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Inflation Report

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February 2006

Bank of England

Inflation Report

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

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

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

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

The Monetary Policy Committee:

Mervyn King, Governor Rachel Lomax, Deputy Governor responsible for monetary policy John Gieve, Deputy Governor responsible for financial stability Kate Barker Charles Bean Richard Lambert Stephen Nickell Paul Tucker David Walton

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/2006.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/2006.htm.

Overview

Following a soft patch, output growth recovered towards the end of 2005. Consumer spending revived, though business investment growth appeared lacklustre. The pace of expansion in the United Kingdom's major export markets remained firm. In the Committee's central projection, under the assumption that official interest rates follow a path implied by market yields, four-quarter GDP growth picks up to around its historical average.

The recent period of soft growth appears to have led to a modest increase in spare capacity within companies and a slight easing in the labour market. Pay pressures remained benign, but energy prices rose sharply and import price inflation edged higher. CPI inflation fell to 1.9% in December. In the central projection, inflation remains close to the 2% target over the forecast period. The risks are a little to the downside for growth and broadly balanced for inflation.

Domestic demand

After a period of weakness during the first half of 2005, household spending growth recovered in Q3. Retail sales indicators suggest that the revival continued in the fourth quarter. This upturn occurred despite slowing growth in both real post-tax labour income and unsecured credit, and may reflect the stimulus from lower interest rates, higher equity prices and the pickup in the housing market. Looking forward, the Committee's central expectation is for continued steady growth in household consumption.

Business investment growth appeared lacklustre in the third quarter. The recent weakness in capital spending is unsurprising in the light of the earlier softness in domestic demand and the moderation in investment intentions indicators. But the sustained weakness relative to GDP since 2003 is more surprising, given the buoyancy of corporate cash flow, the low cost of finance and the continued decline in the relative price of capital goods. It is possible that the uncertainty engendered by higher energy prices and concerns about pension fund deficits may have checked capital spending. But investment data are particularly prone to revision and it is also possible that the present estimates will eventually be revised higher. The Committee's central expectation is for a rather modest acceleration of business investment over the forecast period.

The fiscal projections contained in the *Pre-Budget Report* imply that the government sector will continue to make a material

contribution to demand growth through most of the forecast period.

External demand and net trade

The world economy continued to expand briskly. The recovery in the euro area gathered momentum and business surveys point to solid growth in the near term. In the United States, GDP growth faltered in Q4 after ten quarters of robust expansion, but the easing in domestic demand growth seems likely to prove temporary. The Japanese revival seems to be continuing apace, despite a dip in output growth, and buoyant growth in the rest of Asia was maintained. The Committee expects that world trade growth will remain close to its recent average over the forecast period.

Net trade pulled down output growth in the third quarter but is likely to have made a broadly neutral contribution for the year as a whole. Over the past decade or so, increased competition from low-cost producers in Asia and Eastern Europe has contributed to a decline in the market share of UK exporters and an increase in the proportion of goods and services that are imported. The Committee expects those trends to continue. Overall, the impact of net trade on GDP growth over the forecast period is expected to be broadly neutral.

The outlook for GDP growth

GDP growth has been somewhat weaker than its historical average since the middle of 2004, but is provisionally estimated by the ONS to have picked up to 0.6% in the fourth quarter. The pace of growth in the services sector quickened and business surveys suggest that the momentum was maintained into this year. Activity in the manufacturing sector is reported to have dropped back, though business surveys paint a somewhat less gloomy picture.

Chart 1 shows the MPC's assessment of the outlook for four-quarter GDP growth under the assumption that official interest rates follow a path implied by market yields. The central projection is for four-quarter GDP growth to move slightly above its historical average as the quarters of weak growth in 2005 drop out of the calculation. It then eases back in the second half of the projection as domestic demand growth moderates. Compared with November, the profile is a little stronger in the first part of the projection, but slightly weaker thereafter.

Costs and prices

Surveys and reports from the Bank's regional Agents suggest that the period of weak GDP growth since the middle of 2004

Chart 1 Current GDP projection based on market interest rate expectations



The fan chart depicts the probability of various outcomes for 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 GDP growth 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 outturns of GDP growth 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 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.

has probably reduced the pressure of demand on capacity. That in turn should dampen inflationary pressure. But higher energy prices may have had some adverse impact on potential supply, so attenuating the increase in spare capacity.

Employment growth remained reasonably firm for much of the past year despite the softening in activity, resulting in a sharp decline in labour productivity growth. In part, that may have reflected a tendency for employers to retain their workforce during a temporary slowdown so as to avoid unnecessary expenditure on firing and hiring costs. But employment growth appears to have slackened towards the end of the year, suggesting that some of that labour hoarding may be starting to unwind. The associated rise in the LFS unemployment rate points to some easing in labour market tightness.

A key question is whether the recent sharp increases in energy prices will result in higher earnings growth. So far, pay settlements have remained flat and regular pay growth has been broadly stable. Moreover, contacts of the Bank's regional Agents suggest that only a small pickup is likely during the current pay round.

But other cost pressures have been less benign. Oil prices rose again, approaching the peak levels seen last August. And wholesale gas prices quadrupled during November. That was prompted by a spell of cold weather, but appears to have been exacerbated by a shortage of domestic gas supplies and rigidities in the international gas market that limited imports. Although gas prices subsequently fell back, they remain high and are likely to augment the domestic energy component of CPI inflation over the next year or so.

Import price inflation has also picked up over the past year. That reflects not only the impact of higher energy prices, but also the influence of robust global economic growth. Import price inflation is expected to fall back during the course of this year.

CPI inflation fell to 1.9% in December. The decline in inflation since September reflects a moderation in the contributions from petrol and transport services, particularly air fares.

The outlook for inflation

Chart 2 shows the Committee's assessment of the outlook for CPI inflation, also assuming that official interest rates move in line with market yields. Under the central projection, inflation remains close to target throughout, as a declining contribution from the prices of energy and imported consumer goods is offset by a gradual increase in the pressure of demand on

Chart 2 Current 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 charts are constructed so that outturns 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. capacity. Compared with November, the profile is slightly higher around the end of the first year of the projection, mainly on account of the further increase in energy prices, but similar further out.

As usual, there are substantial risks surrounding the central projections. These include, in particular: the outlook for consumer spending; the prospects for net exports; the sustainability of low long-term interest rates; the margin of spare capacity; and the evolution of energy prices and their impact on inflation. There is a range of views among members, but the Committee judges that, relative to the central projection, the overall risks are to the downside for growth and broadly balanced for inflation.

The policy decision

At its February meeting, the Committee noted that the central projection was for output growth to remain broadly similar to the prospective rate of growth of supply through most of the forecast period, while inflation remained close to the target. In the light of this outlook, and bearing in mind the balance of risks, the Committee judged that no change in the repo rate was necessary to keep inflation on track to meet the target in the medium term.

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Money and asset prices

The MPC has left official interest rates unchanged since the November Report. UK short-term market interest rates were little different from three months ago, and long-term real interest rates fell to historically low levels. Equity prices rose and sterling depreciated. There were continued signs of recovery in the housing market. Growth in broad money remained robust. Household borrowing growth edged higher. Corporate finances appeared healthy in aggregate.

Chart 1.1 Bank of England official rate and one-day forward curves^(a)



Sources: Bank of England and Bloomberg.

1.1 Asset prices

The Monetary Policy Committee (MPC) has left official interest rates unchanged during the past three months. A summary of the MPC's policy decisions since the November *Report* is provided in the box on page 4.

Short-term forward rates provide a guide to market participants' expectations of future policy decisions. The forward curve indicates that in the run up to the MPC's meeting on 8–9 February, market participants expected official interest rates to remain broadly unchanged over the next few years (Chart 1.1).

Global asset prices

Asset prices have risen significantly in recent years, both in the United Kingdom and around the world.⁽¹⁾ It is likely that this broadly based rise reflects common influences.

One such influence could be high levels of global liquidity. The box on page 5 explores whether increases in global liquidity can help to explain the strength of international asset prices.

A second possible influence is changes in attitudes towards, or perceptions of, risk. Risk-averse investors will typically demand an additional expected return — or risk premium to compensate them for uncertainty about the future returns provided by assets. If investors believed that the risks associated with holding assets had fallen, or if they had become more willing to bear risk, then risk premia would have declined across assets. That would have tended to boost asset prices, and is discussed further in the box on page 7.

⁽a) Forward rates are interest rates expected to prevail in a future period. They are derived from instruments that settle on the London interbank offered rate (Libor). That includes market rates on short sterling futures, swaps, interbank loans and forward rate agreements. The forward curves shown in the chart are fifteen-day averages of one-day forward rates. The curves have been adjusted for credit risk.

See King, M (2006), a speech to Kent business contacts in Ashford, Kent on 16 January, available at www.bankofengland.co.uk/publications/speeches/2006/speech263.pdf.

Monetary policy since the November Report

The MPC's central projection in the November Inflation Report, under the assumption that official interest rates followed a path implied by market yields, was for GDP growth to regain momentum gradually before slowing a little in the second half of the projection. CPI inflation was projected to remain above the 2% target in the near term and then dip below it, before moving back up to meet the target around the two-year point.

At the time of the Committee's meeting on 7–8 December 2005, there had been little news from financial markets. But more generally, asset prices had been buoyant for some time. Developments in the international economy had been positive, and non-oil GDP growth in the United Kingdom appeared to have been recovering since the start of the year. Although oil prices had eased, they remained substantially above their levels a year ago. But, so far, wage growth had remained well contained.

For most members, the evidence warranted no change in official interest rates. Growth appeared to be recovering broadly in line with the central projection in the November *Report*. And inflation had fallen from its peak in September, broadly in line with the Committee's expectations. But some of the uncertainties around the short-term path for inflation remained. For example, it was too early to conclude that there would be no wage response to the past pickup in inflation.

For one member, there was a case for an immediate reduction in the repo rate. Business surveys and capacity pressures suggested a more subdued outlook for investment than that incorporated in the central projection of the November *Inflation Report*. The projection for net trade also seemed optimistic. And pipeline inflation pressures were easing, with output price inflation moving lower.

Given these considerations, eight Committee members voted to maintain the repo rate at 4.5%. One member preferred a reduction in the repo rate of 25 basis points. At the time of the MPC meeting on 11–12 January 2006, UK short-term interest rates had fallen, together with long-term forward rates, and equity prices had increased further. World demand growth had also been slightly stronger than expected, particularly in the euro area. Those factors would provide some stimulus to UK demand.

UK growth had probably picked up, although the composition of growth was likely to be different to that envisaged in the November *Inflation Report*. Business investment and exports had been weaker than expected, and continued to pose a downside risk to the outlook. On the other hand, indicators of service sector output, consumption growth and the housing market had been stronger than expected.

Consumer price inflation had returned to the target, and there had been few signs of second-round wage pressures related to higher oil prices. There was probably some spare capacity in the economy, which might be expected to put downward pressure on future inflation. But upside risks to inflation from oil and gas prices remained. For most members, on balance it seemed likely that inflation would be broadly in line with the target over the medium term.

For one member, there was a case for an immediate reduction in the repo rate. Unemployment data and surveys of capacity utilisation pointed to the emergence of spare capacity. And given that pipeline pressures were modest, it seemed likely that inflation would fall below the target once the effects of higher energy prices had dropped out of the year-on-year calculations.

Eight Committee members voted to maintain the repo rate at 4.5%. One member preferred a reduction in the repo rate of 25 basis points.

At its meeting on 8–9 February, the Committee also voted to maintain the repo rate at 4.5%.

Excess global liquidity, asset prices and inflation

The amount of broad money in circulation around the globe has increased at a rapid pace in recent years (Chart A). This box explores whether this increase in global liquidity has contributed to the rise in global asset prices.

Chart A

Contributions to annual growth in global broad money^(a)



(a) National data on broad money have been converted into a common currency (dollars) using market exchange rates.

Broad money includes a range of liquid assets which can easily be converted into cash, but pay a relatively low rate of return. The fraction of gross wealth held as broad money will therefore depend on a number of factors, including the amount of spending that households and companies plan to make, and the opportunity cost of holding money — that is, the additional yield that could be earned by holding wealth in more illiquid assets. Rapid global money growth does not necessarily mean that there is too much money in circulation. Households or companies may have wanted to increase their holdings of liquid assets that can easily be turned into cash. In that case, the rapid growth in broad money would reflect a shift in demand and there would be no implications for asset prices.

However, it is possible that the rapid growth in broad money could have left households and companies holding too much of their gross wealth in money, given their planned expenditures and the level of interest rates. If so, then households and companies have two choices. First, they can spend their excess money balances on goods and services. But the supply of goods and services is limited by the capacity of the economy. So ultimately, faster growth in broad money will lead to an increase in prices, rather than more output.

Alternatively, households and companies can rebalance their portfolios by purchasing other assets, until they are content with the share of their gross wealth held in the form of money. That increase in the nominal demand for assets could drive up the price of any asset that is in limited supply.⁽¹⁾ The resultant increase in financial wealth may prompt individuals to spend more on goods and services. This would push up the prices of those goods and services. And in the process, asset prices would fall back relative to the price of goods and services in the economy.⁽²⁾

 See King, M (2002), 'No money, no inflation — the role of money in the economy', Bank of England Quarterly Bulletin, Summer, pages 162–77, available at www.bankofengland.co.uk/publications/quarterlybulletin/qb020203.pdf.

(2) See King, M (2006), a speech to Kent business contacts in Ashford, Kent on 16 January, available at

www.bankofengland.co.uk/publications/speeches/2006/speech263.pdf.

Many assets provide a stream of income in the future. The value that investors place on those future returns will depend upon the long-term real (or inflation-adjusted) interest rate. Real interest rates have fallen internationally and that should also have boosted global asset prices.

Long-term real interest rates

The real rate of return on long-dated UK government bonds has fallen to historically low levels over the past year

Chart 1.2 The real spot curve^(a)



Sources: Bank of England, Bloomberg and Debt Management Office.

(Chart 1.2). The fall in real rates may well have been driven by the factors discussed above: increased global liquidity or a decline in risk premia.⁽¹⁾ But there are other potential explanations.

As discussed in previous *Inflation Reports*, real interest rates tend to move to bring the desired level of savings and investment into line. Long-term real rates reflect the series of short-term interest rates expected to prevail in the future. So only persistent shocks to desired savings or investment that affect expected short-term rates far into the future should have a significant impact on long-term real rates. And while higher levels of desired saving in oil-producing countries and in industrialising Asian economies could have temporarily boosted global savings, it is unlikely that such higher savings will persist in the longer term.

The fall in long-term real rates could also have been driven by the behaviour of pension funds. Pension funds' liabilities are similar to the government's obligations on the debt it issues, in that the pension fund is committed to making a series of regular index-linked payments in the future. Holding long-dated government bonds is therefore an effective way for pension funds to match their assets and their liabilities. UK pension funds have increasingly adopted this matching strategy over the recent past and that may have helped to push down long-term yields.

Pension funds' demand for long-dated bonds has been further boosted by the need to purchase assets in order to reduce large deficits. Those deficits opened up when the slide in share prices at the start of the decade reduced the value of their assets. Unanticipated improvements in life expectancy have increased pension funds' liabilities because people are surviving longer in retirement. And the recent decline in long-term interest rates will have put further pressure on pension funds' deficits, because the value of those liabilities is calculated using current market interest rates to discount future obligations.

It is unclear whether long-term real interest rates will remain at their current levels. Furthermore, if investors use the current low level of long rates to value the flow of returns that they expect to receive from other assets, then an unwinding of recent falls in long rates could trigger a broadly based decline in asset prices. But if long rates remain at their current low levels that could support asset prices, and ultimately demand.

⁽a) The spot curves shown in the chart are fifteen-day averages of spot rates at different maturities. These real rates are defined relative to the retail prices index (RPI).

⁽¹⁾ This assumes that the risk premium attached to index-linked bonds is positive. For more details on the likely sign of that risk premium see the box on pages 308–09 of the Autumn 2005 Bank of England Quarterly Bulletin.

The economics of risk premia

There has been a general increase in international asset prices in recent years. One factor which could explain an across-the-board increase in asset prices is a decline in risk premia. This box explains what risk premia capture, and discusses four factors which could have led to a decline in risk premia across all assets.⁽¹⁾

Most people prefer to consume today rather than tomorrow. Savers will therefore want a guarantee of higher consumption in the future to forgo consumption today, and the rate at which they are willing to exchange consumption today for a guarantee of future consumption is reflected in the so-called risk-free interest rate.

Most assets cannot guarantee future consumption, because they offer uncertain returns. If investors are risk-averse, they will demand an additional expected return from such assets — over and above the risk-free rate — to compensate them for that uncertainty. This additional expected return is called the risk premium.

The size of the risk premium depends on a range of factors. Investors value assets because they can provide for consumption in the future. And investors tend to prefer assets that deliver high returns when income from other sources is weak. So the more likely it is that an asset delivers a low return exactly when the investor's consumption is weak, the larger the premium that the investor will demand in order to hold the asset.

The risk premium will also reflect the degree of uncertainty that investors face. In part that uncertainty is specific to the asset. The more variable the returns on a particular asset are, the larger the risk premium on that asset. But aggregate uncertainty also matters. The greater the uncertainty about investors' consumption and about asset returns in general, the larger the risk premia on all assets. One factor which could have led to a reduction in risk premia across all assets is if investors believe the outlook for consumption has become more certain. The macroeconomic environment has been remarkably stable over the past decade.⁽²⁾ That greater macroeconomic stability may have led to a reduction in the uncertainty about investors' consumption. If investors believe that this stability will persist, then that could explain a decline in risk premia common to all assets.

A second factor which could have reduced risk premia across all assets is financial innovation. The development of new financial products may have allowed investors to diversify risk better. In other words, investors may have been able to reduce the uncertainty about their overall returns by adding those products to their portfolio. If the return from investors' portfolios has become less volatile that would lead to a decline in risk premia across all assets.

A third factor which could explain a decline in risk premia across all assets is a fall in the degree of investors' risk aversion. Less risk-averse investors will demand a smaller premium over the risk-free rate to compensate them for the uncertainty over their returns.

There is a possible fourth factor that implies that the narrowing of risk premia could be temporary. Returns have fallen around the world, perhaps reflecting a decline in the risk-free rate or ample global liquidity. That may have led to a 'search for yield' with investors buying riskier assets in order to achieve the rates of return that they used to enjoy. It is possible that they have not fully appreciated the increased risks involved in that search for yield. A growing realisation of that exposure could lead to risk premia rising again in the future, and a corresponding decline in asset prices.

For more details on the determinants of risk premia see Gai, P and Vause, N (2004), 'Risk appetite: concept and measurement', *Bank of England Financial Stability Review*, December, available at www.bankofengland.co.uk/publications/fsr/2004/fsr17art12.pdf.
 For more details see King, M (2003), 'Speech given to the East Midlands Development Agency', in Leicester on 14 October,

available at www.bankofengland.co.uk/publications/speeches/2003/speech204.pdf.

Chart 1.3 The recovery in share prices



Chart 1.4 House price inflation(a)



Sources: Bank of England, Halifax and Nationwide

Average of the Halifax and Nationwide three-month on three-month inflation rates. (a)

Table 1.A Housing market indicators(a)

| Averag | e ^(b) | 2005 | | | | | |
|---|------------------|-------------------|--------------|--------------|--------|---------|-------|
| since | 2000 | Q1 ^(b) | <u>Q2(b)</u> | <u>Q3(b)</u> | Oct. | Nov. | Dec. |
| Prices | | | | | | | |
| HBF house prices ^{(c)(d)} | 26 | -19 | -31 | -18 | -17 | -8 | 10 |
| RICS house prices ^(e) | 16 | -37 | -42 | -25 | -7 | 4 | 8 |
| RICS price expectations(e) | 13 | -27 | -22 | -1 | 11 | 21 | 24 |
| Activity | | | | | | | |
| HBF net reservations(c)(f) | -1 | -41 | -41 | -7 | 0 | -3 | 6 |
| HBF site visits(c)(f) | -7 | -36 | -32 | -24 | -13 | -22 | -10 |
| RICS sales to stocks ratio ^(g) | 0.44 | 0.29 | 0.28 | 0.30 | 0.31 | 0.32 | 0.33 |
| RICS new buyers enquiries(d) | -4 | -4 | -1 | 15 | 22 | 14 | 11 |
| Mortgage approvals ^(h) | 106 | 86 | 96 | 104 | 112 | 116 | 122 |
| Sources: Pank of England Home I | 2ildo. | e Fodor | ation (I | JDE) an | d Pour | IInctit | ution |

Federation (HBF) and Royal Institution of Chartered Surveyors (RICS).

All series are net percentage balances unless otherwise stated. These data are averages of monthly balances

These data are averages of monthly balance Seasonally adjusted by Bank staff. Compared with the previous month.

(c) (d)

- Change during the past three months/expected over the next three months
- Change on a year ago. Ratio of sales recorded during the past three months relative to the level of (g)

stocks on estate agents' books at the end of the month. The number of loan approvals for house purchases, in thousands

(h)

Equities

The FTSE All-Share index averaged 2914 in the fifteen working days to 8 February. That was almost 10% higher than the equivalent average at the time of the November Report, and over 80% higher than the trough in early 2003 (Chart 1.3). Three factors which could explain this sustained rise in equity prices have already been discussed: increases in global liquidity; a smaller risk premium attached to equities; and lower real interest rates. Higher expectations of future corporate earnings were discussed in the November Report as a possible fourth factor. Though non-oil profit growth has slowed (see below), there has been little change in financial market analysts' expectations of long-term corporate earnings over the past three months,⁽¹⁾ according to data from IBES. It is also possible that the strength of UK equity prices could reflect the spate of mergers and acquisitions (M&A) activity.

The housing market

Recent data continued to point to a modest pickup in the housing market. House prices edged up in late 2005, having been broadly flat over the first half of the year (Chart 1.4). Indicators of activity along the house purchase timeline which runs from first enquiries to house purchase - suggest that the recovery may persist in the near term (Table 1.A).⁽²⁾

Houses are similar to other assets, in that they can be valued according to the discounted stream of future income or of the benefits that they generate.⁽³⁾ For landlords, that stream of income is rent. For homeowners, the benefits are the housing services that they consume by living in their own house. If current market interest rates were used to discount those future rents or housing services then the decline in long-term rates would justify a higher level of house prices than before.

Exchange rates

In the fifteen working days to 8 February, the sterling effective exchange rate (ERI) averaged 99.4, down almost 1% on the equivalent period used in the November Report. Sterling has continued to move in the relatively narrow range in which it has been trading during the past eight years.

⁽¹⁾ For more details on analysts' earnings forecasts, see Panigirtzoglou, N and Scammell, R (2002), 'Analysts' earnings forecasts and equity valuations', Bank of England Quarterly Bulletin, Spring, pages 59-66.

⁽²⁾ For more details about the house purchase timeline, see page 6 of the November 2004 Inflation Report.

⁽³⁾ For more details on this approach to valuing housing, see Weeken, O (2004), 'Asset pricing and the housing market', Bank of England Quarterly Bulletin, Spring, pages 32-41.

Chart 1.5 Broad money(a)



 ⁽a) Defined as M4, which includes the UK private sector's holdings of sterling notes and coin, and its holdings of sterling deposits with UK monetary financial institutions.
 (b) Other financial corporations.

1.2 Money, credit and balance sheets

Monetary aggregates

In the long run, persistent changes in the rate of money growth are associated with changes in the rate of inflation.⁽¹⁾

Growth in the quantity of notes and coin in circulation may have stabilised, having drifted lower during the past few years. The quantity of notes and coin in circulation rose by 3.9% in the year to January, having averaged almost 8% over 2002 and 2003. By contrast annual growth in broad money (M4) was 12.6% in December 2005, the highest rate of growth since November 1990 (Chart 1.5). Rapid growth in broad money has been an international phenomenon recently, as the box on page 5 describes.

M4 includes the bank deposits held by a range of non-bank financial organisations, such as pension funds and clearing houses. These are collectively known as 'other financial corporations' (OFCs). These organisations have been rapidly accumulating deposits over the recent past, and that has contributed to the robust growth in broad money. The implications for activity and inflation of a build-up in OFCs' money holdings depends on why these organisations have been accumulating deposits. If they have been building up deposits with the intention of purchasing assets, then the rapid growth in OFCs' deposits could presage rising asset prices. That in turn could lead to higher nominal spending at some point in the future. But these institutions may have chosen to effect a long-term increase in the share of their wealth held in the form of cash or liquid deposits. In other words, the rapid accumulation of OFCs' deposits may reflect a sustainable increase in their demand for money. In that case, rapid growth in OFCs' money would not have any implications for asset prices.

The OFCs sector includes a broad range of institutions that have different motives for holding money. Given the heterogeneous nature of the sector it is difficult to tell how much of the strong growth in OFCs' money reflects a transitory accumulation of deposits that will be spent on assets, rather than a permanent increase in OFCs' money holdings. So it is unclear how large an impact the rapid accumulation of deposits by these institutions will have on asset prices.

Households

Quarterly growth in lending to individuals has edged up since the November *Report*. That reflects an increase in secured

See Benati, L (2005), 'Long-run evidence on money growth and inflation', Bank of England Quarterly Bulletin, Autumn, pages 349–55.

Chart 1.6 Effective interest rates(a) on debt, relative to August 2005



(a) Defined as the flow of interest payments divided by the stock of outstanding debt. For more details on effective rates see pages 10–13 of the May 2005 edition of the Bank of England Monetary and Financial Statistics publication, available at www.bankofengland.co.uk/statistics/ms/2005/may/bankstats_full.pdf.



Private non-financial corporations. In current prices at factor cost. Excluding the alignment adjustment.

Table 1.B **Corporate liquidity**

Chart 1.7

Percentage changes on a year earlier

| | 2005 | | | |
|--|-----------|-----------|-----------|------------------|
| | <u>Q1</u> | <u>Q2</u> | <u>Q3</u> | $\underline{Q4}$ |
| PNFCs' ^(a) profits ^(b) | 4.2 | 4.1 | 3.1 | n.a |
| of which, non-oil companies ^(b) | 4.3 | 3.3 | 1.9 | n.a. |
| of which, oil companies | 3.4 | 12.0 | 14.9 | n.a. |
| PNFCs'(a) M4 deposits | 9.5 | 10.2 | 7.6 | 11.8 |

Private non-financial corporations Excluding the alignment adjustment lending by banks and building societies, consistent with the modest pickup in the housing market. However, growth in the stock of unsecured lending continued to slow, with the net flow of unsecured credit in 2005 Q4 falling to its lowest level in more than five years.

The flow of interest payments on household debt was broadly flat over 2005 H2. The effective rate on secured debt, which accounts for over 80% of household debt, fell by around 20 basis points between August and December (Chart 1.6). But household debt continued to increase robustly over this period. So households paid a slightly lower interest rate on a larger stock of debt.

As discussed in recent Inflation Reports, the number of households in financial distress has risen sharply over the past couple of years. Nonetheless, aggregate data suggest that most households are not having difficulties servicing their debts. The number of mortgage repossessions remained low by historical standards: around two in every ten thousand UK households had their home re-possessed in 2005 H2. And around one in every thousand adults in the household population became insolvent over the same period.

Private non-financial corporations

Overall, corporate finances remained healthy. Private non-financial corporations ran a positive financial balance for the fourteenth successive quarter in 2005 Q3 (Chart 1.7). When the corporate sector has a positive financial balance, then companies receive more in the form of gross profits, rents and other sources than they pay out on investment, dividends and other expenditures. Those funds have been invested in financial assets, predominantly bank deposits, rather than paying down debt.

Corporate profitability has been supported by the strong growth in revenues in the oil sector (Table 1.B). Outside that sector, profit growth has been slow. The number of companies informing shareholders that future earnings are likely to fall short of expectations has increased - more UK companies issued profit warnings in 2005 than in any year since 2001. In part, the disappointing profit figures may reflect the squeeze on margins from large increases in the cost of energy, and suggest that the near-term prospects for corporate spending on both wages and investment outside of the oil and financial sectors may be relatively subdued.

Demand

Domestic demand growth strengthened in 2005 Q3, driven by a revival in household spending. And retail sales indicators suggest that consumer spending growth was also firm in O4. By contrast, business investment growth remained muted in the third quarter, and net trade acted as a drag on UK growth. The euro area — UK exporters' principal market — continued to recover. And although US and Japanese GDP growth eased, those developments are likely to prove temporary.

Table 2.A Expenditure components of demand(a)

Percentage changes on a quarter earlier

| | 2003 | 2004 | | 200 | 5 | |
|---|---------|-------------------|--------------|-----------|-----------|------------|
| | Average | (b) <u>H1</u> (b) | <u>H2(b)</u> | <u>Q1</u> | <u>Q2</u> | <u>Q</u> 3 |
| Household consumption ^(c) | 0.6 | 1.2 | 0.7 | 0.1 | 0.2 | 0.6 |
| Government consumption | 1.5 | 0.3 | 0.3 | 0.2 | 0.1 | 0.0 |
| Investment | -0.2 | 1.8 | 0.3 | 0.6 | 0.2 | 2.2 |
| of which, business | -0.7 | 0.5 | 0.8 | -0.3 | 1.3 | 0.3 |
| Final domestic demand | 0.6 | 1.1 | 0.6 | 0.1 | 0.3 | 0.6 |
| Change in inventories ^{(d)(e)} | 0.1 | 0.0 | 0.0 | -0.1 | -0.2 | 0.2 |
| Alignment adjustment ^(e) | 0.0 | -0.2 | 0.2 | -0.2 | -0.1 | 0.2 |
| Domestic demand | 0.8 | 0.9 | 0.7 | -0.2 | -0.1 | 1.0 |
| Exports | 1.0 | 2.1 | 0.9 | -0.4 | 4.4 | -0.4 |
| Imports | 1.0 | 2.0 | 1.9 | -1.6 | 2.2 | 1.9 |
| Net trade ^(e) | 0.0 | 0.0 | -0.3 | 0.4 | 0.5 | -0.7 |
| Real GDP at market prices | 0.8 | 0.9 | 0.5 | 0.2 | 0.5 | 0.4 |
| Memo: | | | | | | |
| Nominal GDP at | 1.5 | 17 | 17 | 0.1 | 1 5 | 0.7 |
| market prices | 1.5 | 1.5 | 1.5 | 0.1 | 1.5 | 0.5 |

Chained-volume measures, apart from nominal GDP. Average of quarterly growth. Includes non-profit institutions serving households.

(c) (d) Excludes the alignment adjustment

Percentage point contributions to quarterly growth of real GDP.

Chart 2.1 Contributions to quarterly growth in real consumer spending(a)



Growth in nominal demand slowed in Q3, rising by 0.3% on the quarter (Table 2.A). However, the weakness of growth in that quarter substantially reflected erratic movements in the value of insurance output (following higher claims on UK insurers in the aftermath of Hurricanes Katrina and Rita). As such, the weak estimate for Q3 is a misleading guide to underlying nominal demand growth.

Growth in the volume of aggregate demand (real GDP) was unaffected by those hurricane-related developments. It weakened in the second half of 2004 and early 2005, from an unsustainably high level during the previous six months. But it has recovered somewhat since. Indeed in 2005 Q4, real GDP is provisionally estimated to have risen by 0.6% — its long-run average rate of growth (Section 3).

2.1 Domestic demand

Consumption

According to the latest vintage of official data, growth in household spending eased in the second half of 2004 and was weak in the first half of 2005. That easing was largely concentrated in more discretionary purchases such as consumer durables (Chart 2.1). Those data also suggest that spending growth has begun to recover - in 2005 Q3 household spending rose by 0.6%, close to its historical average of 0.7%.

There are no official data yet for consumer spending in Q4. But partial indicators of consumer spending are available. Retail sales cover about one third of consumption. And according to the official data, they rose by 1.6% in Q4 (Table 2.B), the highest rate of growth since the start of the consumer spending slowdown in 2004.

Table 2.B Indicators of household spending

| | 2004 | 04 2005 | | | | | |
|--|---------|-----------|------------------|------------|------------------|------|--|
| | Average | <u>Q1</u> | $\underline{Q2}$ | <u>Q</u> 3 | $\underline{Q4}$ | Jan. | |
| Retail sales volumes ^(a) Private vehicles' | 1.1 | 0.2 | 0.5 | 0.4 | 1.6 | n.a. | |
| registrations ^(a) (b) | -2.0 | -8.8 | 4.2 | -2.2 | -5.1 | -3.4 | |
| confidence ^(c) | -3 | 1 | -1 | -3 | -8 | -7 | |

Sources: Bank of England, GfK NOP, ONS and SMMT.

(a) Percentage changes on previous quarter/latest three months on previous

(b) Monthly data have been seasonally adjusted by Bank staff.
 (c) Headline GfK NOP measure. These data are not seasonally adjusted.

(c) Headline GK NOP measure. These data are not seasonally adjusted. Quarterly data are averages of the monthly observations. The January figure refers to the three-month average.

Chart 2.2 Measures of retail sales values



 a) Three-month average.
 b) The Agents' scores range from +5 (which denotes a rapidly rising level) to -5 (a rapidly falling level). Each observation relates to the latest three months compared with the same period a year earlier (see footnote 1, below). So the data presented are comparable to the ONS measure.

Chart 2.3 Household taxes and National Insurance contributions^(a)

Percentage of labour income^(b) and government benefits — 25



contributions less employer contributions.(b) Labour income is defined as wages and salaries and self-employment income.

The Bank of England has recently published its regional Agents' scores — the quantitative assessments made by its Agents of economic conditions around the United Kingdom. Those scores are timely and in some cases have a high correlation with subsequently published ONS data.⁽¹⁾ The score for the value of retail sales is one such indicator. It suggests that the firmer growth in the value of retail sales has persisted through the Christmas and New Year trading period (Chart 2.2).

Other indicators of consumer spending were less upbeat at the end of 2005 and in the new year. For example, spending on cars, which accounts for about 5% of total household consumption, is likely to have fallen in Q4 given the decline in private vehicle registrations (Table 2.B). And in January they fell further. Monthly survey data on retail sales from the BRC and CBI, which had strengthened toward the end of 2005, eased back in January. Overall, however, the MPC believes that household spending growth probably remained around its historical average in Q4 and that some of that firmness persisted into the new year.

Explaining the consumer spending profile

What factors could explain the downturn and the more recent pickup in household spending growth?

Households are thought to plan their spending by taking into account not only their current, but also their expected future disposable income (together often referred to as their permanent income). Among other things, permanent income depends on the level of taxation. The share of households' earnings devoted to tax payments has risen over the past two years (Chart 2.3). If households expect that higher level of taxation to persist, they may have revised down their expectations of future disposable income.

In principle, a downward revision to permanent income should lead to reduced consumption growth for a period, as households move to a lower spending path. But once that adjustment is complete, spending growth is likely to revert to a growth rate more in line with its historical trend. So it is possible that the temporary dip in consumption growth can at least in part be explained by households adjusting to a lower level of permanent income.

Households' current income alone can also materially affect consumer spending. That is because some households have few financial assets and find it difficult to access credit. Those households may be constrained to consume out of their

 See Ellis, C and Pike, T (2005), 'Introducing the Agents' scores', Bank of England Quarterly Bulletin, Winter, pages 424–30.

Chart 2.4 Household income^(a) and consumption^(b)



 (a) Defined as labour income (wages and salaries and self-employment income) plus government benefits, less National Insurance contributions, income and Council Tax. This has been deflated by the final consumption expenditure deflator (households and NPISH).
 (b) Chained-volume measure. Includes non-profit institutions serving households (NPISH). current resources irrespective of the likely path of future income. The latest vintage of data shows that growth in real post-tax labour income has slowed since mid-2004, in part because of the increase in tax payments discussed above. That slowing may have cut into credit-constrained households' discretionary spending growth. Indeed, Chart 2.4 shows that the deceleration in real post-tax labour income has occurred in tandem with the easing in consumer spending. But there has been little sign yet of a pickup in quarterly post-tax income growth in 2005, though data for Q4 are not yet available.

By raising consumer price inflation, the increases in energy prices over the past two years have contributed to the easing in real post-tax labour income growth. But those increases will also have boosted the income and wealth of energy company shareholders. However, shareholders are less likely than the average household to spend the full extent of the extra income. Moreover, some shareholders may live abroad, so the overall impact of higher energy prices is likely to have depressed spending growth.

Interest rates also affect consumer spending. Higher interest rates raise the cost of consuming now relative to the future. That generally encourages all households to spend less. Another way interest rates affect spending is by raising debt-servicing costs and so reducing the money available for indebted households' discretionary spending. Though creditor households gain from an interest rate rise, the net impact of higher rates on household spending is still likely to be negative. This is because indebted households are more likely to spend more of any extra disposable income than creditor households. In addition, some of the creditors are not UK residents. So some of the proceeds from higher rates flow overseas rather than being spent in the United Kingdom.

Official interest rates were increased by 1.25 percentage points between November 2003 and August 2004. They were subsequently unchanged during the following year and then were lowered by 0.25 percentage points in August 2005. Typical estimates suggest that it takes up to a year for changes in monetary policy to have their peak impact on demand.⁽¹⁾ So the timing of these changes is consistent with the profile of consumer spending — the impact of the rate rises on spending growth is likely to have dissipated by the second half of 2005.

The housing market has tended to move in step with consumer spending over the past two years. It slowed in the second half of 2004, but appears to have recovered since the middle of last year. Consumer spending and the housing market are affected

⁽¹⁾ See The transmission mechanism of monetary policy, Bank of England, April 1999.

by many common influences — for example, interest rates and expectations about future income. So some of the similarities in housing and consumption developments are likely to have reflected changes in those common factors.

But there are also ways in which housing market developments directly affect spending. For example, rising house values make it easier and cheaper for some households to finance consumer spending with credit. Furthermore, households tend to buy more durable goods for the home when they move, though that effect is likely to be small relative to aggregate spending.⁽¹⁾ Nevertheless, the slowing and subsequent recovery in housing market activity may help to explain the recent profile of consumer expenditure.

Overall, the MPC judges that a range of factors lies behind the weakening and subsequent pickup in spending growth. Those include changes in the profile of current and expected future post-tax income growth, higher energy prices, interest rate changes and developments in the housing market. The MPC expects the recent recovery in consumer spending to consolidate in the near term with growth at a rate close to its historical average.

Government spending

The government set out its latest fiscal and macroeconomic projections in its December 2005 *Pre-Budget Report*. The MPC assumes that nominal government demand will rise in line with those plans. The spending plans are similar to those outlined in last year's Budget, and so contain little additional information for the Committee's current set of projections.

Investment

Whole-economy investment rose by 2.2% in 2005 Q3. That was driven almost entirely by government investment, which rose by 16.5% on the quarter.

In contrast, growth in business investment appeared lacklustre in Q3, rising by 0.3% on the quarter. The profile of business investment relative to GDP has been quite subdued during the past few years. One possibility is that UK business investment has been more buoyant than implied by the current vintage of data. Business investment is particularly prone to substantial revisions (Chart 2.5), and early estimates often tend to be revised higher as the ONS receives more information.⁽²⁾ Upward revisions seem more likely for 2004 than 2005. Even

Chart 2.5 Revisions to estimates of quarterly business investment growth^(a)



⁽a) The chart includes data up to 2003 Q4. This is because those data are less likely to be revised on account of additional information. Data before implementation of ESA(95) in 1998 are for 'private other investment' and investment by public corporations.
(b) Between initial and latest estimates over the period 1995-2003. The mean revision measures the average revision between initial and final articles. So its or in the initial private or the period 1995-2003. The mean revision measures are revision between initial and final private so the average revision between initial and final private.

⁽¹⁾ See Benito, A and Wood, R (2005), 'How important is housing market activity for

durables spending?, Bank of England Quarterly Bulletin, Summer, pages 153–59. (2) See Barnes, S and Ellis, C (2005), 'Indicators of short-term movements in

business investment', Bank of England Quarterly Bulletin, Spring, pages 30–38.

⁽b) Between initial and latest estimates over the period 1995–2003. The mean revision measures the average revision between initial and final estimates. So it gives an indication of the average bias in the initial estimate. The mean absolute revision measures the average size of the change irrespective of its direction.

though concerns about pension fund deficits may have held back investment, conditions in 2004 appeared favourable for investment: capacity utilisation was high; corporate cash flow was ample; and the cost of finance was low.

It is, however, possible that the weakness of business investment in the most recent past has been genuine. That could reflect several factors. Companies may have put off investment projects in the face of weaker domestic demand growth, or uncertainty about future demand. Second, despite the buoyancy of overall company cash flow, profit growth in the corporate sector excluding oil and financial companies has eased over the past 18 months (Section 1). That may have impinged on the investment plans of some businesses. And, third, ongoing concerns about pension fund deficits may have continued to act as drag on investment. Survey data confirm the picture of slow investment growth in 2005.

Looking ahead, neither the surveys on capital spending nor the Agents' scores point to a substantial pickup in investment in the near term.

2.2 External demand and UK trade

The euro area

The euro area is the United Kingdom's chief trading partner, purchasing about half of all UK exports. Euro-area output has accelerated during the past three quarters. In Q3, growth rose to 0.6% (Chart 2.6). The pickup has, in broad terms, been shared across the euro-area economies.

Faster euro-area growth mainly reflects rising investment and higher exports. The upturn in household spending growth has been more subdued. That relative weakness primarily reflects developments in Germany, where household spending growth has been subdued for some time.

Surveys of euro-area businesses suggest that output growth was solid in Q4. Other survey information on demand, such as consumer and business confidence, were also robust. But some of the official data, particularly for consumer demand, were less upbeat. For example, retail sales only rose by 0.1% in Q4. Overall, the MPC expects euro-area GDP growth to remain reasonably firm over the near term.

The United States

The rate of economic expansion declined markedly in the United States in 2005 Q4. Quarterly GDP growth fell to 0.3%, the lowest since 2002 Q4. Much of the decline reflected a sharp deceleration in consumer spending, but investment and government spending also weakened. And net trade

Chart 2.6 Euro-area GDP









Private non-residential investment.

Forecast for investment by private non-financial companies in tangible fixed assets (including land purchasing expenses but excluding software investment). The forecasts shown are those made in the penultimate quarter of the fiscal year.

Chart 2.9 UK imports and relative prices^(a)



The data have been adjusted to exclude the estimated effects of trade fraud. The price of UK imports relative to the price of final expenditure.

subtracted from growth (Chart 2.7). Despite the broadly based nature of the slowdown in Q4, it seems likely that growth will rebound in Q1. That is because much of the weakness related to temporary factors such as the effects of Hurricanes Katrina and Rita, the timing of automobile price discounts and a strike at Boeing. The recovery in consumer confidence, capital goods orders and the gradual restoration of oil and gas extraction capacity in the Gulf of Mexico suggests that demand and activity will pick up in the near term.

Asia

Quarterly growth in Japanese GDP slowed to 0.2% in 2005 Q3, from 1.2% in the previous guarter. However, the slowing partly reflected erratic movements in stockbuilding. More timely indicators of activity suggest that the recovery continued in Q4. For example, industrial production rose by 2.7%. And the Tankan survey of business conditions suggests that investment, which has so far been a mainstay of the recovery, is set to strengthen further (Chart 2.8).

Rapid growth in China continued in 2005 Q4. Following an economic census, the Chinese authorities revised the size of the economy higher by one sixth. That primarily reflected upward revisions to service sector output. Chinese economic growth since 1993 has also been revised higher.

Net trade

Net trade (the difference between exports and imports) contributed positively to UK GDP growth in 2005 Q1 and Q2. This was the first time in four years that net trade boosted GDP growth for two consecutive quarters. But in Q3, net trade subtracted from GDP growth once again (Table 2.A).

One reason why net trade has dragged down growth for much of the past decade is that the volume of goods and services purchased from abroad has risen more rapidly than overall spending (Chart 2.9). That phenomenon largely reflects the impact of falling import prices relative to domestic prices which has encouraged consumers and businesses to purchase more goods and services from abroad. Some of those movements in the relative price of imports are associated with exchange rate developments. For example, the relative price of imports fell rapidly over the mid-to-late 1990s, most probably as a result of sterling's appreciation.

However, over the long run, the trend decline in the relative price of imports is likely to reflect other factors such as increased competition from lower-cost economies. Looking

Chart 2.10 The UK export market share(a)



⁽a) The volume of UK exports of goods and services divided by the volume of UK-weighted world imports. World imports have been calculated using IMF data where each individual trade series has been weighted according to *Pink Book* estimates of UK export destinations in 2002. UK exports exclude the estimated effects of VAT fraud. The 2005 estimate for UK exports is based on the average of the first three quarters of data.

ahead, the MPC expects the relative price of imports — and thus the share of imports in total final expenditure — to move broadly in line with its trend over the past five years.

The contribution of net trade to growth also depends on the path of exports. For much of the past decade, UK exports have risen much less rapidly than world imports. Consequently the United Kingdom's share of export markets has declined (Chart 2.10). One reason why that has occurred is that UK exporters may have gradually withdrawn from international markets after the sharp rise in sterling in the mid-to-late 1990s. But the export market share has also fallen in other advanced economies, such as the United States and Italy. So other global factors are also likely to have been at work. For example, the advanced economies may have lost market share directly because of greater competition from low-cost industrialising economies such as China, India and those in Eastern Europe. The MPC expects a further decline in the UK export market share over the medium term.

Output and supply

Whole-economy output growth picked up in 2005 Q4 to around its historical average rate. Recently revised output data suggest that annual growth since the end of 2004 has been a little stronger than appeared to be the case at the time of the November Report. That largely reflected revisions to services output. Employment growth slowed towards the end of 2005, although it had been firm in the face of earlier weakness in output growth. Capacity pressures appear to have fallen since the end of 2004. And the degree of tightness in the labour market may have eased.



Chained-volume measure of gross value added at basic prices. 2005 Q4 data were unavailable at the time of the November *Report*.

Table 3.A Activity measures(a)

Percentage changes on a quarter earlier

| 2 | 2003 2004 | | | | | 2005 | | | |
|--|-----------|------------|--------------|------------|--------------|------------|------------|---|------------|
| Ā | Average | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | <u>Q</u> 4 |
| Whole-economy output Private sector output ^(b) | t 0.8 | 0.8 0.8 | $0.8 \\ 1.0$ | 0.3 0.2 | $0.6 \\ 0.6$ | 0.3 0.1 | 0.5 0.5 | $\begin{array}{c} 0.4 \\ 0.4 \end{array}$ | 0.6 0.6 |

Chained-volume measures of gross value added at basic prices. Private sector output is calculated by excluding public administration, national defence and social security, health and social work, and education from the average measure of gross value added. The figure for 2005 Q4 was estimated using information in the preliminary GDP release. б

3.1 Output

GDP at basic prices was provisionally estimated to have grown by 0.6% in 2005 Q4 (Chart 3.1). That followed an estimated rise of 0.4% in the previous quarter. National Accounts data published in December suggest that four-quarter GDP growth since the end of 2004 has been a little stronger than previously estimated (Chart 3.1). That largely reflected upward revisions to service sector output growth (see below).

Since the first half of 2004, output growth in the private sector slowed even more markedly than in the economy as a whole. But private sector output growth also appeared to pick up in 2005 Q4, to around 0.6% (Table 3.A).

Service sector

In making its decisions, the MPC takes account of a broad range of economic data. The principal source is the ONS, which produces official estimates of key macroeconomic variables such as GDP. But these statistics can only ever be an approximate guide to the true state of the economy. And they tend to be revised over time as new information becomes available and methodological improvements are introduced.

Following revisions by the ONS, the pattern of growth in service sector output has changed a little from the one reported in the November Report (Chart 3.2). In particular, the deceleration in activity since early 2004 appears less marked than was estimated three months ago. In the latest data, service sector output growth is estimated to have been 2.5% in the year to 2005 Q3, compared with 2.2% previously.

Revisions such as these are inevitable, so the MPC also looks at other sources of information, such as business surveys and

3

Chart 3.2 Service sector output^(a) Latest data Data available at the time Percentage changes ____ 6.0 of the November Report - 5.5 - 5.0 4.5 On a year earlier _ - 4.0 ____ - 3.5 3.0 _ 2.5 - 2.0 On a quarter earlier - 1.5 - 1.0 - 0.5 0.0 05 2000 01 02 03 04 Chained-volume measure, 2005 O4 data were unavailable at the (a) time of the November Report.

Table 3.B **Manufacturing output**

| A | Averag | e ^(a) | $\frac{2005}{Q1}$ | <u>Q2</u> | <u>Q3</u> | <u>Q4</u> | 2006 Jan. |
|--|---------------------|------------------|-------------------|-----------------|------------------|-----------------|----------------------|
| Surveys CIPS/RBS output index ^(b) CBI past output trends balance CBI output expectations balance | 53 e(c) ce(c) | 3.3 0 7 | 52.6 -10 5 | 49.8 -1 6 | 52.6 -13 2 | 53.5 -6 1 | 53.8 n.a. n.a. |
| Percentage change on a quarter ea ONS manufacturing output | arlier (|).1 | -0.9 | -0.4 | 0.3 | -1.0 | n.a. |

Sources: CBI, CIPS/RBS and ONS

Chart 3.3

The CIPS/RBS average is calculated from July 1991. The averages for the CBI (a)

balances and for manufacturing output growth are calculated from 1975 Q1. Quarterly data refer to the average of the three CIPS/RBS monthly balances. An index above/below 50 implies rising/falling output. Data are non seasonally adjusted. (b)

(c)



Data are from the LFS and are for non-overlapping quarters ending (a) Data have been divided by four to allow them to be compared with the quarter-on-quarter series. (b)

feedback from the Bank's regional Agents. Business surveys have pointed to stronger service sector output growth during much of 2004 and 2005 than the official data.⁽¹⁾ But the latest revisions have reduced the size of the discrepancy between the two measures over that period.

Both the ONS data and business surveys point to some pickup in service sector output growth in 2005 Q4. According to the ONS, quarterly growth was 0.9%, following growth of 0.7% in 2005 Q3 (Chart 3.2). And the service sector output balance in the CIPS/RBS survey increased to its highest level since April 2004 in December. Although the balance fell back a little in January, it remained above the level it has occupied for most of the past 18 months.

Manufacturing

Activity in the manufacturing sector remained subdued. Based on data released in February, output fell by 1.0% in 2005 Q4, a little weaker than estimated in the ONS preliminary GDP release. The extent of the weakness in manufacturing output was at odds with some of the survey balances (Table 3.B), although there has been a greater number of profit warnings than usual from this sector recently.

3.2 Labour and productivity

Comparing the three months to November with the previous three months, employment fell by 22,000, according to the household-based Labour Force Survey (LFS). That followed a rise of 110,000 in the three months to August. But the sampling variability around these data is large, and the recent pattern of employment growth has been volatile. Smoothing through this volatility, by looking at movements on a year earlier, may give a better picture of underlying employment growth. That suggests some easing in employment growth towards the end of 2005 (Chart 3.3).

In the second half of 2004 and throughout much of 2005, employment growth remained firm in the face of slowing output growth. As a result, growth in whole-economy productivity on a per head basis fell to 0.4% in the year to 2005 Q3 (Chart 3.4), its lowest rate for almost 15 years. But the recent pickup in activity and weakening in employment may be indicative of a nascent recovery in labour productivity.

The extent of the slowing in labour productivity growth is uncertain. It could be that output growth has been underrecorded and that the true slowing in GDP growth was not as marked as suggested by the official data. Or it may be

(1) See page 20 of the August 2005 Report and page 16 of the November 2005 Report.



Chart 3.5 Average hours worked(a)



that employment growth has been overrecorded. If so, actual productivity growth would be stronger than currently measured.

But it seems likely that at least some of the slowing in productivity growth has been genuine. One possibility is that the greater use of migrant labour from the EU Accession countries has led to a fall in labour productivity growth. These migrant workers generally appear to occupy lower paid, lower productivity jobs. So the large increase in their numbers may have lowered productivity growth in the economy as a whole via a simple averaging effect. The recent energy price rises might also have lowered productivity growth. As highlighted in the November *Report*,⁽¹⁾ higher energy prices will lower productivity growth temporarily if companies choose to scrap capital equipment that becomes unprofitable following a rise in energy prices. In addition, uncertainty over energy prices may lead firms to postpone investment decisions, which would also reduce temporarily the growth of the capital stock.

Cyclical downturns in output growth, however, are often associated with labour hoarding and a fall in labour productivity growth. Firms may have been hoarding labour in the belief that the slowdown would prove temporary. In that case, there would be additional spare capacity to be worked off in the event of a revival in demand, though the recent easing in employment growth suggests that some of the labour hoarding may have started to unwind. In principle, labour hoarding might be expected to result in some fall in average hours worked. Employees do not appear to have worked fewer hours (Chart 3.5), but companies could still have been hoarding labour. It may be that employees, on average, have been working the same hours, but less intensively than normal.

Furthermore, the flat profile of hours worked masks divergent trends among different groups of workers. Average hours worked by men fell a little as the economy slowed, in part because they worked fewer overtime hours. But average hours worked by women have increased over the same period. The latter largely reflects a rise in the number of females working full-time and a fall in those working part-time.

3.3 Balance between output and potential supply

Factor utilisation

The majority of prices in the CPI basket are set by private sector companies. So imbalances between the demand for output in the private sector and the resources available to

⁽¹⁾ See the box on page 19 of the November 2005 Report.

Table 3.C Factor utilisation(a)

| | Average ^(b) | $\frac{2004}{Q4}$ | 2005 Q1 | <u>Q2</u> | Q3 | Q4 | <u>2006</u> Jan. |
|---|------------------------|---|-----------------|-----------------|------------------|------------------|----------------------|
| Manufacturing CBI ^(c) BCC ^{(d)(e)} Agents ^(f) | 40 36 -0.8 | $\begin{array}{c} 41\\ 40\\ 0.8\end{array}$ | 39 38 0.0 | 45 38 0.0 | 39 35 -0.6 | 38 35 -1.1 | n.a. n.a. -1.0 |
| Services BCC ^(d) Agents ^(f) | 39 1.3 | 44 1.7 | 38 1.9 | 36 2.1 | 35 1.8 | 39 1.3 | n.a. 1.4 |

Sources: Bank of England, BCC and CBI

- All data are non seasonally adjusted. 1995–2004 for the BCC and CBI surveys. The averages for the Agents' scores are calculated from January 1998 to December 2004. Historical averages of survey balances can be used to gauge whether the economy is approaching 'normal' levels of factor utilisation. Different time periods though can give different impressions of what is 'normal'. See the box on pages 24–25 of the February 2005 *Report*. Weighted percentage of respondents not 'working below a satisfactory full rate of operation'. Percentage of firms working at full capacity.

Percentage of firms working at full capacity

- Also includes agriculture, energy and construction. See Ellis, C and Pike, T (2005), 'Introducing the Agents' scores', *Bank of England Quarterly Bulletin*, Winter, pages 424–30. Quarterly data refer to the average of the three monthly Agents' scores.

Chart 3.6

Agents' survey:(a) the importance of migrants in sectoral employment

Percentages of employers with a large migrant workforce^(b) 100



Based on 225 responses from a survey of companies by the Bank of England's regional Agents in November 2005, weighted

by respondents' number of employees. Percentages of firms in which non-UK nationals accounted for (b)

10% or more of the workforce. Includes other consumer services (c)

Chart 3.7 Sectoral basic pay and overtime pay in 2005^(a)



Source: Annual Survey of Hours and Earnings. For further details on these data, see www.statistics.gov.uk/StatBase/Product.asp?vlnk=14203.

(a) Median.(b) Includes pay before deductions for PAYE, National Insurance, pension schemes and voluntary deductions, but excludes overtime, shift premium and bonus or incentive pay.

produce it can foreshadow short-run movements in CPI inflation. One aspect of any such imbalance is the intensity with which private sector companies use capital and labour in other words, private sector factor utilisation. The slow growth of private sector output and productivity in the first half of 2005 (Section 3.1 and Chart 3.4) is consistent with capacity pressures having eased, though past increases in energy prices may simultaneously have lowered the growth in potential supply.

One approach to assessing the degree of factor utilisation is to use surveys which ask companies directly about their degree of factor utilisation. Broadly speaking, the surveys point to a decline in factor utilisation from the end of 2004 (Table 3.C), though not a substantial one. The Bank's regional Agents also suggest that there has been a fall in capacity pressures during 2005, both in the manufacturing and the services sectors.

Labour market tightness

The balance between supply and demand in the labour market is another key indicator of inflationary pressure.⁽¹⁾

The supply of labour has been growing particularly rapidly recently, with the population of working age increasing at its fastest annual rate in over 20 years. That partly reflects the increase in migrant workers, as highlighted in the November *Report.* The scale of these migrant flows is uncertain.⁽²⁾ But reports from the Bank's regional Agents have indicated for some time that overseas workers have played a significant role in boosting the United Kingdom's potential pool of available labour and helping to ease labour shortages.

A recent survey by the Bank's regional Agents on their contacts' use of migrant labour supports that conclusion. The main reason cited by companies for employing non-UK nationals was a scarcity of local workers.

The survey results also highlighted those sectors in which non-UK nationals accounted for a large proportion of the workforce (Chart 3.6). Non-UK nationals were particularly important in two sectors: agriculture; and hotels and restaurants. In agriculture, the typical worker's overtime pay fell sharply in 2005, according to the Annual Survey of Hours and Earnings. In hotels and restaurants, basic pay fell too (Chart 3.7). These data appear consistent with the view that migrant flows have helped to ease the degree of tightness in the labour market, and restrained upward pressures on labour costs.

(1) See the box on pages 28-29 of the May 2005 Report.

⁽²⁾ See the box on pages 22-23 of the August 2005 Report.





Table 3.D Survey evidence on recruitment difficulties and labour shortages

| | 2004 2005 | | | | | 2006 | |
|---|--------------|--------------|--------------|--------------|--------------|--------------|--|
| | Q4 | Q1 | <u>Q2</u> | <u>Q3</u> | <u>Q4</u> | Jan. | |
| Availability of agency staff ^(a) Deloitte/REC: Permanent staff Deloitte/REC: Temporary staff | 38.9 43.7 | 42.8 46.4 | 46.0 49.1 | 48.0 50.6 | 45.1 48.8 | 46.5 50.6 | |
| Factors likely to limit output ^(b) CBI: Skilled labour CBI: Other labour | 14 2 | 11 3 | 11 3 | 16 4 | 10 2 | n.a. n.a. | |

Sources: CBI and Deloitte/REC Report on Jobs.

(a) Indices, for which 50 represents no change. Quarterly data refer to the average of the three monthly balances.

(b) Data are for the manufacturing sector and are percentages (weighted by respondents). The data are non seasonally adjusted.

Turning to the most recent data, a commonly used indicator of tightness in the labour market is the unemployment rate. The claimant count measure of unemployment, defined as the number of people receiving the Job Seeker's Allowance, has edged up for eleven consecutive months. The LFS measure of unemployment takes account of all those looking for work, not just those claiming benefit. On that measure, the unemployment rate has also increased, reaching its highest rate in over two years in the three months to November (Chart 3.8).

Surveys of staff availability from recruitment agencies suggest that over the past year or so, the availability of temporary staff has stopped declining, while the availability of permanent staff, though still falling, has done so at a slower pace (Table 3.D). And the Bank's regional Agents reported that recruitment difficulties continued to moderate. The *CBI Quarterly Industrial Trends* survey was also consistent with some easing in the labour market towards the end of 2005.

On balance, measures of factor utilisation and labour market tightness suggest some small decline in the pressures of demand on supply during 2005. Other things equal, that would tend to reduce the degree of inflationary pressure in the economy.

Costs and prices

Energy prices have risen markedly since the November Report. Wholesale gas prices doubled, and oil prices approached the record levels seen last August. In early February, futures contracts pointed to energy prices remaining high. But inflation expectations appeared stable and, on average, broadly consistent with the target. Pay pressures remained subdued. Following a decline in CPI inflation during late 2005, the MPC judges that CPI inflation is likely to remain close to target in the coming months.





 (a) Monthly average of daily data. Futures prices, and spot price data for February, are averages during the fifteen working days up to the time at which the MPC finalised its projections.
 (b) One-day forward price of UK natural gas.

Chart 4.2 Monthly changes in temperature in November



Source: © Crown copyright 2006. Published by the Met Office.

4.1 Energy prices

Gas prices

UK wholesale gas prices quadrupled during November. And although they subsequently fell back, gas prices in early February were still twice as high as three months earlier (Chart 4.1).

The scale of the gas price rise in November was surprising. At times, supply was constrained by disruptions to domestic production. And demand increased on account of colder weather. The mean temperature was the lowest for any November since 1998, while the decline on the month was one of the largest since records began (Chart 4.2). But as prices in the UK wholesale market rose well above those in Continental Europe, gas imports might have been expected to pick up substantially. In practice, any diversion of overseas supplies to the United Kingdom was limited.

The lack of arbitrage activity appeared to reflect a number of factors. The interconnector gas pipeline with the Continent was operating well below capacity. That was probably related to the structure of the gas market on the Continent, where many companies are state-owned, operate under long-term supply contracts and seem relatively insensitive to price developments in the UK market. In addition, shipments of liquid natural gas were not immediately redirected to the United Kingdom, given the higher gas prices already prevailing in the United States prior to the November spike. Although import capacity should expand with the expected completion of a number of projects next winter, the infrastructure for importing gas to the United Kingdom is relatively undeveloped at present.

⁽a) Mean temperature for November less mean temperature for October in Central England. Further details on this historical temperature measure are available at www.metoffice.com/research/hadleycentre.

Chart 4.3 Surveys(a) and market beliefs(b) about future oil prices(c)

Spot price



Sources: Bloomberg, Consensus Economics, Reuters and Thomson Financial Datastrea

Diamonds indicate mean survey responses. Consensus forecasts are for the end of April 2006 and the end of January 2007. Reuters forecasts are year averages for 2006 and 2010. Monthly data. Futures prices, and spot data for February, are averages during the fifteen working days up to the time at which the MPC finalised its projections. West Texas Intermediate crude oil. (a)

(b)

Table 4.A **Measures of inflation expectations**

2004 2005 <u>2006</u> Q1 02 Q3 Q4 01 Financial markets (inflation swaps)^(a) RPI inflation expectation, two years ahead RPI inflation expectation, n a 2.6 2.6 2.6 2.6 2.6 three years ahead n.a 2.7 2.6 2.6 2.7 2.6 Financial markets (government bonds)^(a) RPI inflation expectation, four years ahead 2.8 2.7 2.6 2.6 2.6 2.6 External forecasters (Bank of England)^(b) Mean CPI inflation expectation, 1.9 1.9 1.9 2006 Q4 n.a 1.9 1.9 Mean CPI inflation expectation, 2007 04 2.01.9 n.a. n.a. n.a. n.a. General public (Bank of England/NOP)^(c) Median expectation over next twelve months^(d) 2.4 2.2 2.0 2.2 2.2 n.a.

Sources: Bank of England, Bloomberg and NOP

Averages of daily data. 2006 Q1 figure is the average to 8 February. Survey results are published each quarter in the *Inflation Report*. See page 39 of this *Report*. The survey takes place in February, May, August and November each year. The question asks: 'How much would you expect prices in the shops generally to change over the next twelve months?'. The 2004 figure is an average of the cupaterbury unverse. (c) (d) quarterly surveys

Looking ahead, one indication of the outlook for wholesale gas prices is provided by futures markets. These provide an imperfect guide, not least because gas futures contracts are relatively lightly traded. But the futures market does appear consistent with a continuation of the supply difficulties discussed above. In early February, futures prices pointed to another surge in gas prices towards the end of this year, following a temporary seasonal decline in the summer (Chart 4.1).

Oil prices

The price of Brent crude oil averaged \$64 in the fifteen working days to 8 February. That was around 9% higher than the fifteen-day average leading up to the November Report. And the oil futures curve also moved up. Oil prices have more than doubled over the past two years.

The outlook for the oil price remains unclear, reflecting fundamental uncertainty about both demand and supply prospects. Oil demand will depend not only on the pace of global economic growth, but also on how recent oil price rises affect the usage of oil. Furthermore, the future supply of oil is impossible to gauge with any precision. Oil supplies may be disrupted by unpredictable developments, such as political unrest. And they will be affected by OPEC policy as well. With limited spare production capacity, oil prices may be particularly sensitive to such factors at present.

The extent of this uncertainty is evidenced by the array of views among professional forecasters. According to the January Consensus survey, the projected change in the oil price over the following three months ranged from an increase of 10% to a decline of almost 20%. And the latest Reuters survey pointed to a similarly wide distribution in the near term and beyond (Chart 4.3).

4.2 Inflation expectations and labour costs

Recent Reports have highlighted how changes in inflation expectations can affect the behaviour of those involved in setting wages and prices and, hence, the prospects for CPI inflation. This section considers the extent to which those expectations may have shifted in recent months.

Inflation expectations

Despite the rise in energy prices discussed above, a variety of measures suggest that inflation expectations have remained stable and, on average, broadly consistent with the target (Table 4.A). Surveys suggest little change in the expectations of the typical household. External forecasters continue to

Per cent

Table 4.B Private sector labour costs

Percentage changes on a year earlier

| | Average | 2005 | | | | | |
|------------------------------------|----------------------------------|------|------|-----|---------|-----------------------|---------|
| | 1998-2004 | Q1 | Q2 | Q3 | Oct.(a) |) _{Nov.} (a) | Dec.(a) |
| Average earnings | index | | | | | | |
| Regular pay | 4.2 | 3.9 | 3.8 | 4.0 | 3.8 | 3.8 | n.a. |
| Average earnings | 4.4 | 4.6 | 3.7 | 4.1 | 3.5 | 3.3 | n.a. |
| Bonus contribution(| b) 0.1 | 0.7 | -0.1 | 0.1 | -0.3 | -0.5 | n.a. |
| Experimental ave earnings measu | rage weekly re ^(c) | | | | | | |
| Regular pay | n.a. | 4.1 | 3.8 | 4.2 | 4.2 | 4.2 | n.a. |
| Average earnings | n.a. | 5.0 | 3.8 | 4.7 | 4.4 | 4.3 | n.a. |
| Bonus contribution(| ^{b)} n.a. | 0.9 | 0.0 | 0.5 | 0.2 | 0.1 | n.a. |
| Memo: | | | | | | | |
| Pay settlements | 3.3 | 3.6 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |

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

Three-month average. Percentage points. Defined as average earnings growth less regular pay growth. These data are non seasonally adjusted.

expect CPI inflation to be close to the 2% target over the next vear or two. And financial market measures⁽¹⁾ — based on either inflation swaps or the difference between yields on nominal and index-linked government bonds - also point to steady inflation expectations.

Labour costs

Survey and financial market measures of inflation expectations may not be a reliable guide to the views of wage and price-setters (see pages 24–26 of the November 2005 Report). But the evidence on expectations appears consistent with indications that private sector pay pressure has remained subdued (Table 4.B).

Average earnings are a broad measure of pay. In the three months to November, the average earnings index (AEI) for the private sector was 3.3% higher than a year earlier. That was well below the rates of increase experienced at the beginning of 2005. The slower pace of earnings growth reflected a significantly weaker contribution from bonuses, in part related to a shift in the timing of bonus payments in the financial sector.

Annual growth in the AEI measure of regular pay, which excludes bonuses, has been more steady. It remained at or below 4.0% over the course of 2005, somewhat lower than the average of recent years. And wage settlements, a further indicator of pay pressure, have also been broadly flat.

The moderate pace of pay growth suggested by these data could be related to slackening demand growth in the second half of 2004 and early 2005. Together with the boost to labour supply from increased inflows of migrant workers, that should have eased the degree of tightness in the labour market (Section 3.3). It is also possible that companies have responded to energy price rises by bearing down on other costs. such as labour.

Other official data paint a slightly different picture of recent earnings developments. Since June 2005, the ONS has published a new experimental series: the average weekly earnings (AWE) measure. The AWE series points to a less marked decline in average earnings growth than suggested by the AEI (Table 4.B), although the factors behind that divergence are unclear at present. But both the AEI and the AWE measures are consistent with relatively stable regular pay growth over the past year.

⁽¹⁾ For details on how these measures are calculated, see the box on pages 124-25 of the Summer 2004 Bank of England Quarterly Bulletin.

Chart 4.4 Equity prices(a) and bonuses(b)



Sources: ONS and Thomson Financial Datastream

Based on the FTSE All-Share index at the end of the preceding year. Contribution to annual private service sector earnings growth in the three months to February.





(a) Contributions to the cumulative change in annual (non seasonally adjusted) CPI inflation since September 2004.
(b) Utilities, petrol and transport services.

Chart 4.6

Breakdown of domestic gas bills^(a)



Source: OFGEM. Crown copyright material reproduced with the permission of the controller of HMSO and the Queen's Printer for Scotland. (a) Further details are available at www.ofgem.gov.uk

The short-term outlook for labour costs

Looking ahead, press reports and market anecdote have pointed to a pickup in financial sector bonuses. That could support an increase in average earnings growth - as happened in early 2005, when the financial sector accounted for almost two thirds of all bonus payments and caused a temporary spike in average earnings. As such, total labour costs could rise significantly in the near term. But to the extent that these bonus payments are transitory — a one-off sharing of profits, related in part to the sharp rise in equity prices in 2005 (Chart 4.4) — then the implications for underlying pay growth would be limited.

Indeed, a recent survey of companies by the Bank's regional Agents suggests that pay pressures are likely to remain relatively stable in the near term. Although a net balance of contacts anticipate higher overall earnings growth in the year ahead, any increase is thought likely to be modest.

4.3 Consumer prices

CPI inflation fell to 1.9% in December, around half a percentage point lower than three months earlier. That decline appears to have been driven by movements in energy prices. Petrol prices fell by 8% in the three months to December. The cost of transport services, like air fares, increased less rapidly than normally occurs at that time of the year. And although rises in domestic gas and electricity prices were greater than a year earlier, the energy-intensive items together accounted for almost all of the decline in CPI inflation (Chart 4.5).

Recent movements in oil and wholesale gas prices could also have important implications for CPI inflation in the coming months. The next section considers these, and other, supply-chain pressures on the prices of consumer goods and services.

Supply-chain pressures on consumer prices

Energy costs and prices

The November *Report* described how the doubling of oil prices since early 2004 might affect the level of the CPI. Higher oil prices feed through directly to the price of petrol. And they indirectly affect the prices of goods and services that are produced using oil.

Retail petrol prices typically adjust quickly to oil price movements. The indirect effects tend to occur more gradually, as prices adjust along the supply chain. As a result, the steady succession of increases over the past year or two may take

Measures of core inflation

CPI inflation has shifted markedly over the past 18 months. The annual rate began to pick up in late 2004. More recently, it has eased. But as CPI inflation has changed over this period, it has not been immediately clear whether this has reflected shifts in the fundamental determinants of inflation or factors of a more transient nature. Could core measures of inflation provide some guidance?⁽¹⁾

Two common types of core inflation measure are based on trimming and permanent exclusion. Trimmed mean measures of CPI inflation are calculated by removing the items with the largest and smallest inflation rates from the index. A fixed percentage of items are removed, but those vary from period to period. The second approach involves the permanent exclusion of specific volatile items, such as petrol.

Both approaches are problematic. The mechanical removal of large price movements can be misleading if different prices adjust at different rates to a common shift in demand conditions. In this case, large price movements among items that adjust first might be particularly informative about the prospects for inflation. The prices of items like petrol can be

significantly affected by global demand conditions, so their permanent exclusion could also mean removing useful information about underlying inflation. And, more generally, the choice of which items to exclude is somewhat arbitrary. Oil prices feed through directly to petrol prices and indirectly to the prices of other items, such as transport services. But it is far more common for petrol to be excluded from core inflation measures than other oil-intensive items.

The drawbacks of such measures are particularly germane at present. The elevated price of oil, for example, may be indicative of a process that has transformed demand and supply conditions across the globe: the integration of China and other emerging market economies into the world trading system. While that process has raised the price of commodities like oil, it has also lowered the prices of many other goods.⁽²⁾ Yet core measures typically capture only one of these effects. Similarly, the rise in energy prices could displace demand for other goods and services, putting downward pressure on their prices. In such circumstances, it is not possible to disentangle the transient effects from the more persistent trends using simple core measures.

(1) For a more detailed discussion, see Mankikar, A and Paisley, J (2002), 'What do measures of core inflation really tell us?', Bank of England Quarterly Bulletin, Winter, pages 373-83.

(2) See King, M (2006), a speech to Kent business contacts in Ashford, Kent on 16 January, available at

www.bankofengland.co.uk/publications/speeches/2006/speech263.pdf. See also the box on pages 36-40 of the November 2005 ECB Monthly Bulletin.



Chart 4.7 UK wholesale and domestic gas prices

Monthly data. Monthly average of one-day forward price of natural gas. The observation for February is an average during the fifteen working days up to the time at which the MPC finalised its projections.

some time to feed through to the level of the CPI. But in the absence of any impact on inflation expectations, or any further increases, the influence of oil prices on annual CPI inflation should dissipate over time.

The price of wholesale gas also affects a number of goods and services in the CPI basket — most obviously domestic gas prices. According to OFGEM, the regulator for Britain's gas and electricity industries, wholesale gas costs account for around half of domestic gas bills (Chart 4.6). And domestic gas prices have risen far less rapidly than wholesale prices in the past few months (Chart 4.7). As such, gas companies might be expected to recoup at least some of the recent increase in their costs.

Domestic gas has a weight of about 1% in the CPI, so substantial increases in its price would imply a significant direct effect. And there could also be significant, but smaller, indirect effects: gas accounts for more than a third of the generation of electricity, which also has a weight of about 1% in the CPI. These effects would provide a temporary boost to annual CPI inflation, although the timing and the precise

Table 4.C Service sector costs and prices

| | 2004 | 2005 Q1 | Q2 | Q3 | Q4 | <u>2006</u> Jan. | | | |
|---------------------------------------|-------|------------|------|------|------|---------------------|--|--|--|
| Costs | | | | | | | | | |
| Percentage change on a year earlier | | | | | | | | | |
| Unit wage costs ^(a) | 1.3 | 2.5 | 2.6 | 2.6 | n.a. | n.a. | | | |
| Index | | | | | | | | | |
| CIPS/RBS input costs ^(b) | 59.5 | 58.8 | 57.5 | 58.6 | 58.5 | 58.6 | | | |
| Prices | | | | | | | | | |
| Percentage change on a year ea | rlier | | | | | | | | |
| CSPI(c) | 2.4 | 3.0 | 3.4 | 3.8 | n.a. | n.a. | | | |
| Index | | | | | | | | | |
| CIPS/RBS output prices ^(b) | 53.6 | 52.3 | 52.3 | 51.6 | 52.8 | 52.6 | | | |
| Sources: CIPS/RBS and ONS. | | | | | | | | | |

(a) Estimate of average earnings divided by output per Workforce job in the

(b)

private service sector. Quarterly and annual CIPS/RBS data are averages of monthly indices. A reading above/below 50 implies rising/falling costs or prices. Non seasonally adjusted, net sector measure of the ONS Corporate Services (c) Price Index.

Chart 4.8 Manufacturing output prices(a)



Chart 4.9 Import prices including and excluding energy^(a)



Goods and services. Energy is defined as mineral fuels, lubricants and related materials. The calculations are based on non seasonally adjusted data. (a)

scale of any increases in domestic gas and electricity prices is highly uncertain.

Overall, the rise in energy prices has put upward pressure on inflation. That is likely to continue. But the impact of higher energy prices may have been mitigated by the displacement of demand for other goods and services. This could have put downward pressure on the prices of some items in the CPI basket. So excluding energy from a measure of CPI inflation would not necessarily indicate what might have happened in the absence of any oil and gas price rises. The box on page 27 discusses this and other drawbacks of core inflation measures.

Non-energy costs and prices

Evidence on other supply-chain pressures has been mixed since the November Report.

The latest indicators of service sector cost pressures, such as unit wage cost inflation, have been stable (Table 4.C). And the CIPS/RBS survey points to relatively steady output price inflation. But according to the ONS experimental corporate services price index, the prices that businesses charge other businesses increased at the fastest annual rate in over four years in 2005 Q3.

In manufacturing, a range of non-energy input prices rose rapidly in 2005. Evidence from the CIPS/RBS survey suggests that may have continued more recently. Other costs have increased too. Unit wage cost inflation, for example, picked up markedly towards the end of 2005. But rising cost pressures have not, as yet, fed through into output prices. The rate of output price inflation has tended to ease recently (Chart 4.8).

Import prices are a further potential source of supply-chain pressure on consumer prices. Import price inflation has picked up sharply over the past year. That reflects not only the direct impact of higher imported energy prices, but also rising prices of other imported goods and services (Chart 4.9). Monthly data point to more rises in non-energy import prices during 2005 Q4.

The short-term outlook for consumer price inflation

Looking ahead, the latest pickup in energy prices is expected to feed through to the prices charged for consumer goods and services. But that may be offset in the near term by weak capacity pressures. Overall, the MPC judges that annual CPI inflation is likely to remain close to target in the coming months.

Prospects for inflation

In the MPC's central projection, assuming that official interest rates follow a path implied by market yields, four-quarter GDP growth picks up to around its historical average. The profile is somewhat stronger than in the November Report for the first part of the forecast period, primarily reflecting a firmer outlook for consumption, but a little weaker thereafter. In the central projection, CPI inflation remains close to the 2% target throughout the forecast period. Compared with November, the CPI projection is a little higher around the end of the first year of the forecast, reflecting rises in energy prices. The main risks around the central projection relate to: consumer spending; the prospects for net exports; the sustainability of low long-term interest rates; the margin of spare capacity; and the evolution of energy prices and their impact on inflation. Overall, the risks are a little to the downside for growth and broadly balanced for inflation.

The balance between demand and supply in the UK economy is a key influence on the prospects for CPI inflation. But inflation is also subject to other pressures. Expectations of future inflation play an important role. And shifts in relative prices such as those of energy and imports can also matter. This section first assesses the outlook for demand, and moves onto the prospects for the balance between demand and supply. It then discusses other pricing influences before presenting the Committee's assessment of the outlook for CPI inflation.

5.1 The outlook for demand

Consumer spending

Household spending appears to have regained momentum following a short period of weakness. Growth in consumers' expenditure climbed back towards its historical average in the third quarter of 2005, and that firmer growth seems to have been sustained through the Christmas trading period.

The MPC's central view implies that a steady expansion is in prospect for consumer spending. A pickup in the housing market appears to be in train. Equity prices have risen substantially of late, and are assumed to increase gradually throughout the forecast period.⁽¹⁾ In the near term, the loosening of the jobs market is likely to act as a drag on disposable labour income growth. But, further out, real post-tax labour income is projected to grow broadly in line

⁽¹⁾ The MPC's central view is conditioned on a variety of assumptions about asset prices. See the box on page 33 for further detail.

with its historical trend. Taking all these factors together, consumer spending growth is assumed to remain close to its long-term average during the next three years.

There is a risk that consumer spending growth will be more subdued than implied by the central projection. The household savings ratio is still low by historical standards, and it is possible that consumers will increase their savings at a faster rate than expected. This could be triggered, for example, by concerns about household finances relating to high debt levels or pension prospects. It is also possible that the weakness in disposable labour income growth envisaged for the early part of the forecast period will be associated with a more subdued near-term path for consumer spending growth.

Business investment

Growth in UK business investment is estimated to have been muted despite the buoyancy of corporate cash flow, the low cost of finance and the continued decline in the relative price of capital goods. Reports from the Bank's regional Agents and surveys of investment intentions suggest that business investment growth is likely to remain soft in the short term. Further ahead, the Committee anticipates that companies will step up investment spending as spare capacity is eroded.

Government spending

In forming its projections, the Committee has assumed that nominal government spending will increase broadly in line with the plans outlined in the December *Pre-Budget Report*. Those plans imply that the government sector continues to make a material contribution to demand growth through most of the forecast period.

External demand and UK net trade

It seems likely that net trade — the balance of exports and imports — made a broadly neutral contribution to GDP growth during 2005. In part, that reflects the slowdown in the growth of spending on consumer durables and business investment, which are highly import intensive. The broadly neutral contribution represents a change from recent years, when net trade typically pulled down the economy's overall growth rate.

The outlook for exports is heavily influenced by prospects for the world economy. The euro area, the United Kingdom's largest export market, has enjoyed a pickup in output growth over the past year; the Committee's central view implies that euro-area GDP will expand steadily throughout the forecast period. In the United States, output growth weakened in the final quarter of 2005, though this appears to have reflected temporary influences such as the autumn hurricanes. The Committee's central projection assumes that US output growth rebounds at the beginning of 2006, and that the economy expands steadily thereafter. In Japan, a sustained expansion appears in prospect, while growth in the rest of Asia is likely to continue at a robust pace. Overall, world trade growth weighted to reflect the importance of different countries for UK exports — is expected to remain close to its long-term average throughout the next two to three years.

For many years, UK exporters have been losing market share to competitors overseas. In the recent past, that is likely to have been associated with the emergence of low-cost competitors in China and Eastern Europe. In the Committee's central view, some decline in export market share is assumed to continue through the forecast period. Despite this, the firm outlook for world trade, together with the assumed gentle depreciation in sterling's effective exchange rate (ERI),⁽¹⁾ means that exports are likely to grow steadily over the medium term.

The demand for imports is partly driven by the economic cycle: import growth tends to rise when the economy is expanding strongly. Moreover, imports have been accounting for an increasing share of the UK domestic market for some time. In recent years, at least some of that reflects greater competition from low-cost emerging economies. The Committee's central view implies that import penetration will continue to rise during the forecast period. This, combined with the central view for domestic demand, suggests steady growth in imports. Given the projections for exports and imports, net trade is assumed to make a broadly neutral contribution to GDP growth during the forecast period as a whole.

This profile for net trade is associated with a number of risks. There are considerable uncertainties surrounding the likely evolution of both import penetration and the United Kingdom's share of world export markets. Small changes in the ability of UK producers to compete either at home or abroad could have significant implications for net trade, and therefore for GDP growth.

Global imbalances constitute further risks to activity. In particular, the US national savings ratio is historically low and the current account deficit is correspondingly high. That is likely to correct at some point, although there is considerable uncertainty about the speed and nature of that adjustment, and its impact on the United Kingdom.

The MPC's forecasting assumption for the sterling ERI is described in the box on page 33.

Chart 5.1 Current GDP projection based on market interest rate expectations



The fan chart depicts the probability of various outcomes for 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 GDP growth 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 outturns of GDP growth are also expected to lie within each pair of the lighter green areas on 10 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.

Chart 5.2 The MPC's expectations for GDP growth based on market interest rate expectations^(a)

2006 Q4



⁽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.

The unusually low level of long-term interest rates poses risks not only to the outlook for world activity, but also to UK consumer spending and business investment. As discussed in Section 1, those low long-term interest rates have helped to support the prices of a wide range of assets, including housing and equities around the world. A continuation of that level of rates could be supportive of further growth in demand. But if long-term rates rise from their current low levels, this could have adverse effects for asset prices, and hence for demand both in the United Kingdom and abroad.

The GDP projection

The Committee's projection for four-quarter GDP growth in the United Kingdom, assuming that official interest rates follow a path implied by market yields, is shown in Chart 5.1. The asset price assumptions underpinning that projection are described in the box on page 33.

In the central projection in Chart 5.1, the four-quarter growth rate of GDP strengthens in the near term to move a little above its long-term average. That pickup is partly driven by periods of weak growth during 2005 dropping out of the four-quarter comparison. GDP growth during the first two years is underpinned by a steady expansion in consumer spending, a firm outlook for government expenditure and moderate growth in business investment. In the third year of the projection, four-quarter GDP growth eases back towards its long-term average as domestic demand growth slows.

The central projection for GDP in Chart 5.1 is somewhat stronger for the first part of the forecast period than in the November *Report*. That largely reflects a firmer profile for consumer spending associated with higher asset prices. In the latter part of the forecast period, the four-quarter growth rate is a little weaker than three months ago. That is primarily because of a stronger assumed profile for import penetration, and a weaker assumed profile for UK exporters' market share.

Overall, the Committee judges that the risks to GDP growth, relative to the central projection, are a little to the downside. The probabilities of various outcomes for GDP growth under the market interest rate assumption are set out in Chart 5.2. There are risks in both directions associated with the ability of UK producers to compete at home and abroad. In addition, consumer spending may prove to be weaker than assumed in the central view. There are downside risks associated with global imbalances and a possible rise in long-term interest rates. Though the fan chart reflects the best collective judgement of the MPC, there is a range of views among members.

Asset price assumptions

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). That path provides a convenient benchmark assumption on which to condition the MPC's projections.⁽¹⁾

Table 1

Expectations of the Bank's official interest rate implied by market yields^(a)

| Per cent | | | |
|---|---|---|------|
| February | | | |
| 2006 | 2007 | 2008 | 2009 |
| Q1 Q2 Q3 Q4 | Q1 Q2 Q3 Q4 | Q1 Q2 Q3 Q4 | Q1 |
| 4.5 4.4 4.4 4.4 | 4.4 4.5 4.5 4.5 | 4.5 4.5 4.5 4.5 | 4.4 |
| November | | | |
| 2006 | 2007 | 2008 | |
| <u>Q1</u> <u>Q2</u> <u>Q3</u> <u>Q4</u> | $\underline{Q1}$ $\underline{Q2}$ $\underline{Q3}$ $\underline{Q4}$ | $\underline{Q1}$ $\underline{Q2}$ $\underline{Q3}$ $\underline{Q4}$ | |
| 4.4 4.4 4.4 4.5 | 4.5 4.5 4.6 4.6 | 4.6 4.6 4.6 4.6 | |
| | | | |

(a) The data are fifteen-day averages of one-day forward rates to 8 February 2006 and 9 November 2005 respectively. They have been derived from instruments that settle on the London interbank offered rate. That includes the market rates on futures, swaps, interbank loans and forward rate agreements, adjusted for credit risk. The MPC may change the way it estimates these expectations from time to time, as shifting market conditions can alter the relative advantages of using different methods.

On average, in the fifteen days leading up to the MPC's decision, the market yield curve implied that financial market participants expected the official interest rate to remain broadly unchanged over the forecast horizon. That is similar to the profile expected in November. Chart A uses information from option prices to provide an approximate indication of market participants' uncertainty, ahead of the MPC's meeting on 8–9 February, about the future path of official interest rates. The chart suggests that market participants believed that a wide variety of outturns was possible.

Chart A

Market beliefs about future interest rates



The mean of the fan chart is the market rate profile for the fifteen-day average ending 8 February, consistent with the measure of interest rates shown in Table 1. The distribution is derived using the prices of options on three-month Libor futures contracts traded on Euronext.life. It is constructed by averaging the daily distributions around a common mean for each of the fifteen days. The average is calculated for each probability band at each quarter. The fan chart depicts the probability of outcomes for interest rates in the future. It has a similar interpretation to the fan charts in the Overview and in this section of the *Report*. The chart is only indicative of market expectations because it is based on different, though related, instruments to the Bank's repo contracts, and is estimated on the assumption that investors are risk-neutral.

The starting point for the sterling exchange rate index (ERI) in the MPC's projections for GDP growth and CPI inflation is 99.4, the average for the fifteen working days to 8 February. That was 0.9% below the starting point for the November forecast. Under the MPC's usual convention,⁽²⁾ the exchange rate is assumed to depreciate to 98.0 by 2008 Q1, and is lower throughout the forecast period than assumed in November.

Equity prices are expected to rise broadly in line with nominal GDP over the forecast period.

See the box 'The interest rate assumptions in the projections', on pages 42–43 of the August 2004 *Inflation Report*.
 See the box 'The exchange rate in forecasting and policy analysis', on page 48 of the November 1999 *Inflation Report*.

5.2 The balance between demand and supply

Imbalances between the demand for private sector output and the resources available to supply that output can foreshadow movements in CPI inflation. Those imbalances are reflected in both the margin of spare capacity in private sector businesses and the degree of slack in the labour market.

In the first half of 2004, the economy was growing robustly and companies were running up against capacity limits. Since then, GDP growth has slowed. That slowing has probably generated an increased margin of spare capacity — for example, unemployment is somewhat higher than it was a year ago.

The Committee's central view is that the economy will expand at a reasonable rate throughout the forecast period, leading to a gradual erosion of spare capacity. One risk is that the degree of spare capacity may be less pronounced than in the central view. In particular, the high level of energy prices may have an adverse effect on potential supply — for example, by encouraging companies to scrap energy-intensive machinery.⁽¹⁾ That poses an upside risk to the projection for CPI inflation.

The slowing of the economy has had a number of consequences for the labour market. Initially, employment growth remained reasonably firm despite the softening of activity, reflecting in part the tendency of companies to retain their workforce during a temporary slowdown in order to avoid unnecessary firing and hiring costs. But, more recently, employment growth appears to have eased, suggesting that some of that labour hoarding may be starting to unwind. In the near term, that may continue, implying a subdued outlook for the jobs market at the start of the forecast period. Further out, however, companies should step up their hiring rates in response to the projected pickup in demand growth.

The assessment of labour market conditions in the United Kingdom has been complicated by inflows of migrant workers. In recent years, non-UK nationals have played an increasingly important role in the jobs market, and this rise in labour supply has probably helped to hold down the rate of wage growth. The MPC's central projection continues to assume further migration inflows. After a near-term boost from bonus payments, wage growth is likely to be broadly flat through most of the forecast period. There remains considerable uncertainty surrounding the future magnitude of migration flows, their likely impact on potential supply, and their effect on both wage growth and CPI inflation.

5.3 Other pricing influences

Inflation expectations are an important factor in the Committee's judgement about the likely profile for CPI inflation. Inflation expectations are not directly observable, and neither surveys nor measures derived from financial markets necessarily provide an accurate guide to the expectations of those setting prices and wages. But, in the Committee's view, inflation expectations appear to be stable (Section 4). In particular, inflation expectations do not yet seem to have been affected materially by energy price developments.

⁽¹⁾ See the box on page 19 of the November 2005 Inflation Report.

Shifts in relative prices, such as those of energy or imports, can also help to shape the likely near-term profile for CPI inflation. But disentangling the various effects of such relative price changes is far from straightforward. Movements in energy prices can affect CPI inflation directly, for example via the retail price of petrol or domestic utility bills. In addition, there are various potential indirect effects. Increases in energy prices will raise production costs, and so can lead to building price pressures along the supply chain. However, it may also be that rising energy prices displace demand for other goods and services — and thereby push down on prices and wages in other industries. The rest of this section considers prospects for energy and import prices in turn.

Energy prices

Since the November *Report*, there has been a further rise in the oil price and a sharp increase in the price of wholesale gas. That is likely to have a material influence on CPI inflation over the next year.

As outlined in the November *Report*, it is likely that past steep rises in the oil price are still working their way through the supply chain. But the impact of those higher prices on the twelve-month rate of CPI inflation should recede over the forecast period. That is because the MPC's inflation projection assumes that the spot oil price for Brent crude follows the oil price futures curve, which is broadly flat for the next three years. However, there is a risk that oil prices will rise more sharply than assumed in the central projection, for example because of heightened geopolitical tensions.

In the wholesale gas market, the futures curve suggests that gas prices will be substantially higher on average in 2006 than in 2005. It seems likely that gas prices will push up on the rate of CPI inflation over the next year or two. But it is not clear how quickly higher wholesale gas prices will feed through into domestic utility bills.

As in November, there is considerable uncertainty not only about the likely future evolution of energy prices, but also about the speed with which changes in energy prices pass along the supply chain. For example, it may be that at present, companies feel unable to pass on the full effect of energy costs to their customers. Instead, companies may be absorbing at least part of the energy price increase into their margins. Alternatively, businesses may be trying to offset the impact of higher energy prices by squeezing other parts of their cost base — for example, wages. Neither of these approaches may be sustainable indefinitely.

Import prices

Import prices have picked up strongly over the past year, partly reflecting sharp rises in energy costs. In the Committee's central projection, import price inflation eases back during the forecast period. In large part, that is because energy prices are assumed to remain broadly unchanged, and so make a diminishing contribution to import price inflation.

The relatively subdued path for import price inflation also reflects the balance between a number of influences. The recent depreciation of sterling, together with its assumed path during the next three years,⁽¹⁾ provides a small upward impetus to import prices. The firm outlook for growth in the United Kingdom's main trading partners is a further source of upward price pressure. Working in the opposite direction, the central projection assumes that low-cost imports from China and other industrialising nations are likely to exert continued downward pressure on import price inflation over the next three years.

5.4 The outlook for CPI inflation

The Committee's central projection for CPI inflation, assuming that official interest rates follow a path implied by market yields, is shown in Chart 5.3. In the first part of the forecast period, the downward pressure on inflation stemming from spare capacity is offset by upward pressure from higher energy prices. In the second part of the forecast period, spare

Chart 5.3 Current CPI inflation projection based on market interest rate expectations



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



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 outturns 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.

(1) See the box on page 33.

Chart 5.5 The MPC's expectations for 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 5.6 Current projection for CPI inflation in 2008 Q1(a) based on market interest rate expectations



capacity in the economy is gradually eroded, while the contribution to inflation from higher energy prices is assumed to diminish. So overall, inflation remains close to the 2% target throughout the forecast period.

Compared with November, the profile for CPI inflation is a little higher around the end of the first year of the forecast period. That is primarily because of energy prices. For the second and third years of the forecast period, the projection is similar to that presented three months ago.

The best collective judgement of the Committee is that the risks to CPI inflation, relative to the central projection, are broadly balanced. The main risks around the central projection relate to: the outlook for GDP growth; the margin of spare capacity; and the evolution and impact of energy prices. Though this reflects the best collective judgement of the MPC, there is a range of views among members.

In the November *Report*, the Committee was of the view that the short-term outlook for CPI inflation was particularly uncertain, and widened the fan chart accordingly. That uncertainty related to the timing of the pass-through of higher energy prices and, in particular, whether CPI inflation was on the downward path assumed in the central projection. Some of that unusual near-term uncertainty has dissipated, and the width of the fan chart has been reduced accordingly.

The probabilities of various outcomes for CPI inflation are set out in Chart 5.5. The overall balance of risks to the inflation outlook at the two-year point is shown in Chart 5.6, alongside the corresponding balance in November (Chart 5.7).

Chart 5.7

November projection for CPI inflation in 2008 Q1(a) based on market interest rate expectations



(a) These charts represent a cross-section of the respective fan charts in 2008 Q1 for the market interest rate projections. The coloured bands have a similar interpretation to those on the fan charts. The fan chart widens as the time horizon is extended. 2008 Q1 is nearer to the starting point in the current projection than it was in November so, for a given degree of uncertainty and balance of risks, the spread of possible outcomes in that quarter would tend to be narrower in Chart 5.6 than in Chart 5.7.

(b) Probability of inflation being within ±0.05 percentage points of any given inflation rate, specified to one decimal place. For example, the probability of inflation being 2.0% (between 1.95% and 2.05%) in the current projection is around 7%.

Chart 5.8 Current GDP projection based on constant nominal interest rates at 4.5%



Chart 5.9 Current CPI inflation projection based on constant nominal interest rates at 4.5%



5.5 Projection based on constant interest rates

The Committee's projections for GDP growth and CPI inflation conditioned on a constant interest rate at 4.5% are shown in Charts 5.8 and 5.9 respectively. These charts show projections only up to a two-year forecast horizon.⁽¹⁾ The projections are similar to those based on market interest rates. That is because the market yield curve is broadly flat for the next two years.

5.6 The policy decision

At its February meeting, the Committee noted that the central projection was for output growth to remain broadly similar to the prospective rate of growth of supply through most of the forecast period, while inflation remained close to the target. In the light of this outlook, and bearing in mind the balance of risks, the Committee judged that no change in the repo rate was necessary to keep inflation on track to meet the target in the medium term.

⁽¹⁾ The box on pages 42–43 of the August 2004 *Inflation Report* explains why the projections based on constant interest rates are only shown up to two years ahead.

Other forecasters' expectations

In January, the Bank asked a sample of external forecasters for their latest projections of CPI inflation, output growth, interest rates and the sterling ERI. Overall, their views have changed little since the November Report.

Table 1

Average of other forecasters' projections of CPI inflation, GDP growth, interest rates and the ERI(a)

| | 2005 Q4 ^(b) | 2006 Q4 | 2007 Q4 | 2008 Q |
|---------------------------------|------------------------|---------|---------|--------|
| CPI inflation ^(c) | 2.1 | 1.9 | 1.9 | 1.9 |
| GDP growth(c) | 1.7 | 2.4 | 2.5 | 2.5 |
| Repo rate (per cent) | 4.5 | 4.3 | 4.3 | 4.5 |
| Sterling ERI(d) | 99.7 | 97.6 | 96.6 | 96.2 |
| (New index: January 2005 = 100) | | | | |

Sources: Bank of England, ONS and central projections of outside forecasters as of 1 February 2006.

(a) For 2006 Q4 and 2007 Q4, 26 forecasters provided the Bank with forecasts for CPI inflation, GDP growth and the repo rate. For 2008 Q1, there were 22 forecasts for CPI inflation and GDP growth, and 21 for the repo rate. For the sterling ERI, there were 23 forecasts for 2006 Q4, 21 for 2007 Q4, and 19 for 2008 Q1.
(b) Outturns. GDP is the preliminary ONS estimate for chained volume GDP at market prices. The repo rate and sterling ERI are averages of daily values.
(c) Four-quarter percentage changes.
(d) Where necessary, responses were adjusted to take account of the difference between the old and new ERI measures, based on the comparative outturns for 2005 Q4.

The average forecast was for CPI inflation to remain a little below the 2.0% target over the next two years. Sixteen of the 22 forecasters expected inflation to be between 1.8% and 2.1% at the two-year horizon (Chart A). And, on average, the external forecasters saw a 53% probability of CPI inflation being at or below 2.0% in two years' time (Table 2). That is broadly consistent with the MPC's latest projection (Chart 5.5).

Chart A





The forecasters' average central projection was for four-quarter GDP growth to pick up from the preliminary outturn of 1.7% in 2005 Q4 and to settle around its long-run average of 2.5% in around one to two years' time (Table 1). In their

Table 2

Other forecasters' probability distributions for prospective CPI inflation and GDP growth(a)

CPI inflation

| Probability, per cent ^(b) | Range: | | | | | |
|--------------------------------------|--------|------|------|-------------|------|-------------|
| | Less | 1.0% | 1.5% | 2.0% | 2.5% | More |
| | than | to | to | to | to | than |
| | 1.0% | 1.5% | 2.0% | <u>2.5%</u> | 3.0% | <u>3.0%</u> |
| | | | | | | |
| 2006 Q4 | 3 | 13 | 42 | 30 | 9 | 4 |
| 2007 Q4 | 5 | 13 | 35 | 32 | 11 | 4 |
| 2008 Q1 ^(c) | 6 | 14 | 33 | 31 | 11 | 5 |
| | | | | | | |

GDP growth

Chart B

| Probability, per cent ^(b) | Range: | | | |
|--------------------------------------|--------|-----|----|------|
| | Less | 1% | 2% | More |
| | than | to | to | than |
| | 1% | 2% | 3% | 3% |
| | | - 0 | | |
| 2006 Q4 | 6 | 30 | 51 | 14 |
| 2007 Q4 | 6 | 28 | 47 | 19 |
| 2008 Q1(c) | 8 | 26 | 44 | 22 |
| | | | | |

Source: Projections of outside forecasters as of 1 February 2006.

(a) 26 forecasters provided the Bank with their assessment of the likelihood of expected twelve-month CPI inflation and four-quarter GDP growth falling in the ranges shown above. The table shows the average probabilities across respondents: for example, on average forecasters assigned a probability of 55% to CPI inflation turning out to be 2.0% or less in 2008 Q1.
 (b) Figures may not sum to 100 due to rounding.
 (c) 22 forecasters.

view, there was a greater chance that GDP growth would be below 2.0% than above 3.0% during the next two years (Table 2). That is in contrast to the MPC's latest projection, where GDP is more likely to be above 3% than below 2% (Chart 5.2).

The average forecast for the official interest rate was consistent with a cut during 2006, which would then be reversed by the start of 2008 (Table 1).

The external forecasters also expected the sterling ERI to fall gently over the next two years, on average reaching 96.2 by 2008 Q1 (Table 1). That is lower than the profile assumed by the MPC in its central projection. But Chart B shows that the range of views is diverse.



(a) Where forecasts were provided for the old ERI measure, they have been adjusted to correspond to the new index.

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(a) 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/2006.htm.

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Text of Bank of England press notice of 8 December 2005

Bank of England maintains interest rates at 4.5%

The Bank of England's Monetary Policy Committee today voted to maintain the Bank's repo rate at 4.5%. The minutes of the meeting will be published at 9.30 am on Wednesday 21 December.

Text of Bank of England press notice of 12 January 2006 Bank of England maintains interest rates at 4.5%

The Bank of England's Monetary Policy Committee today voted to maintain the Bank's repo rate at 4.5%. The minutes of the meeting will be published at 9.30 am on Wednesday 25 January.

Text of Bank of England press notice of 9 February 2006

Bank of England maintains interest rates at 4.5%

The Bank of England's Monetary Policy Committee today voted to maintain the Bank's reportate at 4.5%.

The Committee's latest inflation and output projections will appear in the *Inflation Report* to be published on Wednesday 15 February.

The minutes of the meeting will be published at 9.30 am on Wednesday 22 February.

Glossary and other information

Glossary of selected data

AEI: average earnings index.
AWE: average weekly earnings.
CPI: consumer prices index.
CPI inflation: inflation measured by the consumer prices index.
CSPI: corporate services price index.
ERI: exchange rate index.
GDP: gross domestic product.
LFS: Labour Force Survey.
Libor: London interbank offered rate.
M4: UK non-bank, non-building society private sector's holdings of sterling notes and coin, and their sterling deposits (including certificates of deposit, holdings of commercial paper and other short-term instruments and claims arising from repos) held at UK banks and building societies.
RPI: retail prices index.
RPI inflation: inflation measured by the retail prices index.

Abbreviations

BCC: British Chambers of Commerce.
BRC: British Retail Consortium.
CBI: Confederation of British Industry.
CIPS: Chartered Institute of Purchasing and Supply.
DTI: Department of Trade and Industry.
ESA(95): European System of Accounts 1995.
EU: European Union.
FTSE: Financial Times Stock Exchange.
GfK: Gesellschaft für Konsumforschung, Great Britain Ltd.
HBF: Home Builders Federation.
HMSO: Her Majesty's Stationery Office.
IBES: International Brokers' Estimate System.
IMF: International Monetary Fund.
M&A: mergers and acquisitions.

MPC: Monetary Policy Committee.
NPISH: non-profit institutions serving households.
OFCs: other financial corporations.
OFGEM: The Office of Gas and Electricity Markets.
ONS: Office for National Statistics.
OPEC: Organization of the Petroleum Exporting Countries.
PAYE: Pay As You Earn.
PNFCs: private non-financial corporations.
RBS: Royal Bank of Scotland.
REC: Recruitment and Employment Confederation.
RICS: Royal Institution of Chartered Surveyors.
SMMT: Society of Motor Manufacturers and Traders.
VAT: value added tax.

Symbols and conventions

Except where otherwise stated, the source of the data used in charts and tables is the Bank of England or the Office for National Statistics (ONS) and all data, apart from financial markets data, are seasonally adjusted. n.a. = not available.

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

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

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