accounts for only 6% of UK GDP. But GDP growth has nonetheless been sensitive to fluctuations in construction activity in the past. That reflects the tendency for swings in construction output to be both large and rapid (Chart A).

Chart A Construction output and GDP^(a)



(a) Chained-volume measures.

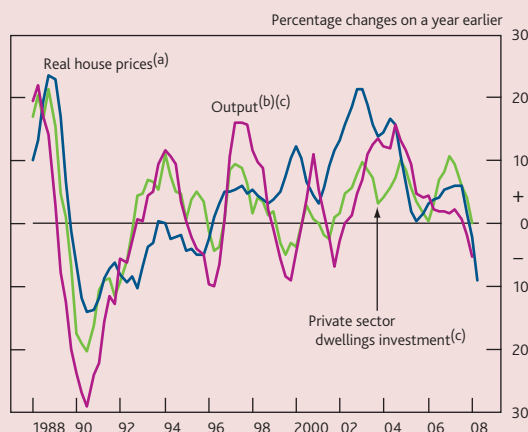
Sharp adjustments are again under way: property prices have fallen significantly (Section 1); private sector new housing starts have halved in the year to Q2; and house-builders' equity prices have fallen by around 80% since the start of 2007. The ONS estimates that construction sector output shrank by 0.7% in Q2, and forward-looking output surveys have turned down markedly. This box assesses the direct risks that those developments could pose for GDP.⁽¹⁾

Private sector new building activity

Private sector new building activity accounts for around 35% of construction sector output — and is split roughly between one third house building and two thirds commercial and industrial property. In the past, changes in private new housing output and dwellings investment (the expenditure-side counterpart)⁽²⁾ have typically moved reasonably closely with residential property prices (Chart B). But there have been periods when that relationship has been less close. For example, between 1999 and 2003, sharp increases in property prices did not feed through into an equivalently large rise in new output, possibly reflecting constraints imposed by planning regulation.

Uncertainties about the outlook for house prices, and about the link between prices and output, complicate an assessment of the medium-term impact of a slowdown in new building activity on GDP. But it is already clear that near-term prospects have deteriorated sharply. For example, the latest fall in housing starts is similar to that seen in the early 1990s.

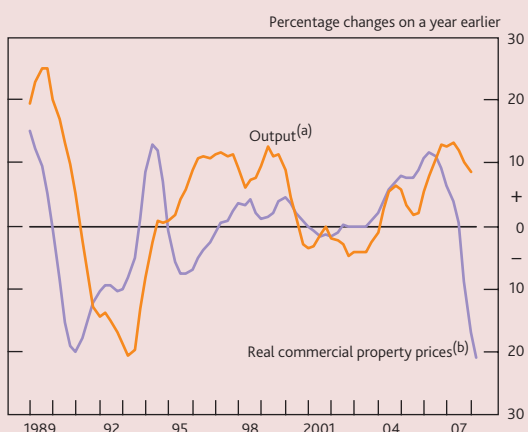
Chart B Real house prices, housing output and dwellings investment



Sources: Halifax, Nationwide, ONS and Bank calculations.

- (a) Based on the average of the Nationwide and Halifax house price indices, divided by the RPI index. The published Halifax index has been adjusted in 2002 by the Bank of England to account for a change in the method of calculation.
- (b) New private sector housing output in Great Britain, at constant 2000 prices. The ONS makes small adjustments to this series when estimating aggregate construction sector output in the United Kingdom.
- (c) Four-quarter moving average. The latest data are for 2008 Q1.

Chart C Real commercial property prices and output



Sources: Investment Property Databank, ONS and Bank calculations.

- (a) Commercial and industrial construction output in Great Britain at constant 2000 prices. Four-quarter moving average. The latest output data are for 2008 Q1. The ONS makes small adjustments to this series when estimating aggregate construction sector output in the United Kingdom.
- (b) Based on the IPD data, divided by the RPI index.

If starts remain at their current levels, that could reduce GDP by between a quarter and half a percentage point.

The relationship between commercial property prices and output is less immediate than in the residential market, reflecting the longer lead times typically involved in commercial projects. Commercial property prices have fallen by nearly 20% over the past year, but reports from the Bank's regional Agents suggest that activity levels have so far weakened only slightly, underpinned by the pipeline of work in progress. When prices last fell as sharply, four-quarter commercial property output growth fell by around 20% (Chart C). A fall of this magnitude is equivalent to around a third of a percentage point off the level of GDP.

Other components of construction output

Private sector repairs and maintenance account for a further 30% of construction output. Over the past year, this activity has contributed positively to overall construction output. More recently, however, the Bank's regional Agents have reported that households' demand for repairs and maintenance work has started to fall, perhaps in response to tighter credit conditions and the squeeze on household incomes.

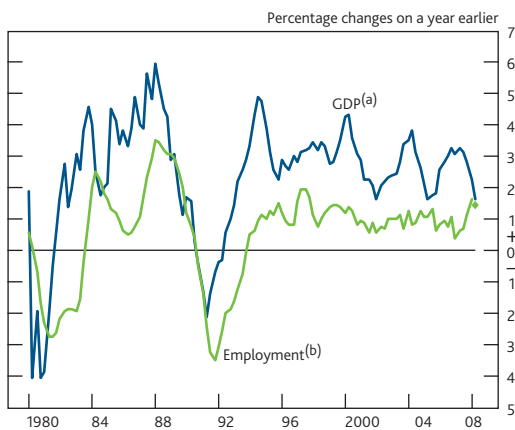
The remaining 35% of construction sector output reflects infrastructure projects and public sector construction, such as public housing, schools, hospitals and work related to the 2012 London Olympics. Contacts of the Bank's regional Agents report that this activity has helped to support overall construction sector activity over the past year.

Weaker construction sector activity will have knock-on implications for other parts of the economy. For example, some house builders have begun reducing employment in recent months, and the Bank's regional Agents have reported falling output in related industries, such as conveyancing, removal services and brick manufacture. These factors may amplify the impact on GDP growth, although the overall impact will depend on how easily construction sector employees can be reabsorbed into other parts of the economy.

(1) For a more detailed discussion of other channels through which changes in property prices can affect output and inflation, see the box on pages 22–23 of the February 2008 Report.

(2) Output is recorded as construction work progresses, while investment is recorded when completed properties are sold. The difference between the two reflects a number of factors, including changes in stocks.

Chart 3.5 GDP and employment

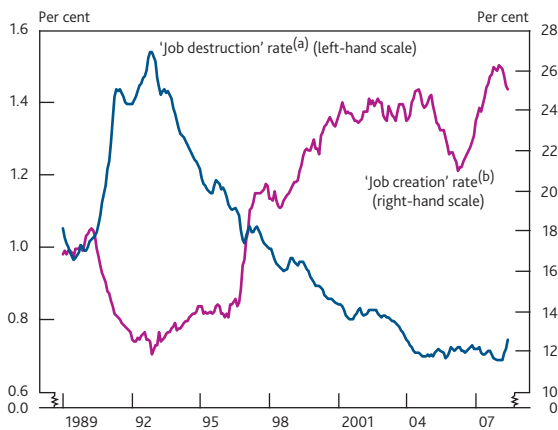


Source: ONS (including Labour Force Survey).

(a) Chained-volume measure, at market prices.

(b) The diamond for 2008 Q2 is based on LFS employment in the three months to May.

Chart 3.6 Job creation and destruction



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

(a) Average inflow into the claimant count over the past three months divided by total LFS employment. The June 2008 observation assumes that employment grows in line with its average rate since 1998.

(b) Average outflow from the claimant count over the past three months divided by total claimant count unemployment.

capital. And rises in energy prices may prompt businesses to make less use of energy-intensive equipment, or mothball it altogether. Any easing in potential supply growth would lessen the impact of weaker output growth on inflation over time.

3.3 Pressures within the labour market

Imbalances between output and potential supply will also be determined by the degree of labour market tightness. The slowdown in demand, coupled with the increase in businesses' non-wage costs, is likely to put downward pressure on employment growth in the months ahead. However, the implications for labour market tightness also depend on the outlook for labour supply. This subsection reviews these factors in turn.

The impact of the slowdown in output

Although weaker output growth is likely to exert downward pressure on employment growth in the near term, the scale and pace of that effect is uncertain.

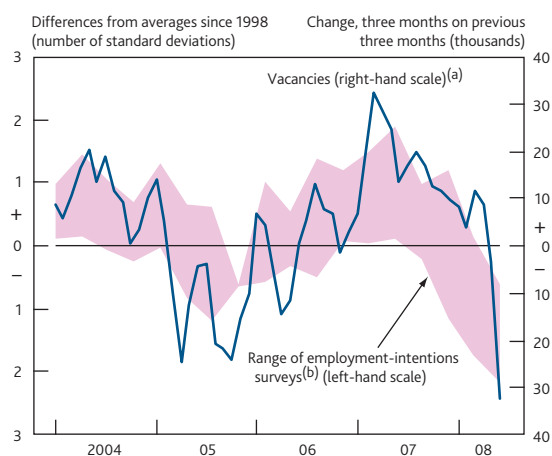
When businesses expect slowdowns in activity to be mild or short-lived, they often seek to maintain employment levels, rather than incurring the costs of firing employees during the downturn, only to have to boost recruitment when activity subsequently recovers. Such 'labour hoarding' appears to have characterised much of the past decade, when employment growth remained relatively stable in the face of mild fluctuations in output growth (Chart 3.5). During the short-lived slowdown in activity in 2004–06, for example, businesses tempered the rate at which they hired additional labour, known as 'job creation' (Chart 3.6). But there was no material increase in the rate at which employees were laid off, known as 'job destruction'. If businesses expect a sharper or more protracted slowdown in output growth, or cease to trade

Table 3.B Employment

Percentage changes on previous three months

	2007		2008		
	Q3	Q4	Q1	Apr.	May
LFS employment	0.3	0.5	0.4	0.3	0.2
Workforce Jobs	0.2	0.0	0.1	n.a.	n.a.
Average hours worked	-0.2	-0.7	0.8	0.4	0.4

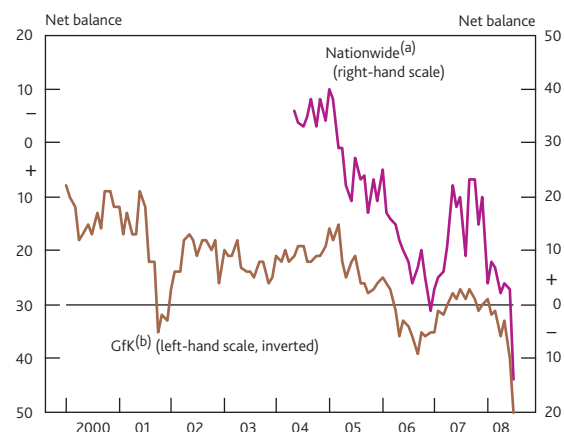
Source: ONS (including Labour Force Survey).

Chart 3.7 Vacancies and surveys of employment intentions

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

(a) Vacancies exclude agriculture, forestry and fishing.

(b) The swathe is based on the employment intentions balances from the Bank's regional Agents (manufacturing, services), the BCC (manufacturing, services), the CBI (manufacturing, financial services, business/consumer services, distributive trades) and the Manpower whole-economy survey, weighted by shares in employment. The BCC data are non seasonally adjusted.

Chart 3.8 Indicators of households' employment expectations

Sources: Nationwide and research carried out by GfK NOP on behalf of the European Commission.

(a) The Nationwide survey asks respondents whether they think there will be many or few jobs available in six months' time.

(b) Non seasonally adjusted. The GfK survey asks respondents how they expect unemployment to evolve over the next year. The series has been inverted, such that a lower net balance reflects an increase in unemployment expectations.

because of weaker demand and higher costs, then there will be a sharper decline in numbers employed. In that case, the 'job destruction' rate might pick up more sharply.

The latest data do not, as yet, provide a clear signal as to the sharpness of the prospective decline in employment growth. Measures of employment growth up to May had eased back only modestly (Table 3.B). And the pickup in the 'job destruction' rate remained limited (Chart 3.6). But the relative stability of the official labour market data may partly reflect lags between changes in output and changes in employment. Forward-looking indicators of employment growth have turned down in recent months. There has been a marked decline in the number of job vacancies (Chart 3.7). And surveys of employment intentions have fallen, although their relationship with the official ONS data has not been that close in recent years.

The impact of higher non-wage costs

The recent sharp increases in businesses' non-wage costs, associated with higher oil, gas and import prices, will also influence the outlook for employment. To continue in operation, businesses must ultimately offset these increases by cutting back on other costs, in particular labour costs. But the degree to which that will be achieved through lower employment growth, or lower rates of real pay growth, is uncertain, and depends in particular on the extent to which employees are willing to accept downward adjustments in the growth of real take-home pay per head (Section 4). When non-wage costs rose in 2004–06, unemployment picked up by around a percentage point, consistent with there being some temporary real wage resistance. Since then, households have become increasingly concerned about future employment prospects (Chart 3.8), which may reduce real wage resistance somewhat, tempering the impact of higher non-wage costs on employment.

The impact of changes in labour supply

Another factor that will affect the balance between demand and supply in the labour market is changes in net migration. Inflows of foreign workers from the A8 Accession economies have played an important role in boosting labour supply in recent years. But a number of indicators suggest that the inflow of A8 migrants has started to ebb in recent quarters (Table 3.C). That is consistent with a recent survey conducted by the Bank's regional Agents, which showed that businesses no longer expected to increase the proportion of foreign employees in their workforces as rapidly as they had at the end of 2006 (Chart 3.9).

Some of the slowing in inward migration from A8 countries may reflect the cyclical position of the United Kingdom relative to economies such as Poland. It may also reflect sterling's depreciation relative to the A8 currencies, which reduces the value of migrants' remittances and savings in their

Table 3.C Indicators of A8 migration flows^(a)

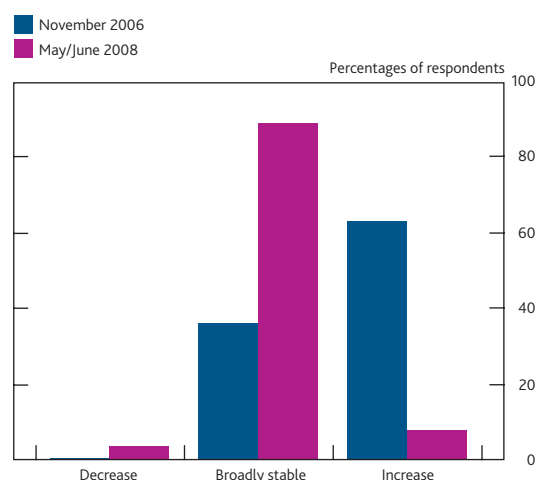
Thousands	Averages	2007				2008
	2005–06	Q1	Q2	Q3	Q4	Q1
Worker Registration Scheme ^(b)	54	58	57	56	53	51
National Insurance numbers ^(c)	60	67	67	66	62	58

Sources: Department for Work and Pensions, Home Office and ONS.

(a) Flows are four-quarter moving averages of non seasonally adjusted data. The A8 Accession countries are the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia and Slovenia.

(b) Nationals from the A8 are required to register under the Worker Registration Scheme upon finding a job.

(c) Number of A8 nationals who have been allocated a National Insurance number for the purpose of employment.

Chart 3.9 Agents' survey: businesses' expected use of migrant labour^(a)

(a) Responses weighted by employment. The November 2006 survey covered 214 respondents, and asked businesses how they expected the proportion of their total workforce accounted for by migrants to change over the next twelve months. The survey conducted during May and June 2008 covered 216 respondents, and asked about expectations over the next six months.

home currencies. These factors may also prompt some, who had previously come to the United Kingdom looking for work, to return to their home countries — a tendency confirmed by around half of the businesses who responded to the Agents' recent survey. Working against that, social networks established by earlier waves of migrants may limit any fall in the growth of net migration, at least to a degree.

Labour market tightness

There are signs that the labour market is loosening modestly. The rise in the claimant count over the past three months was the largest for fifteen years, although the unemployment rate has so far been little changed (**Table 3.D**). And more forward-looking measures of recruitment difficulties, such as those from the Banks' regional Agents, have eased.

The implications of movements in labour market tightness for wage pressure will depend on the causes of the change. For example, a rise in unemployment associated with a cyclical slowdown in output would typically be associated with a reduction in wage pressure. However, this would not necessarily be the case if a rise in unemployment were driven by supply-side factors, such as increased real wage resistance. The MPC's assessment of the outlook for wages is discussed in Section 5.

Table 3.D Selected indicators of labour market pressure

	Averages	2008				
	1998–2007	Q1	Apr.	May	June	July
Vacancies/unemployed ratio ^{(a)(b)}	0.40	0.42	0.42	0.42	n.a.	n.a.
Unemployment rate						
Labour Force Survey ^{(a)(c)}	5.3	5.2	5.3	5.2	n.a.	n.a.
Claimant count ^(d)	3.2	2.5	2.5	2.6	2.6	n.a.
Recruitment difficulties						
BCC ^(e)	62	61	n.a.	n.a.	60	n.a.
CBI ^(f)	16.5	21.7	n.a.	n.a.	15.6	n.a.
Agents' scores ^(g)	1.6	0.6	0.1	-0.2	-0.7	n.a.
KPMG/REC availability of staff ^(h)	48	47	51	55	56	60

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

(a) Three-month moving average.

(b) Number of vacancies divided by LFS unemployment. Vacancies exclude agriculture, forestry and fishing. Average is since June 2001.

(c) Percentage of the economically active population.

(d) Percentage of the sum of the claimant count and Workforce Jobs, monthly data.

(e) Non seasonally adjusted. Manufacturing and services balances weighted by shares in employment.

(f) Averages since the series starts in 1998 Q4. Averages of the balances of respondents expecting the availability of skilled and unskilled staff to limit output/business over the next three months (in the manufacturing sector) and over the next twelve months (in the financial services, 'consumer' services and 'business and professional' services sectors), weighted by shares in employment.

(g) Recruitment difficulties in the most recent three months compared with the situation a year earlier.

(h) A balance over 50 indicates improving availability of staff.

4 Costs and prices

The near-term inflation outlook has deteriorated sharply since the *May Report*. CPI inflation rose to 3.8% in June, reflecting marked increases in food and petrol prices. And further substantial rises in inflation are expected in the near term, reflecting in part the announcements already made about gas and electricity tariffs. The pickup in inflation over the past year has been accompanied by a rise in households' year-ahead inflation expectations. Expectations at longer horizons also edged up. Manufacturing input and output prices increased sharply. But there were as yet few signs of increased pay growth.

Chart 4.1 Measures of consumer prices

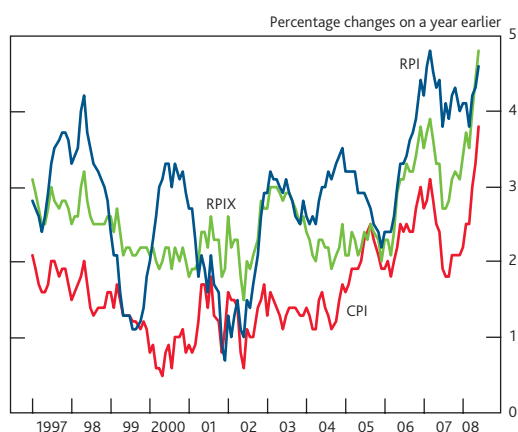


Table 4.A Annual inflation rates within the CPI basket^(a)

Per cent		Averages		2008	
	Frequency of purchase ^(b)	Since 2000	2007	Q1	Q2
Food (9.5%)	Monthly	2.3	4.6	6.2	8.9
Domestic energy (3.5%)	Monthly	7.1	8.2	0.1	11.0
Petrol (3.8%)	Monthly	5.0	3.1	20.0	20.7
Services (45.3%)	n/a	3.7	3.6	3.3	3.8
Other goods ^(c) (37.9%)	n/a	-1.5	-0.3	-1.1	-0.9
<i>Of which:</i>					
Clothing and footwear (6.2%)	Quarterly	-5.6	-3.8	-5.1	-6.9
Audio visual, photographic and data processing goods (2.6%)	Less than once a year	-10.4	-11.3	-15.2	-14.0

n/a = not applicable.

(a) Figures in parentheses are CPI expenditure weights in 2008.

(b) Indicative frequencies of purchase based on ONS classification of RPI categories into items bought at least monthly, at least quarterly, at least annually and less frequently than once a year. See O'Donoghue, J (2007), 'Inflation — experience and perceptions', *Economic and Labour Market Review*, Vol. 1, No. 1, pages 33–39.

(c) CPI goods excluding food, petrol and domestic energy.

CPI inflation rose to 3.3% in May (**Chart 4.1**). That was more than 1 percentage point away from the target and consequently triggered an open letter from the Governor, on behalf of the MPC, to the Chancellor, as required by the monetary policy remit.⁽¹⁾ In June, CPI inflation picked up further to 3.8%. The rise in inflation over the past three months has been sharper than the MPC anticipated at the time of the *May Report*, largely reflecting greater-than-expected increases in food and petrol prices.

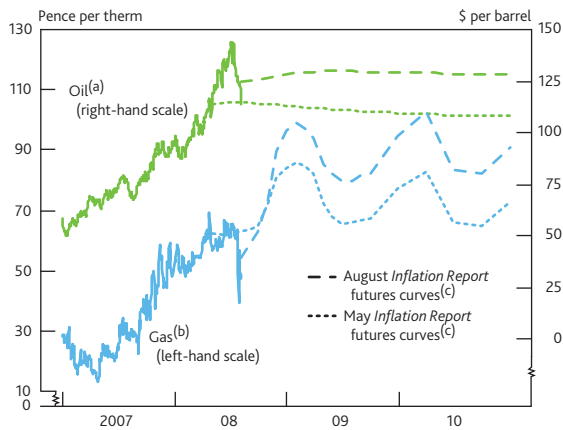
Domestic energy and food prices are expected to put further marked upward pressure on CPI inflation in the near term (Section 4.1). Such movements in individual prices need not necessarily lead to sustained increases in aggregate inflation at longer horizons. For example, between 2004 and 2007, nearly half of the prices of the goods and services in the CPI basket (weighted by expenditure shares) rose by more than 3% a year. Yet CPI inflation averaged 2% over this period. That is because another third of prices rose by less than 1% a year. But the recent increases in individual prices have been very sharp. And they have been concentrated in goods that are both necessities and purchased frequently, increasing both their visibility and their impact on households' monthly budgets (**Table 4.A**). A critical issue for the MPC is the extent to which high near-term rates of inflation will lead households and companies to expect higher inflation in the future (Section 4.2) and to build that into higher wages (Section 4.3) and prices (Section 4.4).

4.1 The near-term outlook for inflation

Energy prices

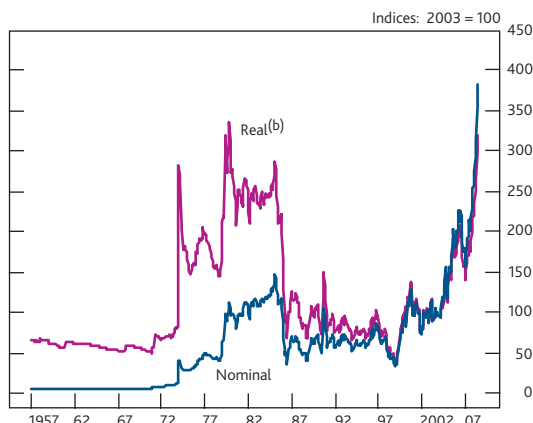
There have been significant movements in oil prices since the *May Report*. The price of a barrel of Brent crude rose to \$144

(1) The letter is available at www.bankofengland.co.uk/monetarypolicy/pdf/cpiletter080616.pdf.

Chart 4.2 Energy prices

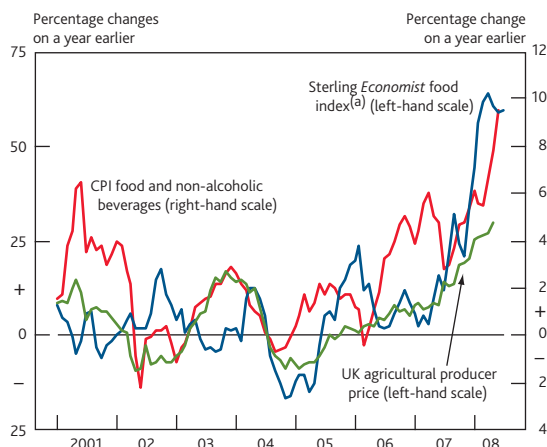
Sources: Bloomberg, International Exchange (www.theice.com), ONS, Reuters and Thomson Datastream.

- (a) Brent forward price for delivery in 10 to 21 days' time.
 (b) One-day forward price of UK natural gas.
 (c) Averages during the fifteen working days to 7 May and 6 August respectively. Oil futures prices, and gas futures prices to late 2009, are monthly averages; thereafter, gas futures prices are interpolated from quarterly data.

Chart 4.3 Brent sterling oil prices(a)

Sources: Bank of England, ONS and Thomson Datastream.

- (a) Monthly data to June 2008.
 (b) Sterling oil prices divided by the RPI index.

Chart 4.4 Food prices

Sources: Bank of England, Defra, The Economist, ONS and Thomson Datastream.

- (a) Monthly averages of weekly US dollar data, converted into sterling using monthly average of market exchange rates.

in mid-July, but that increase subsequently unwound (**Chart 4.2**), amidst perceptions of a weakening in demand and some strengthening in supply. On average, in the fifteen working days to 6 August, spot oil prices were still 10% higher than at the time of the *May Report*. And oil futures prices, which underlie the MPC's medium-term CPI inflation projection, were 17% higher on average over the next three years than the assumption in the *May Report*. Spot prices for wholesale gas have fallen back since the *May Report*. But the futures curve has risen markedly — by 19% on average relative to the *May Report*.

Even after the recent falls, oil prices remain very high by historical standards. Sterling oil prices have more than tripled since early 2003 and real oil prices remain higher than at any time since the late 1970s (**Chart 4.3**). Over time, high prices should encourage oil producers to expand capacity and oil consumers to cut back usage, putting further downward pressure on prices. But the adjustment so far has been limited, as discussed in the box on page 32.

Because oil is a storable commodity, the decisions of oil market participants will be influenced by their views about both current and future oil demand and supply. That may be one reason why oil prices have been volatile at this time of heightened uncertainty about the global economic outlook. Financial market participants may also hold oil-based assets as part of their portfolio, and it is possible that their actions have played a role in recent changes in oil prices. But the Bank's market intelligence suggests that, while purely speculative activity may have sometimes amplified commodity price movements in the short term, sustained price changes have tended to reflect market fundamentals.

Food prices

Global food prices rose by around 60% in sterling terms in the year to July (**Chart 4.4**). Consistent with that, UK agricultural producer prices and retail food prices have risen sharply. CPI food prices were up around 10% on a year ago in June, rather more than anticipated at the time of the *May Report*. Some of the rise in global food prices reflects adverse weather conditions. But other factors, such as the impact of higher energy prices on food producers' and retailers' costs, and increased demand from emerging market economies have also put upward pressure on prices. More recently, food commodity prices have fallen back somewhat: at the end of July, *The Economist* index was around 10% lower than its peak at the start of the month.

Import prices

Higher commodity prices and the marked depreciation of sterling since last summer have pushed up UK import prices. Annual import price inflation rose to its highest level since the early 1990s in 2008 Q1, and looks to have increased further in Q2 (**Chart 4.5**).

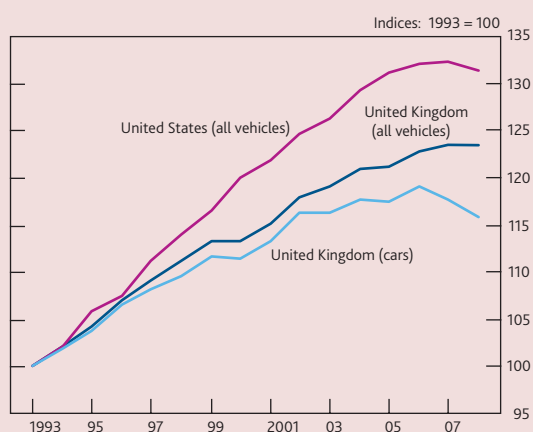
Recent trends in oil demand and supply

World oil prices have risen sharply since 2003, and have more than tripled in sterling terms. Over time, high oil prices should encourage oil producers to increase capacity, and encourage consumers of oil to adjust their behaviour — for example, by switching to less energy-intensive products. That should ultimately put downward pressure on the price of oil: real oil prices have not remained persistently elevated over very long periods of time (Chart 4.3). However, as this box discusses, the adjustment to high oil prices since 2004 has so far been limited.

How has demand responded to higher prices?

In developed countries, the high oil price has encouraged businesses and households to begin substituting away from oil. For example, in the United Kingdom and the United States the number of miles driven has begun to decline (Chart A).

Chart A Miles driven^(a)



Sources: Department for Transport and US Department of Transportation.

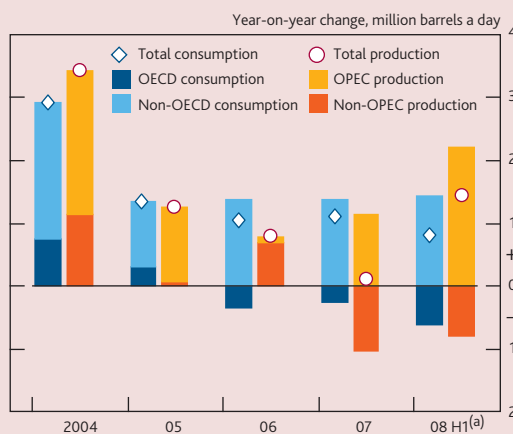
(a) Based on annual data. The 2008 figures are estimates, based on data to May in the United States and to Q1 in the United Kingdom.

But reduced demand from OECD countries has been more than offset by increased demand from emerging market economies (EMEs) (Chart B). Rapid growth and investment in oil-intensive technologies has boosted EME demand for oil over recent years. And government subsidies on petrol and other oil products have shielded households and companies in many countries from the full extent of rising oil prices.

Recently, however, fiscal pressures have led EME governments to cut back subsidies, increasing the prices faced by households and companies. In India, for example, reduced subsidies led to a 10% rise in the price of oil products in June. Prices in other EMEs have risen by up to 40%. However, although higher prices should bear down on demand in these economies, that may be more than offset by the boost to demand from rapid income growth. For example, between 2003 and the end of 2007, a 75% rise in Chinese petrol prices and a 50% rise in GDP coincided with a 40% rise in Chinese

demand for oil. So even as prices rise, non-OECD demand for oil may not slow substantially unless GDP growth slows.

Chart B Oil production and consumption



Source: International Energy Agency.

(a) Change between 2007 H1 and 2008 H1.

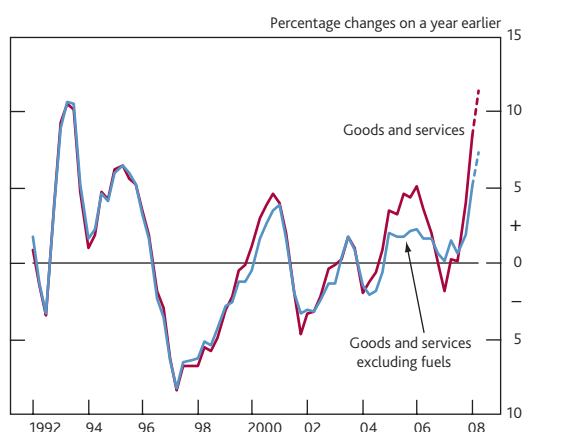
How has supply responded to higher prices?

The sustained increase in oil prices has encouraged investment in capacity: between 2002 and 2006, nominal spending on exploration and development rose by 60%, according to the IMF. But shortages of skilled labour and raw materials have driven up costs, leaving real investment levels little changed.

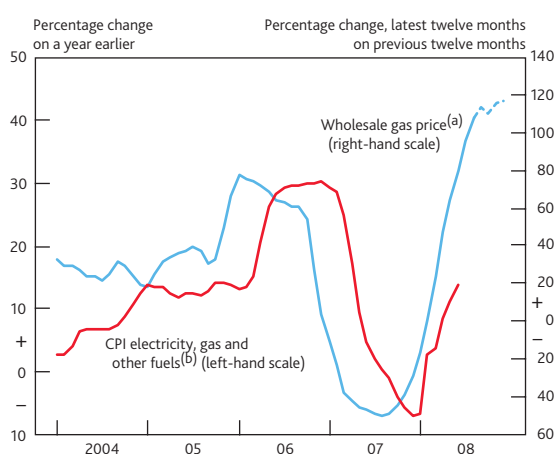
Furthermore, investment has not been concentrated in the regions where it could translate most quickly and cheaply into increases in capacity. OPEC and former Soviet Union countries generally have the lowest costs of exploration and extraction. But national oil companies (NOCs) control access to oil in these countries. NOCs may not want to increase production now for a variety of reasons, including the wish to preserve oil supplies for future generations. Consequently investment by private international oil companies has been increasingly focused on non-conventional sources, such as oil sands and deep-water fields. Such investment is more costly than for conventional sources, and indeed has only become economically viable because of the rise in oil prices. Although the amount of oil extracted from such non-conventional sources has increased rapidly, so far it only amounts to around 3% of global supply.

The outlook for demand and supply

The factors associated with high oil prices over recent years may persist for some time. For example, the International Energy Agency (IEA) estimates that global oil demand will grow by around 1.6% a year over the next five years, a little faster than in the recent past. OPEC production has picked up over 2008 so far. And the IEA expects that past investment will boost non-OPEC production in the near term. But projected production growth beyond 2009 remains modest.

Chart 4.5 Import prices^(a)

(a) Excluding the estimated impact of missing trader intra-community (MTIC) fraud. Dashed lines show estimated four-quarter growth in 2008 Q2 based on trade in goods (including and excluding oil) in April and May.

Chart 4.6 Wholesale gas and domestic energy prices

Sources: Bloomberg, International Exchange (www.theice.com), ONS and Reuters.

(a) One-day forward price of UK natural gas, monthly averages of daily data. Data for August and the futures curve are based on the fifteen working days to 6 August. The dashed line shows estimated increase between September and December 2008, assuming that spot prices follow the futures curve.

(b) Data to June 2008.

Table 4.B Announced changes in gas and electricity prices^(a)

	Price increases (per cent)		Dates effective	Market shares ^(b) (per cent) (Gas/electricity)
	Gas	Electricity		
British Gas	35	9	30 July	46/21
EDF Energy	22	17	25 July	7/14

Sources: Company press releases and Ofgem.

(a) Headline increases in gas and electricity prices as announced by domestic energy suppliers. These may differ slightly from the actual changes in retail energy prices.

(b) Market shares for Great Britain in March 2007, taken from Ofgem's *Domestic Retail Market Report* — June 2007.

The near-term outlook

CPI inflation is likely to rise further during 2008. But the scale and persistence of that pickup depends on a number of factors, in particular the prospects for domestic energy costs. Higher wholesale gas prices tend to pass through to domestic gas and electricity bills relatively rapidly (**Chart 4.6**). To date, two gas and electricity providers covering around 50% of the retail gas market and 35% of the retail electricity market have announced details of price increases (**Table 4.B**). The precise scale and timing of other providers' plans remained unclear at the time the MPC finalised this *Report*. But if the remaining companies raise prices by a similar amount in August or September that would lead to a 22% increase in domestic energy charges and add nearly 1 percentage point to CPI inflation by September. That assumption is embodied in the MPC's central projection.

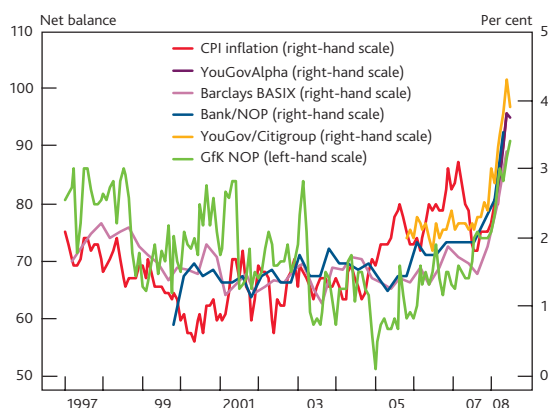
There are a number of uncertainties around this outlook. Other energy providers may adopt different pricing strategies to those who have already made announcements. A more drawn-out response than assumed in the central projection, for example, could lead to a slightly smaller but more persistent pickup in CPI inflation. The prospects for domestic energy tariffs further out will depend on future movements in wholesale energy prices. If wholesale gas prices remain where they are or move higher, there is a risk of further price increases in due course. But if wholesale prices continue to fall, such increases are less likely. Other factors, including elevated food price inflation in the near term, will also influence the overall inflation profile over this period. The MPC's inflation projection is set out in more detail in Section 5.

4.2 Inflation expectations

The MPC's central projection is for CPI inflation to rise sharply for a period before falling back (Section 5). But a key risk to that outlook is that households and companies may expect inflation to remain elevated for longer and build that expectation into higher wages and prices. This subsection reviews the evidence on inflation expectations. First, it examines the range of available measures. Second, it considers whether increases in households' near-term expectations are consistent with the MPC's own projection. And third, it looks at whether inflation is expected to return to the 2% target in the medium term.

Inflation expectations are not directly observable. A number of proxy measures are available, but each has shortcomings. Survey-based indicators of households' expectations are largely for the near term and do not relate to a specific inflation index. Measures derived from financial market instruments do not solely capture inflation expectations. Professional economists' forecasts are not necessarily closely linked to wage-setters' expectations. And, at present, there are no direct measures of companies' expectations for

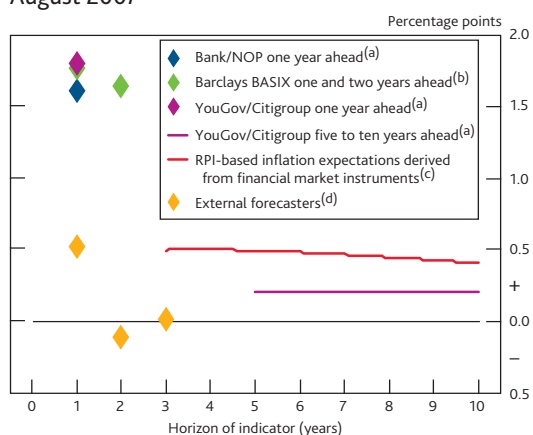
Chart 4.7 CPI and households' inflation expectations for the year ahead, scaled to match CPI on average^(a)



Sources: The AlphaMonitor: consumer, YouGovAlpha, Bank of England, Barclays Capital, Citigroup, GfK NOP, research carried out by GfK NOP on behalf of the European Commission and YouGov.

(a) Survey-based measures (apart from GfK) have been scaled to have the same mean as CPI inflation over a comparable time period. The questions ask about expected changes in prices over the next twelve months, but do not reference a specific inflation index. All measures are based on the median estimated price change, except Barclays BASIX which is the mean expectation, and GfK which captures the weighted net balance expecting prices to increase.

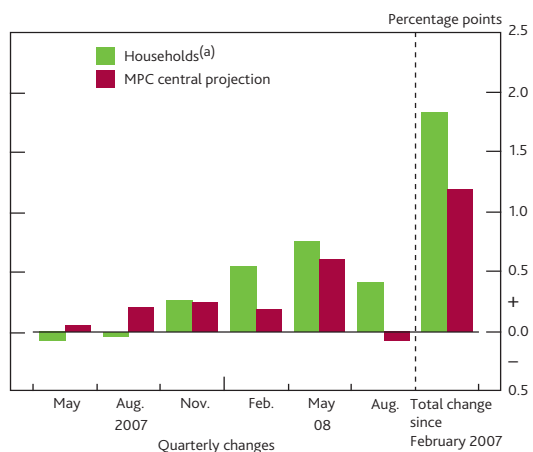
Chart 4.8 Changes in inflation expectations since August 2007



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

(a) Median of respondents' expected change in prices.
(b) Mean of respondents' expectation of rate of inflation, changes since September 2007.
(c) Model-based estimate of expectations derived from financial market instruments at different horizons. For details of the model, see Joyce *et al.* (2008).
(d) For details of the latest survey, see footnotes to Table 1 on page 48.

Chart 4.9 Changes in one year ahead expectations



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

(a) Average of Bank/NOP, Barclays BASIX and YouGov/Citigroup one year ahead inflation expectations. Quarterly changes are based on observations most closely comparable to *Inflation Report* publication dates. The August observation is based on YouGov/Citigroup only.

aggregate inflation. So it is difficult to draw firm conclusions about expectations for CPI inflation itself. Nonetheless, some common trends are evident in the available measures. Indicators of households' expectations for the near term have risen sharply since the autumn (Chart 4.7) but expectations for the medium term have risen more modestly (Chart 4.8).

The pickup in households' near-term expectations since last year is a little greater than the upward revisions to the MPC's own year-ahead central projection for CPI inflation. But given the substantial measurement uncertainties involved, the movements appear broadly consistent (Chart 4.9). However, the pickup also closely mirrors the rise in CPI inflation itself (Chart 4.7). That makes it hard to know whether households are forming a view of inflation over the next year using a range of forward-looking information, or are simply extrapolating recent inflation trends. The distinction is a critical one. If households, like the MPC, believe that the rise in inflation is temporary, that could limit the degree of upward pressure on wages. But if they extrapolate on the basis of observed inflation outturns — as the rise in the BASIX two year ahead measure suggests (Chart 4.8) — then expectations will take longer to fall back, posing upside risks to inflation.

The more modest rise in expectations at longer horizons is consistent with an expectation that much of the short-term pickup in inflation will unwind. But it is difficult to use these measures to judge whether CPI is expected to return to the 2% target. The only longer-term measure of household expectations — from YouGov/Citigroup — has risen since last summer. But that increase has been relatively small. And the measure does not relate to CPI inflation (or indeed any specific index).

Medium to longer-term breakeven inflation rates derived from financial market instruments have also risen over the past year (Section 1). But these do not capture CPI inflation expectations directly, because they also contain risk premia, are affected by market-specific factors and relate to RPI inflation, which has averaged rather more than CPI inflation over the past. Using a model developed in the Bank to isolate RPI-based expectations,⁽¹⁾ and subtracting the historical difference between RPI and CPI inflation, market participants' medium-term expectations appear broadly in line with the 2% target. That is consistent with the medium-term forecasts of professional economists surveyed by the Bank (see box on page 48).

In summary, there is little evidence to suggest that longer-term expectations have risen substantially. But the sharp pickup in households' year-ahead expectations is a little higher than the MPC's own assessment of the near-term

(1) For more information, see Joyce, M, Sorensen, S and Weeken, O (2008), 'Recent advances in extracting policy-relevant information from market interest rates', *Bank of England Quarterly Bulletin*, Vol. 48, No. 2, pages 157–66.

Table 4.C Private sector earnings^(a)

Percentage changes on a year earlier

	Averages since 1998	2008 Q1	2008 Apr.	2008 May	2008 June
(1) AEI regular pay	4.1	3.8	3.9	3.8	n.a.
(2) Pay settlements ^(b)	3.3	3.6	3.5	3.5	3.5
(1)–(2) Pay drift ^(c)	0.7	0.2	0.4	0.3	n.a.
(3) Total AEI	4.3	4.0	3.9	3.9	n.a.
(3)–(1) Bonus contribution ^(c)	0.2	0.2	0.0	0.1	n.a.
Memo item: AWE ^(d)	4.3	4.3	4.7	4.9	n.a.

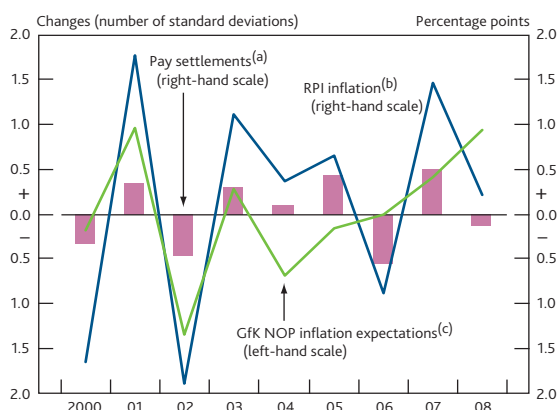
Sources: Bank of England, Incomes Data Services, Industrial Relations Services, the Labour Research Department and ONS.

(a) Three-month moving average measures.

(b) Average of private sector settlements over the past twelve months.

(c) Percentage points.

(d) AWE data exclude arrears. Average is since March 2001.

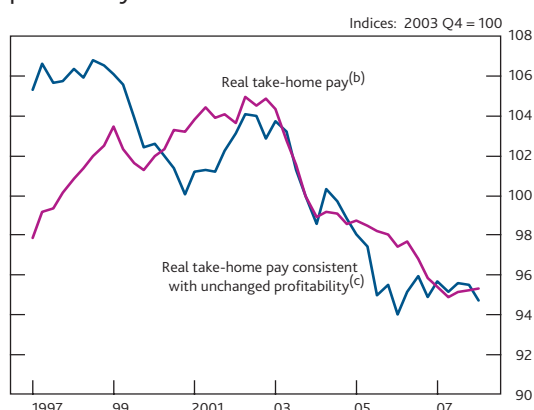
Chart 4.10 Factors influencing changes in pay settlements

Sources: Bank of England, GfK NOP, Incomes Data Services, Industrial Relations Services, the Labour Research Department, ONS and research carried out by GfK NOP on behalf of the European Commission.

(a) Change on the previous year, based on one-month private sector settlements in the first four months of the year.

(b) Change on the previous year, based on the average annual inflation rate in the final four months of the preceding year.

(c) Inflation expectations over the next twelve months. Change on previous year, based on number of standard deviations difference from its 1997–2008 average in the final four months of the preceding year.

Chart 4.11 Real take-home pay per employee relative to productivity^(a)

(a) 1997 Q1 to 2008 Q1.

(b) Households' post-tax wages and salaries divided by the consumption deflator. Includes non-profit institutions serving households. Productivity is calculated from ONS data on non-oil and gas market sector output divided by private sector employees.

(c) Ratio of market sector non-oil and gas output prices to the consumption deflator, multiplied by the ratio of one minus the effective rate of tax on employees to one plus the effective rate of employers' social contributions. Profitability defined as the ratio of profits to value-added output.

outlook. And there is a risk that households may be extrapolating from recent inflation outturns. In that case, expectations may remain elevated until inflation itself falls back. A key question is whether any rise in expectations leads to higher wage demands by households, as discussed in the next subsection.

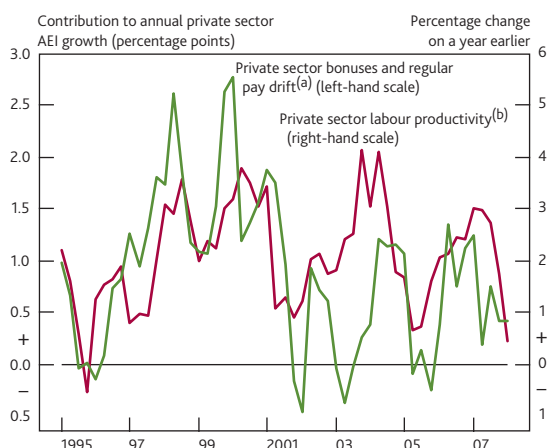
4.3 Labour costs

If heightened inflation concerns lead employees to bid for, and achieve, higher wages that is likely show up first in pay settlements. To date, there have been no signs of a pickup in private sector settlements (Table 4.C). But many employees are covered by pay deals agreed in the first four months of the year. So a key issue is whether high inflation outturns at the end of 2008 will lead to a rise in settlements in early 2009. There is some evidence of such a relationship in previous years (Chart 4.10). However, the ability of employees to achieve faster wage growth is likely to be limited by both the rise in companies' non-wage costs and the outlook for employment.

As well as eroding households' spending power, higher energy and import prices also push up companies' input costs (Section 4.4). Although companies may initially be forced to absorb these higher costs in lower profits, if they are to continue in operation they will eventually have to respond either by pushing down on wages, or by passing higher costs onto consumers in the form of higher prices. In both cases, the rise in non-wage costs will ultimately lead to a downward adjustment in households' real take-home pay (relative to productivity).

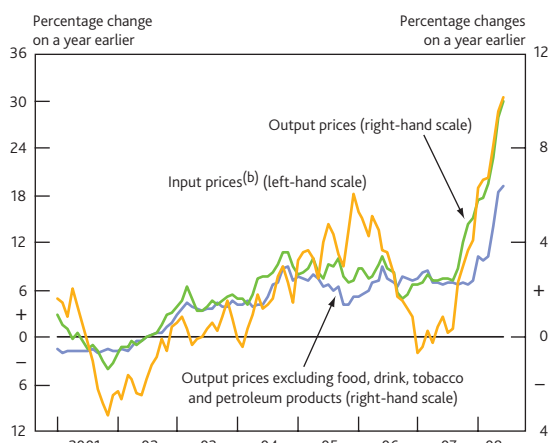
The impact of that adjustment depends on whether employees accept slower growth in real wages. If they instead succeed in achieving faster growth in wages then that may put upward pressure on unemployment. When companies' costs rose in 2004–06, employees eventually accepted the slower growth in real take-home pay necessary to offset the rise in non-wage costs (Chart 4.11). But it took some time for that adjustment to come about. That may be one reason why unemployment rose over that period (Section 3). Some degree of real wage resistance is again possible over the forecast period (Section 5), although this is likely to be tempered by weakening labour market conditions.

The slowdown in activity is also likely to push down on the more cyclical elements of wage growth. Pay drift and employee bonuses reflect factors such as changes in overtime payments or companies' profits and tend to move quite closely with labour productivity (Chart 4.12). With private sector productivity growth slowing sharply, this element of pay growth is likely to remain relatively subdued. That may particularly affect the earnings of the self-employed, whose pay may be more sensitive to the economic cycle than that of employees.

Chart 4.12 Private sector productivity and pay

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

- (a) Calculated as the difference between annual percentage changes in the three-month moving average measures of the private sector average earnings index and pay settlements.
 (b) Market sector output divided by LFS employment excluding general government employees (adjusted to be on a calendar-quarter basis). Up to the end of 2004, market sector output is a Bank calculation based on ONS data. From 2005 the calculation uses the ONS experimental estimate of market sector value added.

Chart 4.13 Producer prices^(a)

- (a) Data are non seasonally adjusted.
 (b) Includes Climate Change Levy.

Table 4.D Companies' expected output prices^(a)

	Averages since 1997 ^(b)	Averages		2008	
		2006	2007	Q1	Q2
BCC manufacturing	15	29	30	42	45
CBI manufacturing	-2	12	16	25	34
BCC services	25	27	32	43	41
CBI business and professional services	-1	7	7	3	6
CBI consumer services	15	42	38	45	14

Sources: BCC and CBI.

- (a) Companies' expected price changes over the next three months. Data are shown in quarter in which survey is published. BCC data are non seasonally adjusted.
 (b) The averages for the BCC and CBI services surveys are since the series began in 1997 Q2 and 1998 Q4 respectively.

It is too early to judge the net impact of higher near-term inflation expectations, higher non-wage costs and slower output growth on wages. Private sector wage growth has so far been subdued. According to the average earnings index (AEI), annual growth in private sector earnings was 3.9% in the three months to May (Table 4.C). An alternative measure of earnings, the experimental average weekly earnings (AWE) series, suggests slightly more of a pickup in wage pressures since the end of 2007. The AEI and AWE have sometimes given different signals on pay pressures. Those differences were discussed in a recent independent review of the AWE, which suggested a number of improvements.⁽¹⁾

4.4 Companies' pricing decisions

Although real wages should ultimately adjust to offset the impact of higher non-wage costs, that adjustment could take some time. In particular, with demand slowing quite sharply, companies may be forced to absorb part of the increase in costs in lower profits for a period.

With annual manufacturing input price inflation rising to 30% in June, companies at the start of the supply chain are facing substantial increases in costs. Some businesses have begun to pass these through. Manufacturing output price inflation rose to 10% in June, its highest level since the early 1980s. In part, that reflected higher prices for petrol and food, where cost rises tend to be passed through quite quickly. But output price inflation for other goods has also picked up (Chart 4.13). Annual services producer price inflation also rose to 3.5% in 2008 Q1, largely reflecting the impact of higher fuel prices on transport companies' prices. Surveys suggest that companies' near-term pricing intentions remain elevated (Table 4.D).

There is evidence of a more substantial margins squeeze in the consumer-facing sector. Excluding food and energy, inflation rates for other goods and services remain close to their post-2000 averages, despite the rise in costs (Table 4.A). The Q2 CBI survey of consumer services companies suggested that, although further cost increases were expected over the next three months, companies did not expect to be able to raise prices at a particularly rapid rate. And the Bank's regional Agents suggest that some consumer-facing businesses are finding it harder to pass through cost increases. Section 5 discusses the outlook for CPI inflation over the next three years.

(1) For more information on the review see www.statistics.gov.uk/pdffdir/awe0708.pdf.

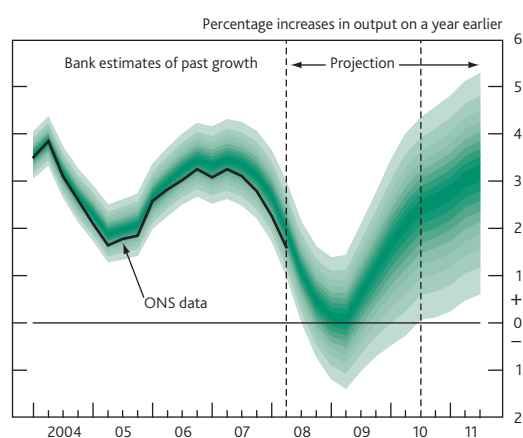
5 Prospects for inflation

On the assumption that Bank Rate moves in line with market yields, the Committee's central projection is for GDP to be broadly flat over the next year or so. Output growth then begins to pick up. CPI inflation, however, rises sharply in the next few months before falling back to a little below target in the medium term, as the contribution of energy, food and import prices wanes and the growing margin of spare capacity in the economy bears down on inflation. Both the slowdown in GDP growth and the initial upturn in inflation are greater than in the *May Report*. The key risks to inflation are, on the downside, that the slowdown in demand will be more pronounced; and, on the upside, that the rise in inflation in the near term leads to higher inflation expectations and greater persistence in inflation in the medium term. Both risks have increased since May. Overall, the balance of risks to growth is on the downside, while that to inflation is on the upside.

5.1 The projections for demand and inflation

CPI inflation has risen sharply since the *May Inflation Report*, while output growth has slowed. Against that backdrop, the outlook for medium-term inflation continues to be dominated by two opposing factors. First, past increases in import and global energy prices will continue to feed through to retail prices, pushing inflation substantially higher in the near term, with upside risks to pay pressures and inflation expectations in the medium term. Second, domestic demand is expected to slow further, increasing the margin of spare capacity in the economy and putting downward pressure on inflation. This outlook reflects some crystallisation of both the upside and downside risks to inflation highlighted in recent *Reports*. The Monetary Policy Committee's task is to bring inflation back to target over the medium term, weighing carefully the risks in both directions around the central projection.

Chart 5.1 GDP projection based on market interest rate expectations



The fan chart depicts the probability of various outcomes for GDP growth. To the left of the first vertical dashed line, the distribution reflects the likelihood of revisions to the data over the past; to the right, it reflects uncertainty over the evolution of GDP growth in the future. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that the mature estimate of GDP would lie within the darkest central band on only 10 of those occasions. The fan chart is constructed so that outcomes are also expected to lie within each pair of the lighter green areas on 10 occasions. Consequently, GDP growth is expected to lie somewhere within the entire fan on 90 out of 100 occasions. The bands widen as the time horizon is extended, indicating the increasing uncertainty about outcomes. See the box on page 39 of the November 2007 *Inflation Report* for a fuller description of the fan chart and what it represents. The second dashed line is drawn at the two-year point of the projection.

Chart 5.1 shows the Committee's projection for aggregate demand, based on the assumption that Bank Rate follows a path implied by current market yields (see the box on page 38). In the central case, GDP is broadly flat in the near term, as: further increases in inflation erode the growth of households' real incomes; the reduced availability of credit also impedes household spending; and residential and business investment are held back by, respectively, the weak housing market and poorer business prospects. Net trade takes up some of the slack. GDP growth then picks up gradually as credit supply conditions begin to ease, the restraining effect of higher energy and other costs on demand and output dissipates and the lower level of sterling supports net trade.

Financial and energy market assumptions

As a benchmark assumption, the projections for GDP growth and CPI inflation described in **Charts 5.1** and **5.3** are conditioned on a path for official interest rates implied by market yields (**Table 1**).

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

	2008		2009				2010				2011		
	Q3 ^(b)	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
August	5.1	5.1	5.0	4.9	5.0	5.0	5.1	5.1	5.2	5.2	5.2	5.2	5.2
May	4.7	4.6	4.6	4.5	4.6	4.6	4.6	4.6	4.7	4.7	4.7	4.7	4.7

(a) The data are fifteen working day averages of one-day forward rates to 6 August and 7 May 2008 respectively. At short maturities, the May curve is based on general collateral (GC) gilt repo rates, while the August curve is based on overnight index swap (OIS) rates. At longer maturities both curves are based on instruments that settle on Libor adjusted for credit risk.

(b) August figure for 2008 Q3 is an average of realised spot rates to 6 August, and forward rates thereafter.

In the period leading up to the MPC's August decision, the path implied by forward market interest rates was for little change in Bank Rate over the next year. The path lies above that in the *May Report*. But these are only central estimates: market uncertainty about future short-term market interest rates remains elevated.

The starting point for sterling's effective exchange rate index (ERI) in the MPC's projections was 93.1, the average for the fifteen working days to 6 August. That was 0.3% above the starting point for the May projections. Under the MPC's usual convention,⁽¹⁾ the exchange rate is assumed to depreciate to

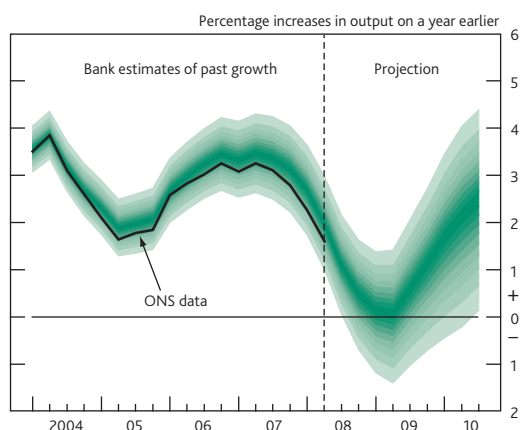
91.9 by 2010 Q3, but is slightly higher throughout the forecast period than assumed in May.

The starting point for UK equity prices in the MPC's projections was 2736 — the average of the FTSE All-Share for the fifteen working days to 6 August. That was around 12% below the starting point for the May projection. In the long run, equity wealth is assumed to grow in line with nominal GDP; in the short run, it also reflects changes in the share of profits in GDP.

Energy prices are assumed to evolve broadly in line with the paths implied by futures markets over the medium term. However, there is considerable uncertainty around the outlook for oil prices, reflected in the increased uncertainty implied by financial options prices. Average Brent oil futures prices for the next three years were 17% higher (in US dollar terms) than at the time of the *May Report*, and the wholesale gas futures curve was on average 19% higher. There is also uncertainty about the scale and pace of the pass-through of developments in wholesale markets to the prices of gas and electricity faced by households and companies. Two large energy companies — covering around 50% of the retail gas market and 35% of the retail electricity market — announced price rises in July (Section 4). The central projection is conditioned on a benchmark assumption that other domestic energy providers also raise their retail gas and electricity prices in Q3, leaving gas and electricity prices overall around 22% higher.

(1) See the box 'The exchange rate in forecasting and policy analysis', on page 48 of the November 1999 *Inflation Report*.

Chart 5.2 GDP projection based on constant nominal interest rates at 5%



See footnote to Chart 5.1.

The central projection embodies a more pronounced slowdown in activity than in the *May Report*.⁽¹⁾ That reflects: lower real incomes as a result of higher-than-expected retail prices and lower employment; a further tightening of credit conditions; sharper-than-expected declines in housing market activity and prices; and greater reluctance to invest on the part of businesses. The balance of risks around the outlook for aggregate demand is judged to be to the downside, particularly in the medium term. That is primarily because credit supply conditions may remain tighter for longer, inhibiting household and corporate spending growth and reducing asset prices. The outlook for GDP growth is very similar on the alternative assumption that Bank Rate remains constant (**Chart 5.2**). The economic influences on the GDP projection are discussed further in Section 5.2.

The outlook for CPI inflation is shown in **Chart 5.3**, also based on the assumption that Bank Rate follows market yields. In the central projection, inflation continues to rise sharply in the near term. This partly reflects the announcements already

(1) The box on pages 46–47 discusses the Committee's recent forecasting record.

Chart 5.3 CPI inflation projection based on market interest rate expectations

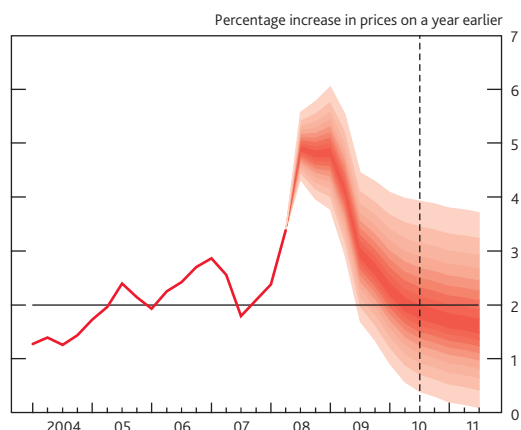
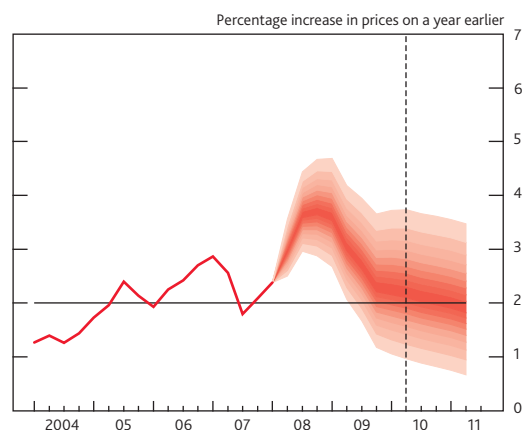


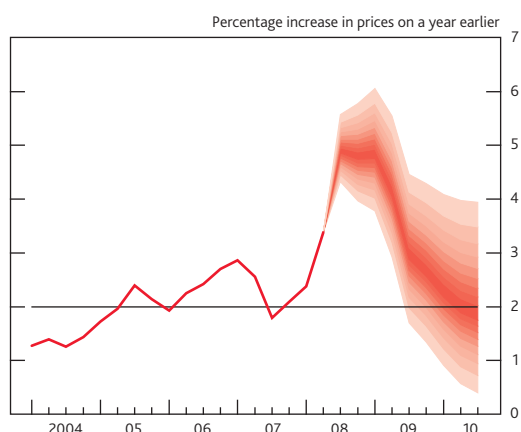
Chart 5.4 CPI inflation projection in May based on market interest rate expectations



Charts 5.3 and 5.4 The fan charts depict the probability of various outcomes for CPI inflation in the future. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that inflation over the subsequent three years would lie within the darkest central band on only 10 of those occasions. The fan charts are constructed so that outcomes of inflation are also expected to lie within each pair of the lighter red areas on 10 occasions. Consequently, inflation is expected to lie somewhere within the entire fan charts on 90 out of 100 occasions. The bands widen as the time horizon is extended, indicating the increasing uncertainty about outcomes. See the box on pages 48–49 of the May 2002 *Inflation Report* for a fuller description of the fan chart and what it represents. The dashed lines are drawn at the respective two-year points.

made about higher retail gas and electricity tariffs, as well as higher import prices. The pickup is larger than anticipated at the time of the *May Report*, in part because retail food prices have risen by more than expected. Inflation starts to fall back sharply towards the middle of next year as the contribution of retail food and energy prices wanes, import price inflation falls and the larger margin of spare capacity in the economy bears down on domestic costs. The central projection, representing the single most likely outcome, is for inflation to fall a little below the 2% target in the medium term. But the balance of risks is significantly on the upside.

Chart 5.5 CPI inflation projection based on constant nominal interest rates at 5%



See footnote to Charts 5.3 and 5.4.

The uncertainties around the central projection for inflation are greater than usual. In the short term, the profile for inflation will depend particularly on the size and timing of further retail gas and electricity price increases. But it is more likely than not that the inflation rate will rise above 5% at some point in the coming months. The Committee judges that the risks on both sides of the projection have increased, and the width of the fan chart has been increased to reflect that. In the medium term, the main downside risk is that higher energy prices and tighter credit supply conditions result in demand being more subdued than in the central projection, bringing inflation further below the target. The main upside risk is that the experience of above-target inflation over a considerable period raises the longer-term inflation expectations of price and wage-setters. That would make the rise in inflation more persistent. Both these risks to inflation in the medium term are judged to have increased since May, but the balance of risks is judged to lie further to the upside. There is a range of views among the Committee about both the central projection and the balance of the risks. The factors shaping the inflation projection are discussed in more detail in Section 5.3. The projection under constant interest rates is shown in **Chart 5.5**.

5.2 Risks to demand

The main risks to the outlook for demand arise from: the response of household spending to declining real income growth and tightening credit supply; the adjustment of investment, particularly in dwellings, in the face of slowing growth in general and a weaker housing market in particular; and the resilience of UK export demand as growth in other advanced economies also moderates.

How much will household spending slow?

Household spending is likely to have slowed during the first half of 2008, judging by a range of survey measures. However, it is not easy to reconcile those measures fully with the current vintage of official data, leaving the underlying trend in household spending more than usually uncertain (Section 2). In the Committee's central projection, real household income and spending growth are both very subdued in the near term, before picking up. The housing market is weaker and credit supply conditions are tightened by more than was assumed in May.

The main reason for the slowing in consumer spending is the squeeze on households' real incomes. The rise in energy and import prices is expected to lead to little, if any, growth in real disposable incomes over the first year of the forecast period.

Tighter credit conditions, accompanied by a weakening housing market, are also likely to act as a drag on household spending. The proportion of households who would like to borrow to maintain consumption in the face of lower real incomes but cannot do so is likely to have increased, given the overall tightening of credit supply, although credit conditions may have eased for the most creditworthy borrowers. Lenders are likely to continue to restrict the supply of credit to households and companies (Section 1). In the Committee's central projection, credit supply conditions are assumed to improve somewhat towards the end of the forecast period, but remain persistently tighter than their pre-turbulence levels. Falling house prices continue to reduce the quantity of housing equity available as collateral for loans to finance spending (Section 2). Tighter credit conditions also make it more difficult for homeowners to access existing housing equity, possibly encouraging them to increase their saving to build up alternative financial buffers, given uncertainty about income and employment prospects.

There are risks around the central projection on both sides. On the upside, household spending may be stronger than expected if the economy proves more resilient than in the central case — for example, if oil prices continue their recent fall, diminishing the squeeze on real incomes. And households may delay adjustment of their consumption for longer in the face of lower real income growth. That would be consistent with the picture from official data of somewhat stronger

consumption growth in the first half of this year than indicated by surveys. On the downside, household spending may slow more sharply than expected if income growth is even weaker than expected or if people attempt to build up their savings to a greater extent. And the risk remains that deteriorating conditions in the housing market and slowing demand growth could weaken banks' balance sheets further, leading them to tighten credit supply more, thus amplifying the slowdown in demand.

How far will investment fall?

A key issue for the investment outlook is the extent to which construction activity will weaken further in response to the continued decline in demand for residential and commercial property, relative to the available supply. In the Committee's central case, dwellings investment falls very sharply in the near term, reducing GDP growth. But later in the forecast period it starts to recover, growing faster than aggregate output. The reduction in dwellings investment is considerably more marked than in the May *Inflation Report* projection, reflecting the greater-than-expected severity of the downturn in the housing market. However, the depth and duration of the downturn in dwellings investment are extremely uncertain. They will depend on how soon the tightening of credit supply begins to unwind, the speed and magnitude of the adjustment in house prices, and how quickly house builders respond when demand recovers.

A slowdown in business investment also contributes to the fall in domestic demand growth in the Committee's central case. That reflects the probable impact of the decline in expected output growth and heightened uncertainty about the outlook, which will encourage companies to postpone investment projects. The slowdown is likely to be exacerbated by tight credit supply. Along with higher real energy prices and tightening credit supply, lower business investment is likely to have a more muted but persistent adverse effect on potential supply. Start-up companies are particularly dependent on access to credit.

How much will export growth offset weaker domestic demand?

Net trade makes a positive contribution to GDP growth in the central projection. That reflects in particular the prospective impact on imports of slower domestic growth over the forecast period and the lagged effects of the fall in sterling's effective exchange rate since August 2007. World trade growth is likely to slow a little in the near term but pick up later on. UK export growth remains robust, buoyed in part by the effects of sterling's depreciation. The subdued outlook for the United States and the euro area is offset to some extent by the continued strength of demand growth in emerging market economies in Asia and commodity-exporting countries.

The balance of risks around this outlook lies to the downside. In both the United States and (to a lesser extent) the euro

area, there is a downside risk from the interaction of more prolonged financial sector adjustment, slowing economic growth and a deteriorating outlook for credit quality. And it is not clear how easy it will be for emerging market economies to maintain their growth rates in the face of rising real commodity prices and weakening demand in the advanced economies.

5.3 Risks to inflation

The MPC seeks to bring CPI inflation back to target in the medium term, as attempting to hit the target quickly in the wake of sharp increases in cost pressures could risk excessive volatility of real output. The medium-term prospects for inflation depend on: first, whether there are further sharp movements in the prices of oil and other commodities; second, the extent to which the sharp near-term increase in inflation also raises medium-term inflation expectations; and third, how the changing balance of demand and supply affects wage and price-setting.

Will food, energy and import prices increase further?

Retail food price inflation has increased sharply since May. However, world food prices have fallen back somewhat recently (Section 4). Reflecting that, in the Committee's central projection, food price inflation is assumed to fall back gradually. Oil and wholesale gas prices have been very volatile, rising following the *May Report* but falling back more recently. But futures prices for both oil and gas have moved markedly higher since May, and that will put further upward pressure on retail gas and electricity tariffs and businesses' costs in the near term. Import price inflation generally has also been higher than expected, and the Committee's expectations of import price inflation in the near term have been revised up since May, reflecting in part the continuing pass-through of the effects of sterling's depreciation.

There are considerable risks around the outlook for global commodity prices, reflected, for oil, in the increased uncertainty implied by financial options prices. As oil is a storable commodity, changes in its price can reflect news about demand and supply, now or in the future, with risks to the price on both sides. The future pace of growth of demand for oil, particularly outside the OECD, may continue to be brisk, although there are some signs of demand slackening in developed countries. So far, the supply response to higher prices has been muted (Section 4). But past increases in prices should provide a spur to investment in oil and gas fields and alternative energy technologies. And while some of the increases in global food prices over the past year were a reflection of temporary adverse weather conditions in various exporting countries, there is an upside risk from more persistent increases in costs of agricultural production due to higher oil prices and increases in demand from rapidly growing emerging market economies.

Will inflation expectations rise?

The increase in CPI inflation over the past three months has been more marked than the Committee expected at the time of the *May Report*. In the Committee's central projection, inflation moves substantially further away from target in the near term and the annual rate remains raised for some while. The key risk is that this period of elevated inflation causes households and businesses to revise up their expectations of inflation in the medium term, leading them in turn to set higher wages and prices.

Inflation expectations are difficult to monitor (Section 4). But, at short horizons, households' expectations appear to have risen significantly since last autumn, broadly in line with the marked upward revisions to the Committee's outlook for CPI inflation. There is a risk that households and businesses extrapolate from recent inflation outturns when forming their medium and longer-term inflation expectations. However, different surveys give different signals about the evolution of expectations at longer horizons. Measures derived from financial markets have edged up, while professional economists' forecasts still suggest that CPI inflation is expected to settle at close to 2% once the impact of near-term rises in commodity prices has passed through.

Given this evidence, the Committee's central view is that medium-term inflation expectations will remain consistent with the 2% CPI target if output slows as expected, with shorter-term expectations falling back broadly in line with actual inflation. But just how much growth needs to slow in order to bring shorter-term inflation expectations into line with the target is very uncertain. There is a downside risk that a sharper-than-expected slowdown in growth brings actual inflation down further below target. But there is an upside risk that inflation expectations drift upwards in response to the prolonged period of elevated inflation. An increase in longer-horizon inflation expectations would require the Committee to accept a more pronounced slowing in economic activity — and consequent increase in spare capacity — in order to achieve the inflation target.

How will wages respond?

In the Committee's central case, the growth of households' real take-home pay is very weak for several quarters before increasing gradually. The sharp increase in companies' non-wage input costs and greater competitive pressures, reflected in lower profit margins, will bear down on the wage increases that businesses are willing to pay. Employees are likely to want to resist the erosion of their real pay by inflation but, with a weakening labour market, they are likely to have to accept some moderation. The degree of downward pressure on real wages will depend in part on how willing businesses are to reduce employment, which in turn is likely to depend on how long employers expect the slowdown in demand growth to persist. The downward pressure will also depend on

changes in labour supply, which will grow more slowly if the inflow of workers from abroad is discouraged by the deterioration in pay and employment prospects.

In the Committee's central case, employment falls a little in the near term before picking up gradually. Real wages and labour supply are unlikely to adjust rapidly enough to offset fully the decline in labour demand, so unemployment is likely to increase. Official data suggest that the pace of employment growth has eased a little, but forward-looking indicators point to more of a slackening in labour demand (Section 3). As output slows considerably more than potential supply, companies' profit margins over labour and other costs are assumed to fall somewhat, as businesses absorb temporarily some of their cost increases in order to try to maintain sales.

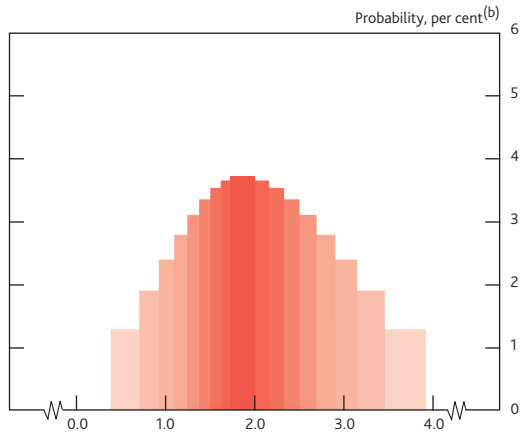
There are risks to nominal wage growth on both sides. On the upside, employees may be more successful in bargaining for higher wage settlements to compensate for higher inflation. On the downside, businesses may conclude that the current deterioration in demand prospects is likely to persist for some time, and therefore cut employment more aggressively. That would increase the downward pressure on wages.

5.4 The balance of risks

Considering the factors discussed in Sections 5.2 and 5.3 together, the Committee judges the balance of risks around activity to be on the downside, especially in the medium term. In particular, that reflects the risk that credit supply conditions may be tighter and persist for longer than in the central case. However, the balance of risks around the central projection for inflation is on the upside, particularly in the medium term. A key factor is the risk that longer-term inflation expectations move higher, so that increases in inflation are more persistent. The most likely spread of outcomes for CPI inflation at the two-year horizon is shown in **Chart 5.6**, and the equivalent outlook from the *May Report* is shown in **Chart 5.7**. **Charts 5.8** and **5.9** show frequency distributions for inflation and output at the two and three-year horizons.

The MPC will be monitoring a range of data to assess the shifting balance of risks to inflation in the medium term. To judge the extent of tightening in credit supply conditions and its consequences for domestic and foreign demand, key indicators are: the prices and quantities of money and credit; information about arrears and defaults; asset prices, including residential and commercial property prices; and timely indicators of household and corporate spending, including forward-looking surveys and reports from the Bank's Agents. To assess the impact of global developments on the near-term inflation outlook, the Committee will focus in particular on: energy and food prices, UK import prices and the exchange rate. And in considering whether above-target inflation is leading to an upward drift in inflation expectations, the

Chart 5.6 Projected probabilities of CPI inflation outturns in 2010 Q3 (central 90% of the distribution)^(a)



(a) Chart 5.6 represents a cross-section of the CPI inflation fan chart in 2010 Q3 for the market interest rate projection. The coloured bands have a similar interpretation to those on the fan charts. Like the fan charts, they portray the central 90% of the probability distribution. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that inflation in 2010 Q3 would lie somewhere within the range covered by the histogram on 90 occasions. Inflation would lie outside the range covered by the histogram on 10 out of 100 occasions. Chart 5.7 shows the corresponding cross-section of the May 2008 Inflation Report fan chart.

(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 5.7 Projected probabilities in May of CPI inflation outturns in 2010 Q3 (central 90% of the distribution)^(a)

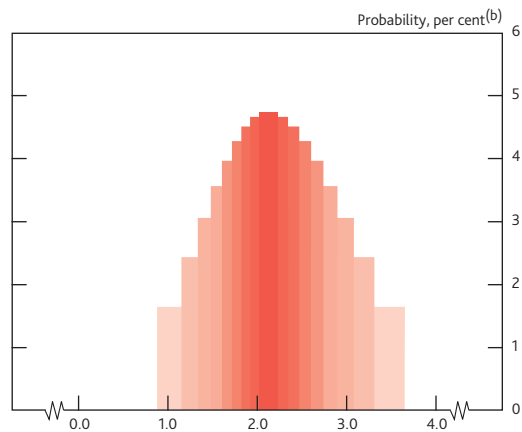
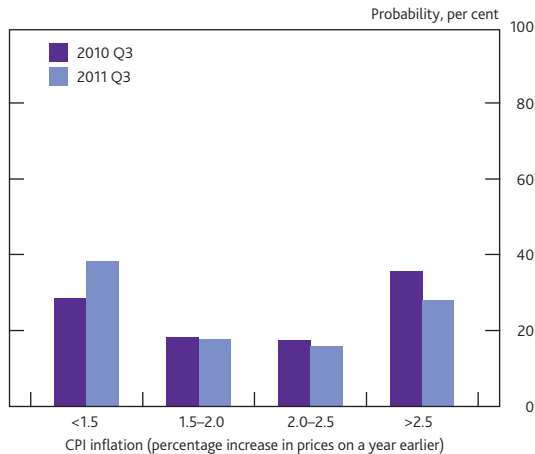
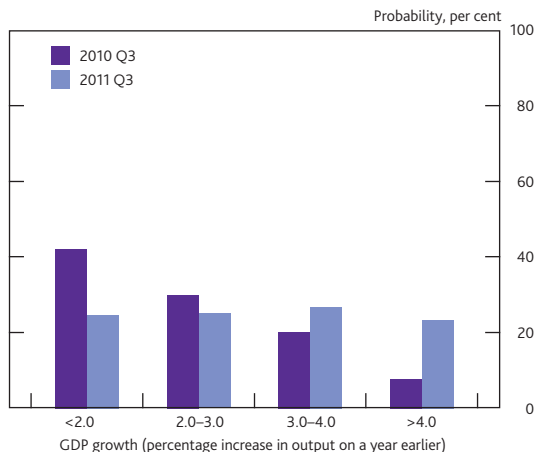


Chart 5.8 Frequency distribution of CPI inflation based on market interest rate expectations^(a)



(a) These figures are derived from the same distribution as Chart 5.3. They represent the probabilities that the MPC assigns to CPI inflation lying within a particular range at a specified time in the future.

Chart 5.9 Frequency distribution of GDP growth based on market interest rate expectations^(a)



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

Committee will look at: surveys of household inflation expectations and companies' pricing intentions; measures of inflationary pressure in the supply chain; and data on earnings and overall compensation.

5.5 The policy decision

At its August meeting, the Committee noted that the immediate prospect was for CPI inflation to move substantially further above the 2% target, and for output to be broadly flat. The weakness of economic activity would open up a margin of spare capacity, which was likely to be necessary in order to return inflation to the target in the medium term and to ensure that longer-term inflation expectations remained close to the target. There were significant risks to the inflation outlook relating to the extent of the slowdown and to the persistence of the pickup in inflation. In the light of those risks, the Committee judged that maintaining Bank Rate at 5% at its August meeting was appropriate in order to meet the 2% target for CPI inflation over the medium term.

The MPC's recent forecasting record

This box compares recent outturns for growth and inflation with the MPC's projections. It is the latest in a series published each August. Inflation outturns in 2008 have been stronger than implied by the MPC's central projection 18 months ago, and growth outturns have been weaker. That reflects three key unanticipated developments: the sharp rise in energy and food prices; the tightening in credit conditions; and the marked depreciation of sterling.

The February 2007 projections and outturns

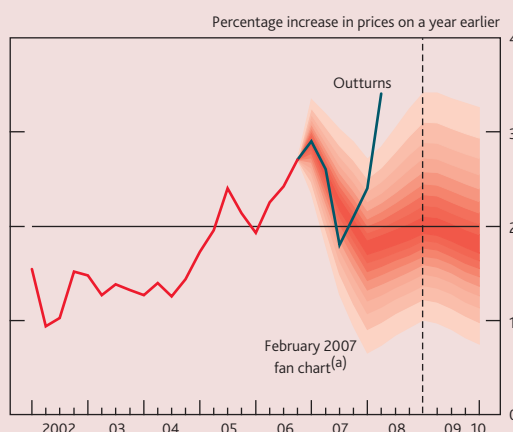
The MPC's projections for growth and CPI inflation are probability distributions rather than point forecasts, and are presented in the form of fan charts. These charts show the MPC's judgement of the likely distribution of outcomes over a three-year horizon. The coloured area of the fan covers 90% of the probability distribution, so over a run of years roughly 10% of outcomes could be expected to lie outside this area. Each successive pair of coloured bands captures a further 10% of the distribution. The central darkest band contains the single most likely path, although the probability of that specific path occurring is very small.

To assess the news in inflation and growth over the past 18 months, the MPC's February 2007 projection is used as a baseline. That projection predates the latest developments in energy and food prices, credit conditions and the exchange rate.

CPI inflation fell during 2007, broadly in line with the February 2007 central projection. But since the turn of this year, CPI inflation has risen sharply; in 2008 Q2, inflation averaged 3.4%, above the coloured area of the February 2007 fan chart (**Chart A**). External commentators had also attached a small probability to such a sharp rise in inflation this year: a Bank survey conducted in April 2007 found that, on average, external forecasters assigned a probability of less than 5% to a CPI outturn of 3% or more in 2008 Q2. While inflation in 2008 has been substantially higher than expected 18 months ago, real GDP growth has been markedly weaker, according to the latest ONS estimates (**Chart B**). Developments in inflation and real activity have broadly offset one another, so that nominal demand growth has been rather closer to the path implied by the MPC's February 2007 projection.

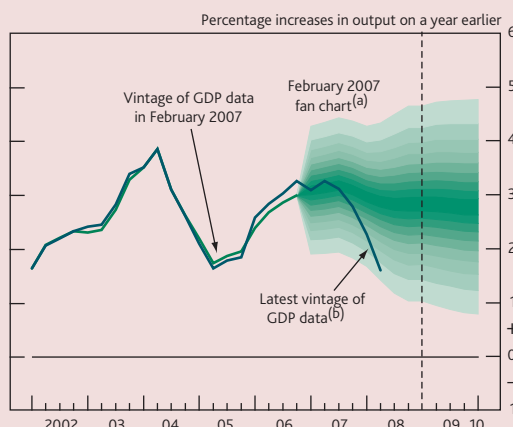
The news on inflation and output relative to the February 2007 *Report* has been incorporated into subsequent MPC projections. The projection for CPI inflation was raised markedly between the November 2007 and May 2008 *Reports* (**Chart C**), although there has been further upside news since then (Section 4). And the projection for real GDP growth in 2008 has been revised successively lower in each *Inflation Report* since August last year.

Chart A CPI inflation



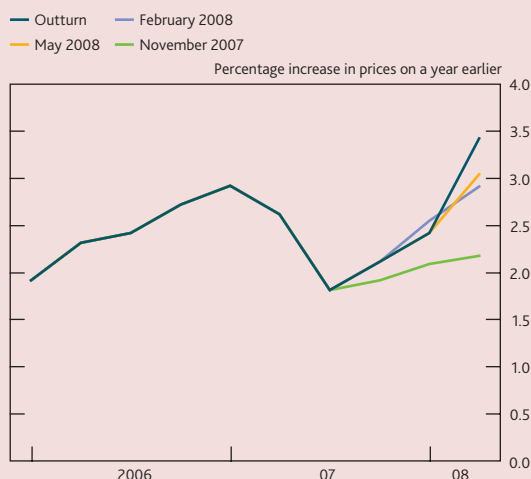
(a) Based on market interest rate expectations. See footnote to **Chart 5.3** for information on how to interpret the fan chart.

Chart B GDP growth



(a) Based on market interest rate expectations. See footnote to **Chart 5.1** for information on how to interpret the fan chart.
(b) Revisions to early estimates of GDP growth account for the gap between the blue and green lines prior to the fan chart.

Chart C CPI inflation and past mean projections^(a)



(a) Based on market interest rate expectations.

To assess the MPC's projections over a longer period, **Table 1** reports the frequency with which inflation and growth outturns fell within and outside the central 50% of the fan charts published in each *Inflation Report* since February 1998, at both one and two-year horizons.⁽¹⁾ Around a half of inflation and growth outturns have fallen in the central 50% of the distribution at the one-year horizon. At the two-year horizon, more than two thirds of inflation outturns have fallen in the central 50% of the distribution. In part, that reflects the unexpected degree of stability in inflation over much of the decade following the MPC's inception.⁽²⁾ But it may also reflect the response of monetary policy. The MPC's fan charts are conditioned on a given path for interest rates. In practice, interest rates will vary from this path over time, as monetary policy responds to developments in the economy to bring inflation back to target. Inflation outturns over longer horizons are therefore likely to have been more clustered around the target than implied by the fan charts alone. But the sample of fan charts is still relatively small, so it is difficult to draw firm conclusions about the MPC's overall forecasting record at longer horizons.

Table 1 Dispersion of inflation and growth outturns relative to fan chart probability distributions^(a)

	Number and proportion of outturns in the fan chart:			
	Number of outturns	Within the central 50%	Above the central 50%	Below the central 50%
Annual inflation				
One year ahead	38	19 (50%)	13 (34%)	6 (16%)
Two years ahead	34	24 (71%)	6 (18%)	4 (12%)
Four-quarter GDP growth				
One year ahead	38	22 (58%)	11 (29%)	5 (13%)
Two years ahead	34	21 (62%)	10 (29%)	3 (9%)

(a) Calculated for the market rate fan charts published between February 1998 and May 2007. The central 50% is calculated relative to the median of the distribution. Fan charts refer to RPIX inflation up to November 2003 and CPI inflation thereafter. The percentages may not sum to 100 due to rounding.

Explaining recent forecast performance

The combination of stronger-than-expected inflation and weaker-than-expected growth reflects three important developments over the past year: the sharp rise in energy and food prices; the tightening in credit conditions; and the marked depreciation of sterling.

The unexpectedly sharp rise in global energy and food prices has been a key influence on the paths of both inflation and output. In the MPC's projections, energy prices are assumed to evolve broadly in line with the paths implied by futures markets. But by 2008 Q2, oil and wholesale gas prices were around twice the level implied by futures curves at the time of the February 2007 *Report*, reflecting developments in global demand and supply. World food prices had also risen by more than 60%. This added to inflation both directly, through

higher petrol, food and domestic gas and electricity prices, and indirectly, by increasing the costs faced by businesses. Higher energy and food prices have also pushed down on demand growth, through their effects on households' real incomes and companies' costs. Households' real labour income growth over the past year, for example, was weaker than assumed in February 2007.

GDP growth was also weaker than expected because of the unanticipated tightening in credit conditions, which originated in concerns about bank exposures to the US sub-prime mortgage market, but has since developed into a more general repricing of risk and deleveraging in the financial sector, both in the United Kingdom and overseas. Tighter credit conditions have influenced demand through a number of channels, including the price and availability of credit, lower asset prices and heightened uncertainty, and these effects have been incorporated into the MPC's subsequent projections.

CPI inflation was also boosted by the unexpectedly sharp fall in the sterling ERI, which by 2008 Q2 was around 12% lower than assumed by the MPC in February 2007. As discussed in Section 1 of this *Report*, that depreciation cannot be explained by interest rate differentials alone. Market commentators seem to believe that the depreciation mainly reflected an increase in the risk premium required for holding sterling assets. Partly reflecting the fall in the value of sterling, non-energy import price inflation was higher than anticipated 18 months ago.

An analysis of recent forecast performance plays an important role in the MPC's assessment of past and prospective economic developments, and is one factor used to calibrate the shape of the Committee's fan charts. For example, the widths of both the inflation and growth fan charts have been increased since the February 2007 projection to reflect the heightened uncertainty about the outlook. The MPC will continue to update these judgements in the light of new information.

(1) For a detailed examination of the MPC's past forecasting record, see Elder, R, Kapetanios, G, Taylor, T and Yates, T (2005), 'Assessing the MPC's fan charts', *Bank of England Quarterly Bulletin*, Autumn, pages 326–48.

(2) For a discussion of the factors behind the stability of inflation and growth outturns, see King, M (2007), 'The MPC ten years on', *Bank of England Quarterly Bulletin*, Vol. 47, No. 2, pages 272–85.

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 July. Like the MPC's central projection, the average external forecast for annual CPI inflation was above the target in the near term, before returning to target in subsequent years (Table 1). The distribution of external forecasters' expectations for near-term inflation had shifted markedly higher since the May Report (Chart A).

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

	2009 Q3	2010 Q3	2011 Q3
CPI inflation ^(b)	2.6	1.9	2.0
GDP growth ^(c)	1.2	2.2	2.7
Bank Rate (per cent)	4.4	4.5	4.8
Sterling ERI ^(d)	92.5	93.1	93.5

Source: Projections of outside forecasters as of 28 July 2008.

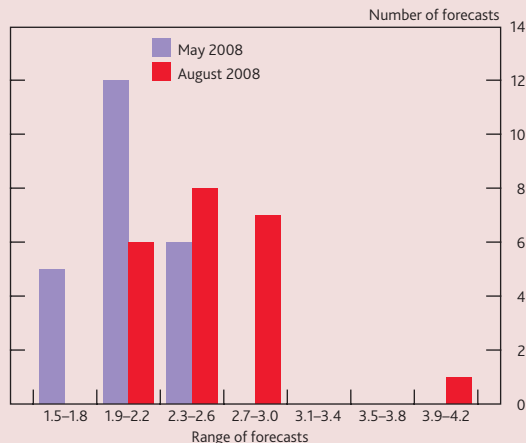
(a) For 2009 Q3, there were 22 forecasts for CPI inflation, GDP growth and Bank Rate, and 18 for the sterling ERI. For both 2010 Q3 and 2011 Q3 there were 19 forecasts for CPI inflation, GDP growth and Bank Rate, and 16 for the sterling ERI.

(b) Twelve-month rate.

(c) Four-quarter percentage change.

(d) Where necessary, responses were adjusted to take account of the difference between the old and new ERI measures, based on comparative outturns for 2006 Q1.

Chart A Distribution of one year ahead CPI inflation central projections

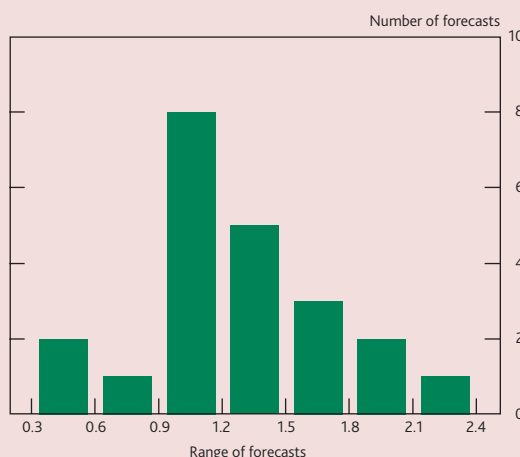


Source: Annual CPI inflation projections of 22 outside forecasters as of 28 July 2008, and of 23 outside forecasters as of 23 April 2008.

There was a wide range of views about the near-term outlook for GDP growth (Chart B). The average central projection for four-quarter growth in 2009 Q3 was 1.2%, somewhat weaker than reported in the equivalent survey three months ago. Growth was expected to recover gradually in subsequent years (Table 1).

The Bank's survey also asked respondents for their assessment of the risks around their central projections. On average, external forecasters thought that there was an 80% chance of CPI inflation remaining above the target by 2009 Q3 (Table 2). But for 2010 and 2011, the external forecasters viewed the risks to inflation to be broadly balanced.

Chart B Distribution of GDP growth central projections for 2009 Q3



Source: Four-quarter GDP growth projections of 22 outside forecasters as of 28 July 2008.

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

CPI inflation

Probability, per cent	Range:					
	<1%	1-1.5%	1.5-2%	2-2.5%	2.5-3%	>3%
2009 Q3	2	6	14	27	28	25
2010 Q3	8	15	31	26	13	8
2011 Q3	9	15	28	28	13	7

GDP growth

Probability, per cent	Range:			
	<1%	1-2%	2-3%	>3%
2009 Q3	38	44	15	4
2010 Q3	17	33	34	16
2011 Q3	9	24	40	28

Source: Projections of outside forecasters as of 28 July 2008.

(a) For 2009 Q3, 22 forecasters provided the Bank with their assessment of the likelihood of twelve-month CPI inflation and four-quarter GDP growth falling in the ranges shown above; for 2010 Q3 and 2011 Q3, 19 forecasters provided assessments. The table shows the average probabilities across respondents. Rows may not sum to 100 due to rounding.

Respondents thought that there was around a 40% chance of four-quarter GDP growth being below 1% in 2009 Q3 (Table 2) — a significant increase relative to the equivalent probability reported in May. External forecasters expected that risk to abate somewhat in subsequent years.

The average external forecast for Bank Rate in 2009 Q3 was 4.4%. Expectations were slightly higher in 2010 and 2011. But nonetheless, the average external forecaster's profile for Bank Rate was significantly lower than implied by market yields (see the box on page 38).

On average, the sterling ERI was expected to remain close to 93 over the next three years. That was similar to the average projection three months ago.

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Text of Bank of England press notice of 5 June 2008 **Bank of England maintains Bank Rate at 5.0%**

The Bank of England's Monetary Policy Committee today voted to maintain the official Bank Rate paid on commercial bank reserves at 5.0%.

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

Text of Bank of England press notice of 10 July 2008 **Bank of England maintains Bank Rate at 5.0%**

The Bank of England's Monetary Policy Committee today voted to maintain the official Bank Rate paid on commercial bank reserves at 5.0%.

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

Text of Bank of England press notice of 7 August 2008 **Bank of England maintains Bank Rate at 5.0%**

The Bank of England's Monetary Policy Committee today voted to maintain the official Bank Rate paid on commercial bank reserves at 5.0%.

The Committee's latest inflation and output projections will appear in the *Inflation Report* to be published on Wednesday 13 August.

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

Glossary and other information

Glossary of selected data and instruments

AEI – average earnings index.

ASHE – annual survey of hours and earnings.

AWE – average weekly earnings.

CPI – consumer prices index.

CPI inflation – inflation measured by the consumer prices index.

ERI – exchange rate index.

GC – general collateral.

GDP – gross domestic product.

HICP inflation – inflation measured by the harmonised index of consumer prices.

LFS – Labour Force Survey.

Libor – London interbank offered rate.

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

OIS – overnight index swap.

PMI – purchasing managers' index.

RPI – retail prices index.

RPI inflation – inflation measured by the retail prices index.

RPIX – RPI excluding mortgage interest payments.

Abbreviations

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

BCC – British Chambers of Commerce.

BRC – British Retail Consortium.

CBI – Confederation of British Industry.

CIPS – Chartered Institute of Purchasing and Supply.

Defra – Department for Environment, Food and Rural Affairs.

ECB – European Central Bank.

EMEs – emerging market economies.

FTSE – Financial Times Stock Exchange.

GfK – Gesellschaft für Konsumforschung, Great Britain Ltd.

HBF – Home Builders Federation.

HEW – housing equity withdrawal.

IBES – Institutional Brokers' Estimate System.

IEA – International Energy Agency.

IMF – International Monetary Fund.

IPD – Investment Property Databank.

LCFIs – large complex financial institutions.

LTV – loan to value.

MPC – Monetary Policy Committee.

MTIC – missing trader intra-community.

NOCs – national oil companies.

OECD – Organisation for Economic Co-operation and Development.

OFCs – other financial corporations.

Ofgem – Office of Gas and Electricity Markets.

ONS – Office for National Statistics.

OPEC – Organization of the Petroleum Exporting Countries.

PNFCs – private non-financial corporations.

PwC – PriceWaterhouseCoopers.

REC – Recruitment and Employment Confederation.

RICS – Royal Institution of Chartered Surveyors.

S&P – Standard and Poor's.

Symbols and conventions

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

n.a. = not available.

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

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

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