

# Inflation Report

November 2002

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 judgment 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.

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## Overview

*The recovery in the world economy remains fragile and global stock markets have continued to be volatile. In the United Kingdom, quarterly output growth has picked up to around trend. The consumer continues to be the primary engine of growth in demand. That has been associated with rapid house price inflation and accelerating household borrowing. The Committee's central projection at the current level of official interest rates is for four-quarter GDP growth to settle at around trend over the next two years. Pay pressures remain subdued. Annual RPIX inflation averaged 2.0% in the third quarter. It is projected to move above the 2.5% target in the near term, dip slightly below it towards the end of next year, and then edge back up towards target as the two-year horizon approaches. Significant risks to the outlook for growth and inflation remain.*

The global economic recovery remains patchy. In the United States, output growth picked up in the third quarter, as consumers increased purchases of motor vehicles in response to generous financing deals. But that stimulus is likely to prove temporary and a drop in consumer confidence suggests household spending could moderate. The euro area has experienced below-par growth in output, with sluggish consumer spending and weak business investment holding back domestic demand. Japan has seen a modest pick-up in activity, led by external demand, but prospects there remain subdued. However, strong domestic demand has ensured output growth has held up relatively well in a number of other Asian economies.

Global equity prices fell sharply again during late summer, but regained most of that lost ground in October. Notwithstanding the recent rise, equity indices stand well below their levels at the start of the year and there is considerable uncertainty about the impact of that correction on future consumer spending and investment. The Federal Reserve has cut official interest rates by 0.5 percentage points, while official rates have remained unchanged in the other major economies. In the face of the continued accommodative monetary stance, market interest rates have softened and that will help to counteract any weakness in global activity. The Committee continues to expect UK-weighted world demand to strengthen gradually. But although prospects are broadly the same as in the August *Inflation Report*, there are significant risks to the outlook.

In the United Kingdom, GDP is provisionally estimated to have risen by 0.7% in Q3, slightly up on the second-quarter growth rate, although the impact of the Jubilee holidays has masked the

underlying trends in some of the constituent series. So while output in the manufacturing sector expanded by over 1% in the third quarter, the underlying trend since Q1 appears to have been broadly flat. The Jubilee effects were probably rather less significant for the services sector, which grew by 0.8% in Q3. Taking the second and third quarters together, the underlying picture is one of around-trend output growth.

The growth in consumers' expenditure picked up sharply to 1.3% in the second quarter, though some of that may reflect the timing of Easter. More muted growth is likely to have occurred in Q3, but record levels of consumers' confidence in their own financial position and rapid growth in borrowing suggest that the outlook is for spending to remain strong in the near term. The resilience of consumer spending in recent quarters has been associated with a rise in annual house price inflation to around 25%–30%. That has allowed owner-occupiers to increase their secured borrowing, thus supporting consumer demand and offsetting the impact of lower equity prices. But recent rates of house price inflation are unsustainable. Together with slowing growth in real disposable incomes and lower equity wealth, slower house price inflation would act to dampen future spending growth.

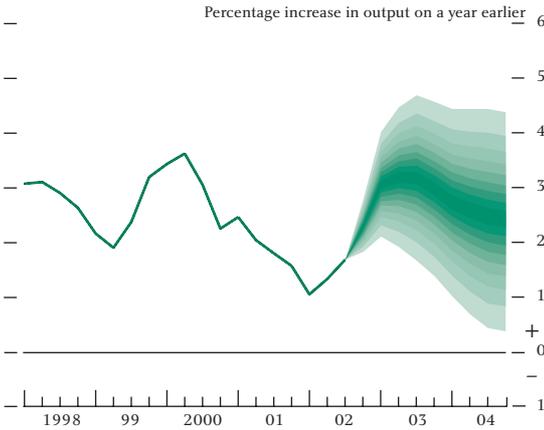
Underlying government spending has been rising strongly, though recent quarterly movements have been erratic. Government consumption in Q2 was 4.6% up on a year earlier, while capital spending was almost 12% higher. Continued strong growth in public expenditure is planned for the next two years.

Business investment was little changed in Q2, but around 11% lower than a year earlier after especially sharp falls around the turn of last year. Sufficient capacity, weak profitability, pressures on corporate balance sheets and subdued investment intentions all point to a sluggish near-term outlook for capital spending. Destocking reduced second-quarter growth, but that may have been partly related to the Jubilee and some reversal is likely to have happened in Q3.

Net exports boosted growth in the second quarter, but recent movements in exports and imports have been erratic and trade data point to a return to a negative contribution in Q3. In every year since 1996, net exports have detracted from growth, though improved terms of trade have limited the impact on the current account deficit.

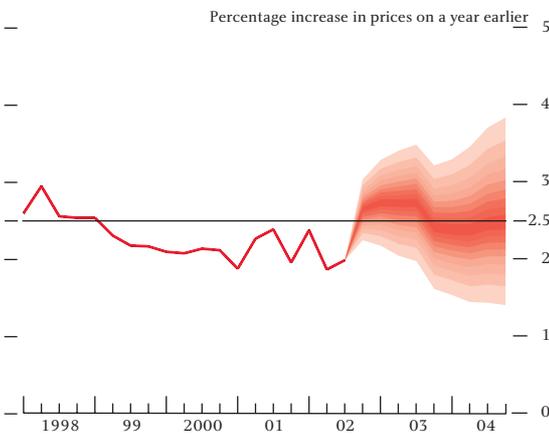
Chart 1 shows the MPC's assessment of the outlook for GDP growth, on the benchmark assumption that the official interest rate remains at 4.0%. Under the central projection, robust consumer demand pushes four-quarter GDP growth up to a

**Chart 1**  
**Current GDP projection based on**  
**constant nominal interest rates at 4%**



The fan chart depicts the probability of various outcomes for GDP growth in the future. The darkest band includes the central (single most likely) projection and covers 10% of the probability. Each successive pair of bands is drawn to cover a further 10% of probability, until 90% of the probability distribution is covered. The bands widen as the time horizon is extended, indicating 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.

**Chart 2**  
**Current RPIX inflation projection based**  
**on constant nominal interest rates at 4%**



The fan chart depicts the probability of various outcomes for RPIX inflation in the future. The darkest band includes the central (single most likely) projection and covers 10% of the probability. Each successive pair of bands is drawn to cover a further 10% of probability, until 90% of the probability distribution is covered. The bands widen as the time horizon is extended, indicating 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.

little above trend early next year. Growth then settles back, as a deceleration of household spending offsets a recovery in external demand, higher public expenditure and a modest pick-up in business investment. The profile for output growth is broadly similar to that shown in the *August Report*.

Among other factors, inflationary pressure depends upon the balance of demand relative to supply in labour and product markets. The employment rate has changed little through the slowdown, as job losses in manufacturing have been offset by increased recruitment in the public sector and construction, though some easing in underlying labour demand is suggested by the decline in total hours worked. In the three months to August, the ILO unemployment rate was 5.2%, just 0.3 percentage points above its May 2001 trough. Along with other indicators, that suggests only a slight easing in labour market tightness. Headline earnings growth has been running at a little under 4% since May, but may soon edge up as the delayed local authority pay settlement takes effect.

Growth in productivity per head had been unusually weak during the slowdown—though productivity per hour held up better—but the growth of unit wage costs has eased as output growth has picked up. Concerns about the possibility of military action in Iraq produced a spike in oil prices, and increases over the course of this year are now working through into input costs. While there are significant differences across sectors, survey measures and other indicators suggest that capacity utilisation is, on average, a little below normal. RPIX inflation ticked up to 2.0% in Q3, though monthly movements remain volatile. The marked divergence between goods and services price inflation has persisted, reflecting sectoral differences in market conditions as well as in productivity growth.

Chart 2 shows the Committee’s assessment of the outlook for RPIX inflation. In the central projection, inflation rises above the 2.5% target by the end of this year reflecting the impact of higher oil prices and an unusually high contribution from housing depreciation. It remains at that higher level for most of next year, and then drops a little below target as those influences unwind, subsequently edging back up as the two-year horizon approaches. Compared with the *August Report*, the profile is rather higher in the first year and slightly lower during the second year.

Among the many uncertainties surrounding these projections, the Committee identified a number of particular risks. First, that US consumer spending might falter and the euro area remain sluggish, thus threatening the global recovery. Second, that the exceptional rate of house price inflation might

continue for a while yet, leading ultimately to a more abrupt slowdown in both house price inflation and consumer spending growth. Third, that the pass-through into wages and prices of the increase in National Insurance contributions next spring might be greater than in the central projection. The crystallisation of any of these risks could have material implications for the prospects for growth and inflation, and thus for policy. But, overall, the Committee judges that, relative to the central projection, the balance of risks to growth is weighted somewhat to the downside, with those to inflation slightly on the upside.

At its November meeting, the Committee noted that, although uneven, the profile for inflation under the central projection remained close to target over the forecast period. Bearing in mind the substantial risks, the Committee judged that it was at present appropriate to leave official interest rates at 4%. But the Committee observed that prompt action might be required if any of those risks appeared to be crystallising.

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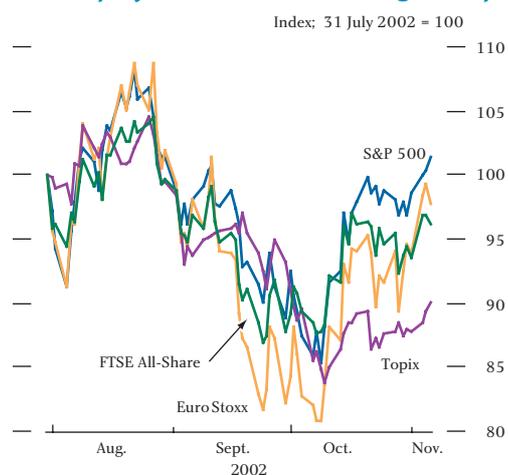
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*Global equity prices rose a little following publication of the August Inflation Report, but then fell sharply during September. Most indices have now recovered to stand at levels close to those seen three months previously. There have also been large fluctuations in the prices of government bonds, with equity prices and bond yields tracking each other closely.*

*Some early indicators point to a possible slowdown in housing market activity. But this has not yet fed through to weaker house price inflation—the annual rate in October looks to have been somewhere in the range 25%–30%. Household borrowing has accelerated. In Q2, less than half the total amount of secured borrowing was invested in the housing stock. It is likely that most of the remainder was used to fund additional consumption.*

**Chart 1.1**  
World equity markets since the August Report<sup>(a)</sup>



Sources: Bank of England, Bloomberg and Thomson Financial Datastream.

(a) All equity price indices have been converted into sterling.

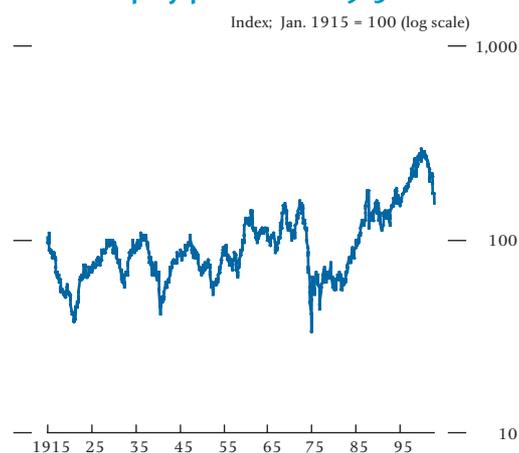
## 1.1 Asset prices

### Equity markets

There has been considerable turbulence in world equity markets during the past three months. In the period between 31 July and 6 November, the price of a broad basket of UK equities varied by almost 20%—the FTSE All-Share index reached a peak of 2147 in late August, and a low of 1783 in late September. For most of the time, other major equity price indices followed paths similar to that of the FTSE All-Share, which suggests that some of the factors driving equity markets were global in nature (see Chart 1.1). Equity price movements have been large in comparison to news about some of the factors that ought to be driving them—for example, expectations of corporate earnings growth over the medium term have changed little in recent months. This, together with high measures of implied volatility as derived from options prices, suggests that market participants have been very uncertain about the valuation to place on equities. The average of the FTSE All-Share index in the 15 working days up until 6 November was 1955, close to its average of 1985 in the 15 working days up until 31 July. The starting point for the equity price projection contained in this *Report* is a little below the starting point used in August.

Although the overall change in UK equity prices during the past three months has been small, by 6 November, when data for this *Report* were finalised, the FTSE All-Share index had fallen more than 20% since the beginning of the year, and was 40% below its value at the end of 1999. Chart 1.2 shows how

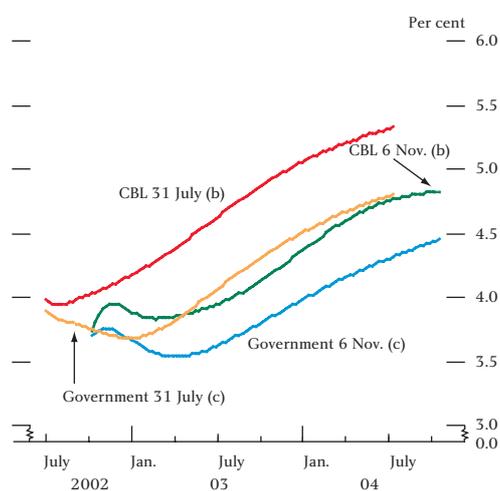
**Chart 1.2**  
Real UK equity prices since 1915<sup>(a)</sup>



Sources: Bank of England, Bloomberg, Global Financial Data and ONS.

(a) Equity prices are measured at the end of each month and deflated by an RPI series that has been seasonally adjusted by the Bank. The chart ends in September 2002, which is the final data point for the RPI.

**Chart 1.3**  
Two-week forward interest rates<sup>(a)</sup>



Source: Bank of England.

(a) A forward interest rate is the rate implied for a future period by comparisons of current shorter-term and longer-term rates.  
 (b) Commercial bank liability curve. Based on Libor rates and a number of derivative instruments that settle against Libor.  
 (c) Government liability curve. Based on GC repo rates and gilt yields.

UK equity prices have changed, in real terms, since 1915. Although dominated by the collapse in real equity prices during 1973 and 1974, the recent decline has been large by post-war standards. And it unwound much of the real increase that had occurred between January 1992 and December 1999.

### Monetary policy

On 7 November, the MPC maintained the Bank of England repo rate at 4%. This two-week official interest rate has now been left unchanged for a year. On 6 November, the US Federal Open Market Committee reduced its target for the federal funds rate by 0.5 percentage points to 1.25%. Official interest rates in the euro area have remained unchanged since the August *Report*.

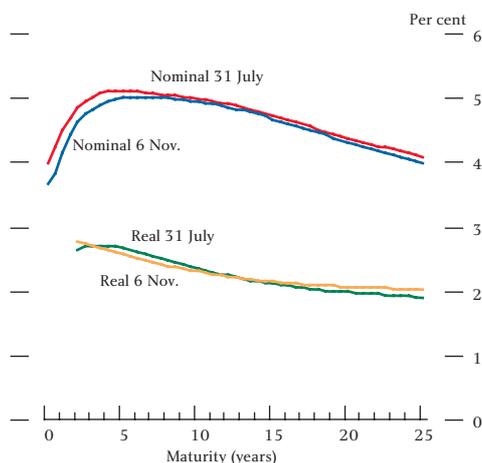
Policy-makers have an interest in knowing what financial market participants expect will happen to the official rate of interest. These expectations affect the terms on which individuals can both lend and borrow money. Moreover, when policy-makers are informed about what people expect them to do, it can help them to judge whether the actual policy decision will be a surprise, and hence what influence it might have on other financial market prices, and on the economy. Each day, Bank staff estimate two nominal forward interest rate curves—known as the government liability curve and the commercial bank liability (CBL) curve—from which information about financial market expectations can be obtained.<sup>(1)</sup> But this is not a straightforward exercise.

The government liability curve is based on a combination of general collateral (GC) repo rates with a maturity of up to six months, and gilt yields.<sup>(2)</sup> Interest rates implied by the government liability curve are often thought to approximate risk-free interest rates. The commercial bank liability curve is fitted through a sequence of rates at which commercial banks lend money to each other on an unsecured basis, known as London Interbank Offer Rates (or Libor), and a number of derivative instruments that settle against Libor. In the period since the August *Inflation Report*, both curves have shifted down and to the right (see Chart 1.3). One interpretation is that, by 6 November, financial market participants believed that the timing of an official interest rate rise had been further delayed.

The government liability curve, as derived, can be an imperfect measure of expectations about the official two-week repo rate, if the yields on particular gilts are affected by fluctuations in

(1) The government liability curve has previously been referred to in the *Inflation Report* as the GC repo/gilt curve. Estimates of both the government liability curve and the commercial bank liability curve are published daily on the Bank of England web site at [www.bankofengland.co.uk/statistics/yieldcurve/main.htm](http://www.bankofengland.co.uk/statistics/yieldcurve/main.htm)  
 (2) A GC repo rate is the rate that one financial institution pays to borrow money from another when it effectively offers any gilt as security against the risk of default.

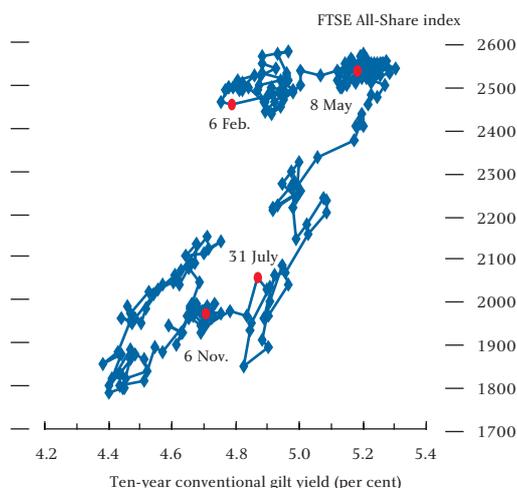
**Chart 1.4**  
Nominal and real forward rate curves<sup>(a)</sup>



Source: Bank of England.

(a) A forward interest rate is the rate implied for a future period by comparisons of current shorter-term and longer-term rates.

**Chart 1.5**  
Equity prices and conventional gilt yields in the United Kingdom in 2002<sup>(a)</sup>



Sources: Bank of England and Bloomberg.

(a) Each dot represents the FTSE All-Share index and the ten-year conventional gilt yield at close of business on a particular day. Red dots represent the final data available to the Committee when projections contained in this and past *Inflation Reports* were finalised.

the demand for them that are unrelated to monetary policy. Some of the dip in the government liability curve towards the middle of next year may have reflected such factors. Interest rates implied by the commercial bank liability curve incorporate a time-varying credit risk premium, to compensate for the risk of default on unsecured loans to private sector organisations. In addition, both curves are affected by term premia, which tend to widen the gap between the implied forward rate and the expected policy rate at longer maturities. Each curve can give misleading signals about market expectations of official rates from time to time, but the large movements down and to the right shown in Chart 1.3 are likely to be significant nonetheless.

In the week before each regular monthly meeting of the MPC, Reuters conducts a survey of economists working in the financial sector. Such surveys, though less timely than information obtained from financial market prices, are still helpful because they provide a direct measure of expectations. In the most recent survey, published on 31 October, 18 of the 32 respondents expected that the Bank of England repo rate would be left unchanged at the meeting on 6 and 7 November. The average expected rate for the end of 2002, at 3.87%, was a little below the current repo rate. The rate expected for the end of 2003 was 4.45%. These forecasts were both around half a percentage point lower than the equivalent forecasts published on 25 July. All of the available evidence suggests that expectations of the two-week Bank of England repo rate during the next twelve months or so, have fallen since the *August Report*. Survey-based measures of inflation expectations have tended to fall too (see Section 4), though by a smaller amount, so the short-term real rate of interest has probably fallen.

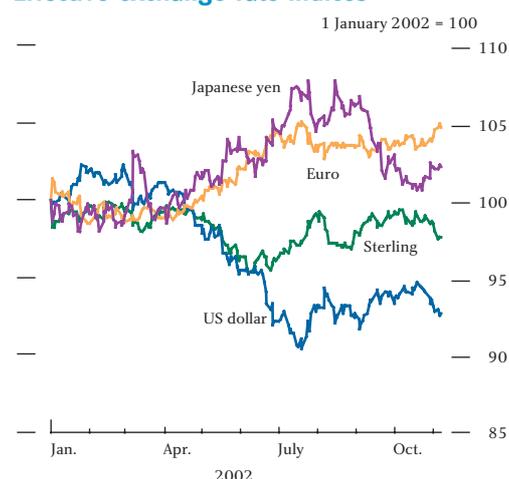
**Government bond yields**

The Government liability curve, and a real forward interest rate curve derived from index-linked gilt yields, provide measures of the implied rates, both nominal and real, at which financial markets would be willing to lend to the UK government at different points of time in the future. The rates at which households and firms can borrow money will be related to these forward interest rates, but will generally be higher.

Chart 1.4 shows that, by 6 November, nominal forward interest rates had fallen by around 0.2 percentage points at maturities up to five years, but were broadly unchanged further out. There had been little movement in real forward interest rates.

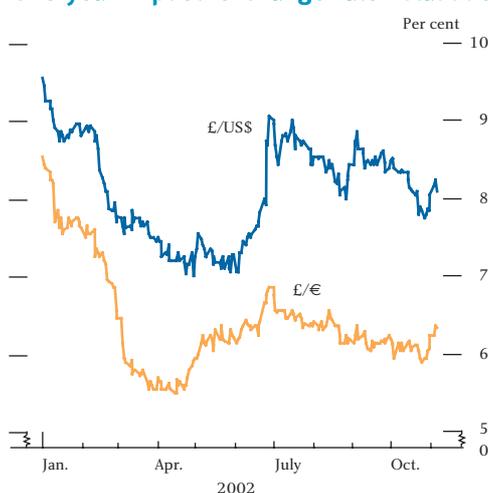
Just as equity prices have varied substantially during the past three months, so too have gilt yields, with the ten-year nominal

**Chart 1.6**  
Effective exchange rate indices



Source: Bank of England.

**Chart 1.7**  
One-year implied exchange rate volatilities



Source: Bloomberg.

**Table 1.A**  
The housing market<sup>(a)</sup>

	2002					
	Q1	Q2	July	Aug.	Sept.	Oct.
HBF survey						
Site visitors (b)	22.3	19.8	11.9	12.7	27.6	n.a.
Net reservations (c)	33.9	35.3	23.6	8.7	24.3	n.a.
Approvals (d)	113	118	118	109	117	n.a.
Monthly change in house prices (e)						
Halifax	1.1	2.5	1.8	0.2	4.4	4.7
Nationwide	0.9	2.7	2.5	2.5	2.1	1.4
Particulars delivered (f)	126	136	133	152	132	n.a.

Sources: Bank of England, Halifax, House Builders' Federation, Inland Revenue and Nationwide.

- (a) Quarterly data are averages of the three monthly observations.
- (b) Percentage balance of respondents reporting more site visitors than during the same month of the previous year. Seasonally adjusted by the Bank of England.
- (c) Percentage balance of respondents reporting more net reservations than during the same month of the previous year. Seasonally adjusted by the Bank of England.
- (d) Number of loans approved for house purchase (thousands).
- (e) Per cent.
- (f) The number of transactions in England and Wales registered with HM Land Registry (thousands).

yield reaching a high of 4.8% and a low of 4.4%. Chart 1.5 shows how UK equity prices have moved closely in line with gilt yields since May, with both tending to fall. This pattern is consistent with an increase in equity risk resulting from greater uncertainty about equity returns. If investors started to demand less risky assets, such as gilts, that would lead to a rise in their price and a fall in their yield. News about growth prospects might also produce the kind of relationship apparent in Chart 1.5, with a weaker economic outlook leading to expectations that dividend payments would be lower and monetary policy looser.

**Exchange rates**

With the exception of the Japanese yen, effective exchange rate indices for most major currencies have been broadly stable since the August Report (see Chart 1.6). This is also consistent with the view that the major events driving financial markets have been international in nature. The amount of uncertainty surrounding the position in twelve months' time of the sterling/US dollar, and particularly the sterling/euro bilateral exchange rates, as measured by implied volatilities, has declined since the beginning of the year (see Chart 1.7).

**Property prices**

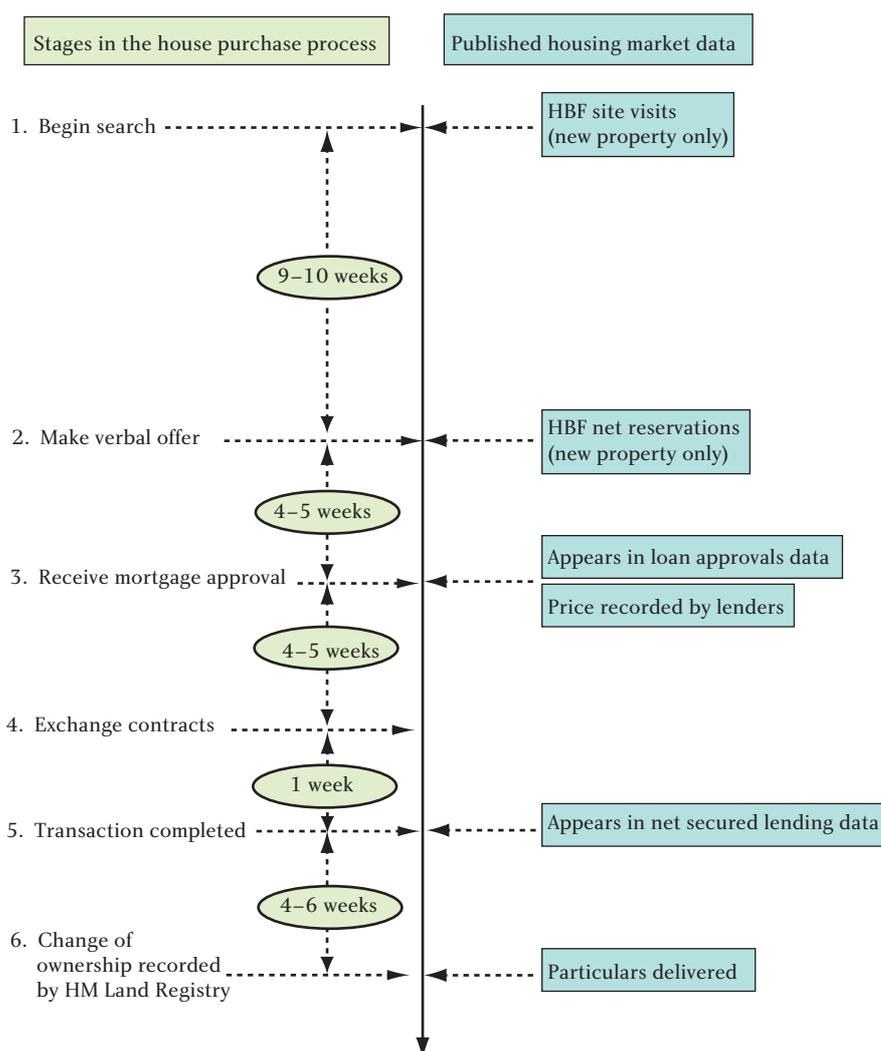
When preparing the projections published in the August Inflation Report, the Committee judged that house price inflation would slow markedly over the next two years, to reach a level a little below the growth rate of nominal earnings. Are there any signs that a slowdown in the housing market has begun?

The diagram opposite, based on a survey conducted on behalf of the former Department for the Environment, Transport and the Regions (DETR), depicts the approximate timing of events that led up to a typical house purchase in 1998.<sup>(1)</sup> According to the survey, the median time interval between deciding to look for a property and completing the transaction was then around five months. The median time interval between securing a mortgage approval and completing the transaction was five to six weeks.

Table 1.A lists some measures of housing market activity. Some of the early indicators in the chain began to slow down in the third quarter. In particular, the balance of respondents to the House Builders Federation survey reporting more net reservations was lower in July and August than during the first half of the year. Although there was some rebound in the September figure, it remained below the averages for Q1 and Q2. There was a small reduction in the number of loan approvals in Q3.

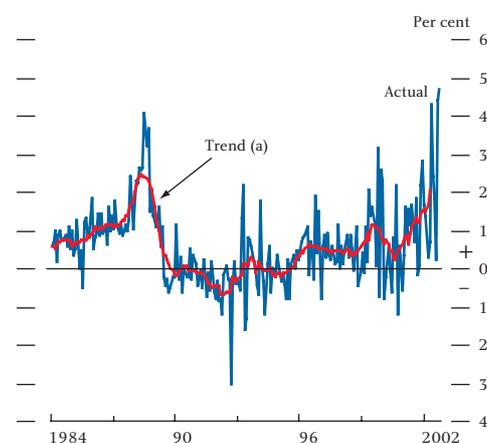
(1) See DETR Housing Research Report, No. 91.

## The house purchase timeline



Sources: Bank of England and DETR.

**Chart 1.8**  
**Monthly changes in the Halifax house price index**



Source: Halifax.

(a) Trend is a 15-month centred moving average.

Because lenders record house prices at the mortgage approval stage, one might expect to see an approximately contemporaneous relationship between housing market activity, as measured by the number of approvals, and the rate of change of house prices. But monthly house price inflation can be quite erratic. It declined, on the Halifax measure, from 1.8% in July to 0.2% in August, only to rise again to 4.4% in September, and 4.7% in October—the strongest one-month increase since the data were first collected in 1983 (see Chart 1.8). Consequently, economic commentators tend to focus on annual measures. Chart 1.9 shows that mortgage approvals have tended to lead annual house price inflation.

Putting together data from both the Halifax and the Nationwide, house price inflation in the year to October appears to have been somewhere in the range 25%–30%. That was considerably stronger than expected by the Committee at

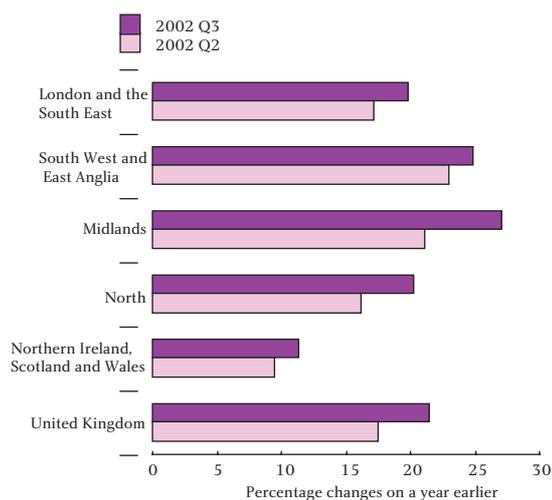
**Chart 1.9**  
Housing market activity and house price inflation



Sources: Bank of England and Halifax.

(a) Halifax measure.

**Chart 1.10**  
Regional house price inflation<sup>(a)</sup>



Sources: Halifax and Nationwide.

(a) Unweighted average of data from the Halifax and the Nationwide.

**Table 1.B**  
Growth rates of the monetary aggregates

Percentage changes on a year earlier

	2001	2002		
	Q4	Q1	Q2	Q3
Notes and coin	8.5	7.5	9.6	8.2
M0	8.1	7.2	9.5	8.2
M4	6.5	5.7	6.1	5.4
M4 lending (a)	8.9	8.0	8.4	9.6

Source: Bank of England.

(a) Excluding the effects of securitisations.

the time of the *August Report*, and is clearly unsustainable. By region, house price inflation in London and the South East has recently been a little below the national average. In the year to Q3 the most rapid house price increases occurred in the Midlands, followed by the South West and East Anglia (see Chart 1.10). In light of the tentative signs of an easing in housing market activity, the Committee continues to anticipate that house price inflation will soon begin to slow.

According to the Investment Property Databank, the capital value of commercial property rose by just 2.0% in the year to September. Commercial property prices have risen much more slowly than residential property prices for the past two years, reflecting the relative weakness of the corporate sector.

## 1.2 Money and credit<sup>(1)</sup>

### Monetary aggregates

The rates of growth of seasonally adjusted notes and coin and M0 have been quite volatile in recent months, largely reflecting unusual patterns of economic activity associated with the timing of Easter and the Jubilee celebrations (see Section 2). In the year to 2002 Q2, the stock of M0 rose by 9.5% (see Table 1.B). At the same time, nominal household expenditure increased by just 4.7%. The box on page 9 of this *Report* suggests that M0 could continue to grow more quickly than consumption for some time to come.

Aggregate M4, the sum of notes and coin and sterling deposits with UK banks and building societies held by households, private non-financial corporations (PNFCs) and other financial corporations (OFCs), rose by 5.4% in the year to 2002 Q3 (see Table 1.B). Its major counterpart, M4 lending (excluding the effects of securitisations), which measures sterling lending by UK banks and building societies to those same three sectors, rose by 9.6% during the same period. The growth rates of these two aggregates have been declining for the past two years or so. However, much of the decline can be accounted for by the OFCs sector. Changes in OFCs' money and credit are thought to have fewer direct implications for nominal demand than those of households and non-financial corporations. Excluding the OFCs component, growth in M4 and M4 lending has been steadier in the recent past (see Chart 1.11).

(1) An account of the way in which money and credit data are analysed at the Bank of England is contained in Hauser, A and Brigden, A (2002), 'Money and credit in an inflation-targeting regime', *Bank of England Quarterly Bulletin*, Autumn, pages 299–307.

## Developments in the velocity of narrow money

During the past two years, the annual rate of growth of M0 has averaged 8.0%. By contrast, the annual rate of growth of nominal consumption has averaged just 5.0%. Should policy-makers be concerned by this rapid growth in the quantity of narrow money? Does it signal that inflation will soon pick up, or perhaps that consumption is being underrecorded? Not necessarily—the relationship between economic activity and M0 is complicated by changes in interest rates and the associated process of financial innovation.

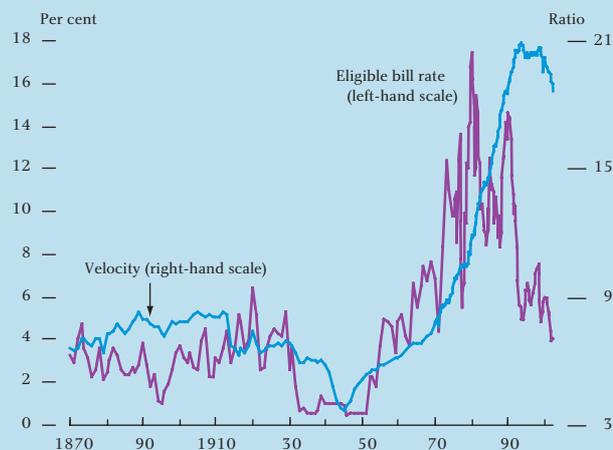
Chart A compares the velocity of circulation of narrow money, defined here as the ratio of nominal consumption per annum to M0, with a nominal interest rate. The nominal interest rate is a measure of the opportunity cost of holding cash. It measures the cost of the interest foregone (represented here by the return on eligible bills) when an individual chooses to hold cash in preference to other forms of wealth. When the opportunity cost of holding cash is high, then other things equal, narrow money holdings should be low relative to consumption—in other words velocity should be high.

For most of the period since 1870 the two series have moved together. During the early part of the 1970s, the nominal interest rate began to rise sharply, reaching a peak of 17.4% in 1980 Q1. This unprecedented increase in the opportunity cost of holding narrow money may have contributed to the development of cash-saving innovations, such as the introduction of Automated Teller Machines (ATMs), encouraged payment of salaries by cheque, or by direct money transfer, and promoted the introduction of credit and debit cards. These innovations were associated with a significant upward shift in velocity.

But since the early 1990s, interest rates have fallen precipitously. Chart A suggests the puzzle is not the current strength of M0 growth, but rather its weakness. Why has M0 not grown more quickly to bring velocity back into line with the low levels seen before the high inflation/high nominal interest rate era of the 1970s and 1980s? Part of the explanation is perhaps that people have grown accustomed to holding less cash, and that the technology enabling them to do this, while expensive to set up, is relatively cheap to maintain.

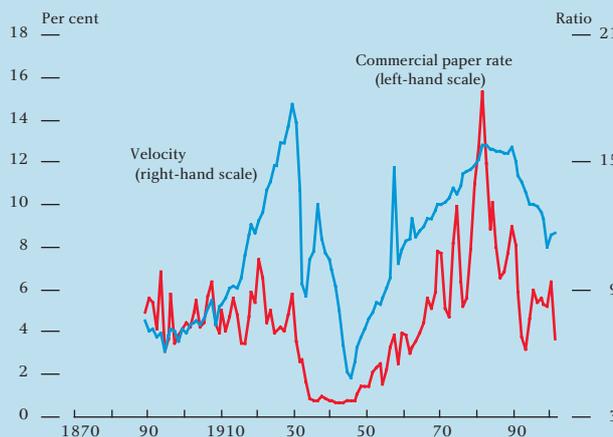
It can be instructive to look at narrow money velocity trends in other countries. Nominal interest rates also rose sharply during the early part of the 1970s in the United States and Canada, but these countries did not experience, to the same degree, a second period of high nominal interest rates at the end of the 1980s. In the United States, narrow money velocity has now returned to pre-1970s' levels (see Chart B). However, this series may have been distorted by the increasing use of dollar bills outside the United States. In Canada, narrow money velocity began to decline around ten years after the peak in nominal interest rates. Although it has not yet returned to pre-1970s' levels, it has fallen further than in the United Kingdom (see Chart C). Given the current low rates of interest, and the experience of other low nominal interest rate economies, it seems plausible that M0 could continue to grow in excess of nominal consumption for some time to come, without necessarily jeopardising the inflation target.

**Chart A**  
Narrow money velocity and the short-term interest rate in the United Kingdom<sup>(a)</sup>

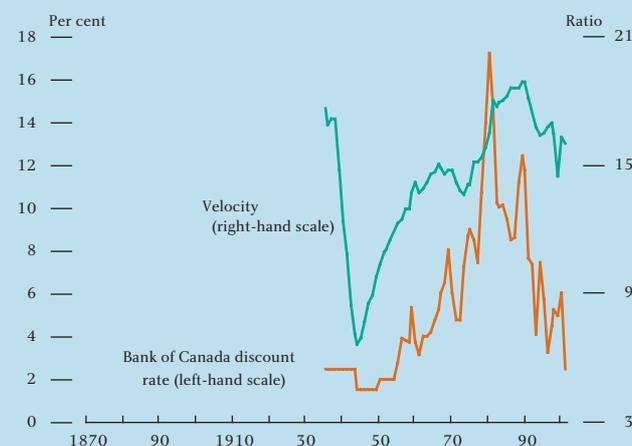


(a) Velocity series is based on annual data before 1970 and quarterly data thereafter. Interest rate data are annual before 1975 and quarterly thereafter.

**Chart B**  
Narrow money velocity and the short-term interest rate in the United States

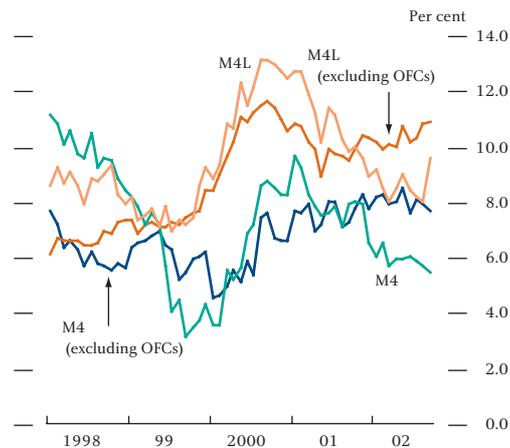


**Chart C**  
Narrow money velocity and the short-term interest rate in Canada



Sources: Mitchell, B R (1988), *British Historical Statistics*, Cambridge University Press; Mitchell, B R (1985), *International Historical Statistics: The Americas and Australasia*, MacMillan; Homer, S and Sylla, R (1991), *A History of Interest Rates*, Rutgers University Press; The Economist (1989), *One Hundred Years of Economic Statistics*, The Economist Publications; IMF; NBER; and ONS.

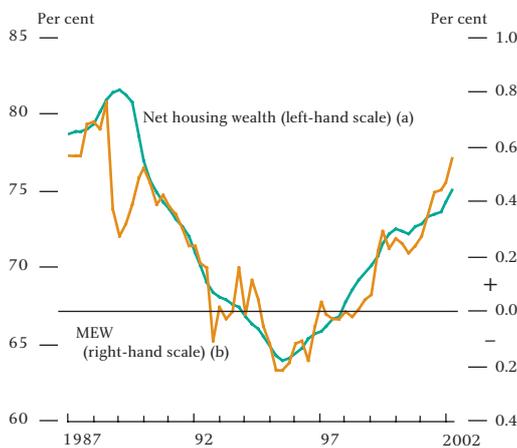
**Chart 1.11**  
Annual growth in M4 and M4 lending<sup>(a)</sup>  
including and excluding OFCs



Source: Bank of England.

(a) Excluding the effects of securitisations.

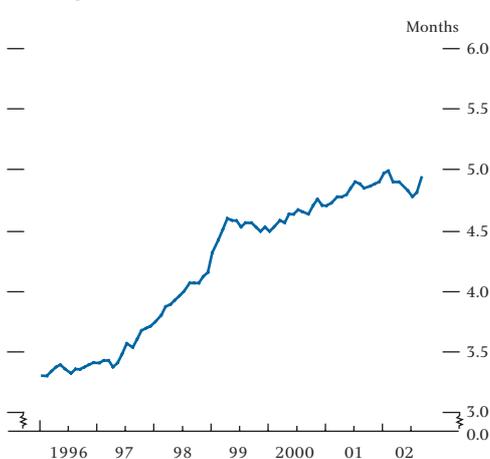
**Chart 1.12**  
Net housing wealth and MEW



Sources: Bank of England and ONS.

(a) Gross housing wealth minus total secured lending to individuals as a percentage of gross housing wealth.  
(b) Mortgage equity withdrawal as a percentage of net housing wealth.

**Chart 1.13**  
Average duration of credit card balances<sup>(a)</sup>



Source: Bank of England.

(a) Average duration is calculated as the outstanding stock of credit card debt divided by the monthly flow of repayments. The series is presented as a three-month moving average.

## Households

Households' M4 deposit growth has remained firm. Annual growth in Q3, at 8.1%, was close to rates seen for the past year or so. Growth in lending to individuals continued to strengthen. Total lending to individuals, which measures lending by a broader set of institutions than just banks and building societies, rose by 13.1% in the year to Q3, the fastest rate of growth since 1990. Lending secured on dwellings grew by 12.4% while the remainder, which includes credit card and store card lending, as well as personal loans and overdrafts, grew by 15.8%.

House price rises boost secured lending through two separate channels. First, for a given loan-to-value ratio, first-time buyers will require larger mortgages than before. Second, existing homeowners will see an improvement in their net housing wealth, giving them the scope to undertake further secured borrowing at lower rates than on unsecured debt. Of the £18.6 billion net secured borrowing by individuals in Q2, it is estimated that £10.6 billion, or more than half, was not invested in the housing stock. It is likely that some of this £10.6 billion, known as mortgage equity withdrawal (MEW), was used to purchase financial assets, and some used to repay existing unsecured debt. But a further portion will have been used to fund additional consumption. Chart 1.12 shows how, in recent years, the fraction of net housing wealth that is withdrawn each quarter, has varied closely with the quantity of net housing wealth. A box on pages 12–13 of this *Report* examines the relationship between changes in house prices and consumption in different countries.

Credit cards have become an increasingly popular source of finance. Their share in the flow of total unsecured lending to individuals rose from around 30% in the mid-1990s to around 40% so far this year. It is sometimes argued that the rapid growth in credit card debt reflects their greater acceptance as a means of payment. But this seems to be only part of the story. Since the mid-1990s, the average time taken to repay credit card debt has increased from a little over three months to nearly five months (see Chart 1.13). People have come to rely increasingly on credit cards as a means to borrow money for a period of time, and not just as a convenient alternative to using cash or a cheque. This may be because, over the past few years, the effective interest rate on credit card debt has fallen by more than the equivalent rate on personal loans or overdrafts (see Table 1.C).

The ratio of household sector liabilities to annualised household sector income reached a new record high in 2002 Q2 (see top panel of Chart 1.14). But household sector liabilities are dwarfed by household sector assets. Even when

**Table 1.C**  
**Household loan rates<sup>(a)</sup>**

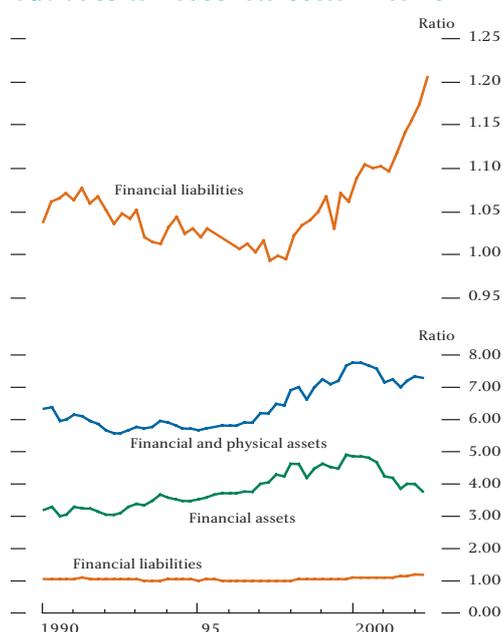
Per cent

	2000 Q1	2001 Q1	2002 Q1	Q2	Q3
<b>Unsecured loan rates (b)</b>					
Credit cards (c)	16.56	15.54	14.36	13.97	13.85
Overdrafts	10.65	10.77	9.83	9.64	9.65
Personal loans	11.62	11.34	9.93	9.75	9.62
<b>Secured loan rates (d)</b>					
Two-year fixed	6.85	5.88	5.43	5.65	5.08
Two-year discounted	5.68	5.72	4.21	4.29	4.26

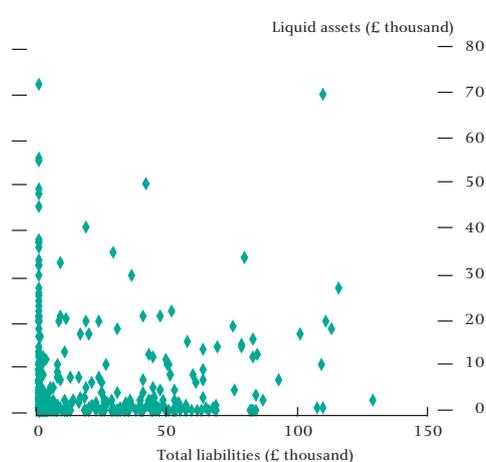
Source: Bank of England.

- (a) Quarterly data are averages of the three monthly observations.  
 (b) Effective interest rates. These are derived from data on interest payment flows and loan stocks supplied by a sample of banks and building societies.  
 (c) Effective interest rate on interest-bearing balances only.  
 (d) Quoted interest rates. These are based on loan rates advertised by a sample of banks and building societies.

**Chart 1.14**  
**Ratios of household sector assets and liabilities to household sector income**



**Chart 1.15**  
**Distribution of total liabilities and liquid assets across individual households<sup>(a)</sup>**



Source: British Household Panel Survey, 2000.

- (a) The full BHPS survey for 2000 contains information on the total liabilities and the liquid assets of more than 5,000 households. Households in the upper percentile of either the liquid assets or the total liabilities distribution were removed. This chart is based on a random 10% sample of the remaining households, with each dot representing one of those households.

housing is excluded, and even after sharp falls in equity prices, household sector financial assets are still worth more than three times as much as household sector liabilities (see bottom panel of Chart 1.14).

Of course, the fact that the household sector has far more assets than liabilities is not necessarily cause for comfort. First, the capital value of the majority of household assets, such as equity and housing, is uncertain. The sums of money owed to banks, building societies and other lenders vary by comparatively little from quarter to quarter. This is evident from the chart. Second, when thinking about the risks to consumption from an excessive build-up of household debt, the distribution and type of assets and liabilities held by individual households matters, as well as the financial balance sheet of the sector as a whole.

The British Household Panel Survey (BHPS), conducted in 2000, records the responses of more than 5,000 households to questions about the nature of their assets and liabilities. The survey showed that people with significant liabilities also tended to own valuable assets. The correlation between the total liabilities and the total assets of individual households was 0.39. This positive correlation is not surprising—people with large mortgages also tend to own expensive houses. But housing and similarly illiquid assets may be difficult to realise at short notice. In evaluating the potential vulnerability of households, it may make better sense to compare total liabilities with liquid assets.

Chart 1.15 shows the distribution of total liabilities and liquid assets across a randomly chosen 10% sample of the BHPS for the year 2000.<sup>(1)</sup> A large number of respondents were positioned on at least one of the axes: 40% had no liabilities and 33% no liquid assets. The correlation between the liabilities and the liquid assets of individual households was just 0.01. In the event that house prices were to fall, or unemployment were to rise, then the observed distribution of total liabilities and liquid assets across households might indicate that the financial position of the household sector would be less resilient than suggested by the aggregate balance sheet data.

### Private non-financial corporations

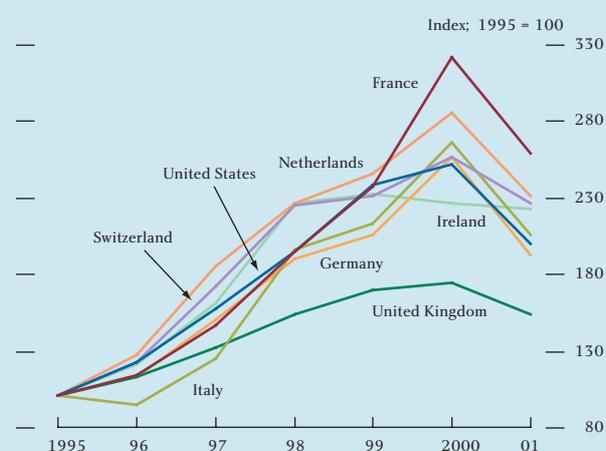
The rate of growth of PNFCs' M4 deposits picked up from 4.4% in the year to Q2 to 6.1% in the year to Q3. The rate of growth of PNFCs' M4 borrowing (excluding the effects of securitisations) was 3.8% in the year to Q3, compared with

(1) The wording of the question about liquid assets was 'Thinking first about your savings accounts, TESSA or ISA, about how much do you currently have in total in these accounts?'

## International housing-market developments

Movements in equity markets and housing markets reflect underlying shocks to the economy, and are themselves important influences on economic activity and thus inflation. The sharp gains and subsequent falls in real equity prices<sup>(1)</sup> over the past few years have been highly synchronised across most industrialised countries (see Chart A). In contrast, movements in real house prices have been less uniform across countries (see Chart B), so they may have supported activity in some countries and weakened it in others.

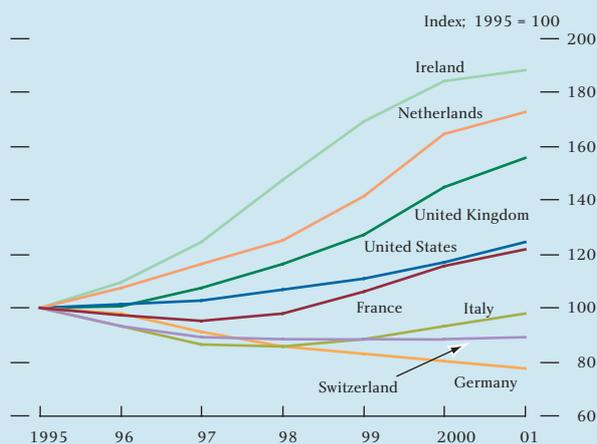
**Chart A**  
Real equity prices<sup>(a)(b)</sup>



Sources: BIS (using national data), Thomson Financial Datastream.

- (a) Deflated by the consumers' expenditure deflator.
- (b) Datastream price indices covering around 80% of total equity market capitalisation. Annual average of daily data.

**Chart B**  
Real house prices<sup>(a)</sup>



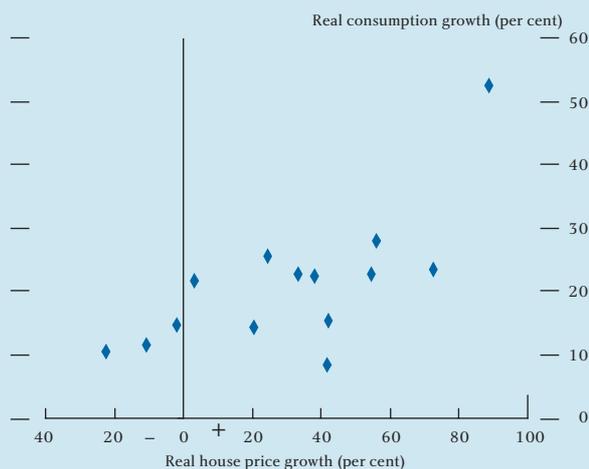
Sources: BIS (using national data).

- (a) Deflated by the consumers' expenditure deflator.

Looking across countries, changes in house prices are typically associated with changes in household consumption (see Chart C). Consumer confidence and income expectations will determine households'

desired consumption of both housing and other goods and services. To the extent that the supply of housing is not perfectly elastic in the short run, higher housing demand will be translated into higher prices. So consumption and house prices can be correlated because they share a common cause.

**Chart C**  
Average annual growth in consumption and real house prices, 1995–2001



Sources: BIS (using national data), Thomson Financial Datastream, ONS.

A rise in house prices may also stimulate an increase in consumption. Owner-occupiers both own and consume the housing services provided by their dwellings, so a change in the price of a claim to this flow (ie a change in house prices) will not have the same effect as a change in the value of other wealth, such as shares. But an increase in house prices may facilitate cheaper borrowing, as housing wealth may be offered as collateral for loans. This will make it easier for households to bring forward consumption of future income, and also to smooth consumption against temporary shocks to income flows. So higher house prices may encourage higher consumption in the short run as well.

The strength of this 'collateral effect' will depend on how easy it is to extract housing equity for consumption (mortgage equity withdrawal). This has changed over time, varies widely across countries, and depends on the institutional and regulatory characteristics of mortgage finance institutions. In countries such as the United Kingdom where it is relatively cheap and easy to extract housing equity, rising house prices may be providing support for consumption, and thus mitigating the negative effects of the recent stock market falls.

(1) Deflated by the consumers' expenditure deflator.

The response of housing construction to changes in house prices will be a key determinant of long-term price trends. In some areas, an increase in the demand for housing, due to an increase in incomes, population or credit availability, will lead to the construction of new houses. In other areas, where either land availability or planning constraints inhibit increased supply, the price of houses must rise to bring demand back in line with the fixed supply. Evidence from the United States<sup>(2)</sup> suggests that the price of housing is close to marginal costs of construction in most areas, with land constituting a small share of total costs. Where land availability or planning restrictions prevent additional supply of similar dwellings, house prices are far above physical replacement cost.

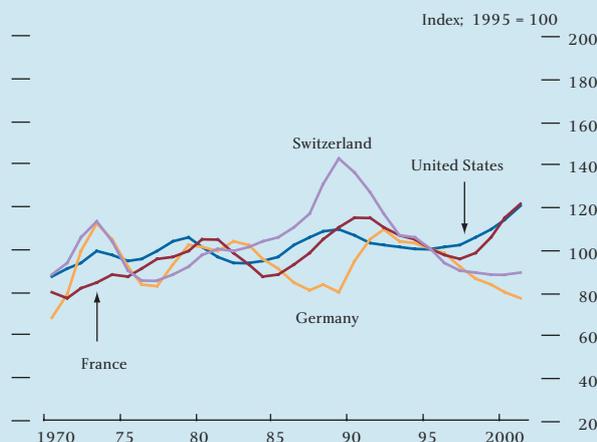
To the extent that the supply of land with planning approval, relative to the demand for it, varies across countries, the long-run response of national average house prices to an increase in housing demand will differ. In countries and regions where land availability and planning regulations facilitate new construction, real house prices will rise in line with construction costs in the long run. Where new construction is in some manner constrained, real house prices may rise faster, as rising real incomes bid up the price of the scarce factor (land with planning permission). Long-term trends in house prices indeed vary widely across countries (see Charts D and E) as well as across regions, although problems of quality adjustment make international comparisons only tentative, and the low frequency of the cycles make it difficult to assess the trend.

**Chart D**  
Real house prices



Source: Bank for International Settlements (using national data).

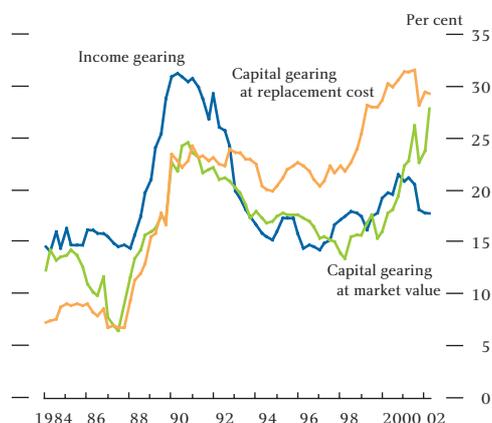
**Chart E**  
Real house prices



Source: Bank for International Settlements (using national data).

(2) Glaeser, E and Gyourko, J (2002), 'The impact of zoning on housing affordability', *NBER Working Paper*, No. 8835.

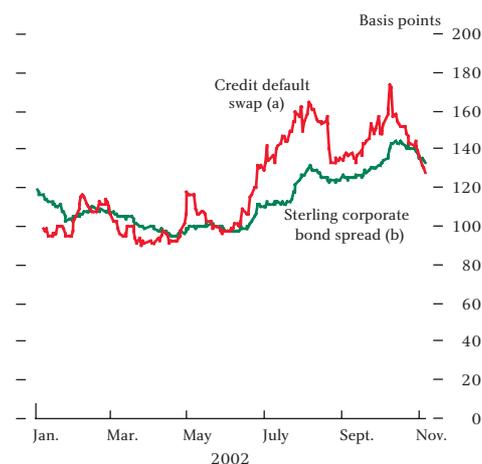
**Chart 1.16**  
PNFCs' gearing ratios



3.5% in the year to Q2. But the total amount of external finance raised by PNFCs, which includes capital market issues, and borrowing in foreign currency in addition to borrowing in sterling from UK banks and building societies, was £14.9 billion in Q3. That was the strongest outturn since 2001 Q2. There were increases in sterling bond and sterling equity issuance.

There was a small fall in PNFCs' capital gearing at replacement cost in Q2. Nevertheless, it remains at a historically high level. Capital gearing at market value rose sharply in Q2, reflecting the fall in equity markets (see Chart 1.16). A credit default swap offers insurance against the risk that a company defaults on its debt. The average price of a credit default swap for a sample of 37 UK companies, although broadly at the same level as at the time of the previous *Report*, has remained above levels seen during the first half of the year. Sterling-denominated

**Chart 1.17**  
**Measures of credit risk**



Sources: Bank of England, Credit Trade and Merrill Lynch.

- (a) A credit default swap offers insurance against the risk that a company defaults on its debt. The series shown in the chart is the average price of a credit default swap for a sample of 37 UK companies.
- (b) Option-adjusted spread over UK government bonds for companies rated BBB or higher. Includes sterling-denominated bonds issued by non-UK corporates.

corporate bond spreads over the yield on government debt tell a similar story (see Chart 1.17). Nevertheless, reductions in government bond yields mean that the absolute yield on sterling-denominated corporate bonds has fallen, from an average of 6.53% in May to an average of 5.92% in October. Despite the high burden of debt, the rate of company insolvencies has remained broadly constant for the past five years.

Economic growth in the major overseas economies slowed in the second quarter, in line with the MPC's assessment in the August Report. Net trade made a large positive contribution to UK GDP growth in Q2, compared with a mostly negative contribution during the past six years. Private investment has remained weak, with little sign of an imminent turnaround. Consumer spending was strong in the second quarter and confidence remains high. However, recent UK data have been affected by the timing of Easter and the Jubilee Bank Holidays, which have obscured the underlying trends. The unravelling of these effects is likely to depress consumption growth temporarily in Q3. But relatively robust consumption growth is expected in the following six months.

**Table 2.A**  
GDP growth in the major industrialised countries

Percentage changes on a quarter earlier

	2001		2002		
	Q3	Q4	Q1	Q2	Q3
United States	-0.1	0.7	1.2	0.3	0.8
Euro area	0.2	-0.3	0.4	0.4	n.a.
Japan	-0.7	-0.7	0.0	0.6	n.a.
Major six (a)	-0.1	0.2	0.8	0.4	n.a.

Sources: Bank of England, IMF and Thomson Financial Datastream.

(a) Major six economies are Canada, France, Germany, Italy, Japan and the United States. Growth is weighted using GDP shares, based on 2001 purchasing power parity exchange rates.

**Table 2.B**  
Contributions to euro-area GDP growth

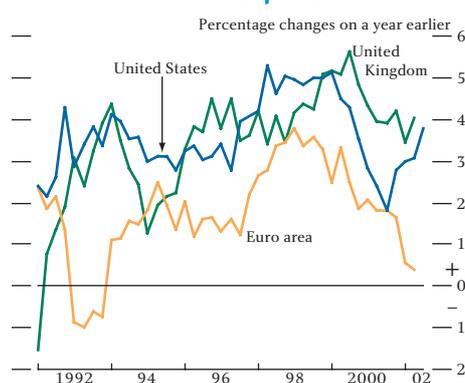
Percentage point contributions to quarterly growth (a)

	Averages		2001		2002	
	2000	2001	Q3	Q4	Q1	Q2
Consumption	0.3	0.2	0.1	0.0	-0.1	0.2
Fixed investment	0.2	-0.1	-0.1	-0.2	-0.1	-0.1
Government	0.1	0.1	0.1	0.1	0.2	0.1
Change in inventories	0.0	-0.2	-0.3	-0.2	0.2	0.1
<b>Domestic demand</b>	<b>0.5</b>	<b>0.0</b>	<b>-0.3</b>	<b>-0.3</b>	<b>0.1</b>	<b>0.2</b>
Net trade	0.1	0.1	0.5	0.0	0.2	0.2
<b>GDP</b>	<b>0.7</b>	<b>0.1</b>	<b>0.2</b>	<b>-0.3</b>	<b>0.4</b>	<b>0.4</b>

Source: Eurostat.

(a) Components may not sum to totals due to rounding.

**Chart 2.1**  
Private sector consumption



Sources: Bureau of Economic Analysis, Eurostat, ONS and Thomson Financial Datastream.

## 2.1 External demand and UK net trade

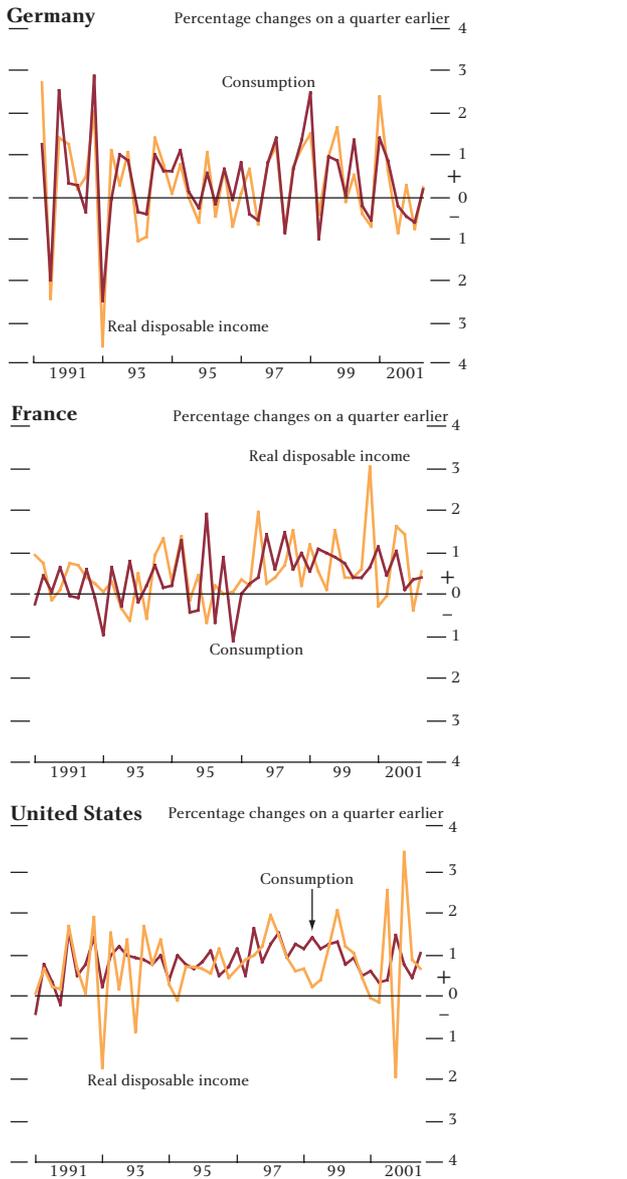
In line with the MPC's assessment in the August Report, growth in the major six economies (Canada, France, Germany, Italy, Japan and the United States) slowed in the second quarter, mainly reflecting weaker US activity (see Table 2.A). US GDP grew by 0.3% in Q2, compared with 1.2% in Q1. The advance estimate for Q3 was 0.8%. Growth in the euro area in Q2 was 0.4%, unchanged from Q1. Japanese GDP rose by 0.6% in Q2, following a revised figure of no growth in Q1.

### Euro area

Growth in the euro area reached a trough in 2001 Q4, but the subsequent pick-up has been modest, reflecting prolonged weakness in consumption and investment (see Table 2.B). The falls in equity prices since 2000 have dampened consumption growth in the major economies. But consumer spending in the euro area has weakened more sharply than in the United Kingdom and the United States (see Chart 2.1). And it seems unlikely that the predominant cause of weak euro-area consumption has been the decline in equity wealth. Households' direct share ownership remains less widespread and the ratio of equity market capitalisation to GDP is lower than in the United Kingdom and the United States.<sup>(1)</sup> So although equity prices fell further in the euro area, they probably had a smaller impact on consumption. Moreover, these equity price falls cannot have been the initial cause of the consumption slowdown, as that started in early 1999, when stock prices were still rising rapidly. By contrast, the start of

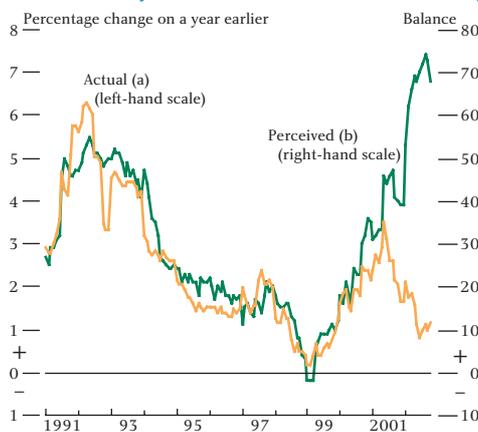
(1) See Norman, B, Sebastia-Barriel, M and Weeken, O (2002), 'Equity wealth and consumption—the experience of Germany, France and Italy in an international context', *Bank of England Quarterly Bulletin*, Spring, pages 78–85.

**Chart 2.2**  
Consumption and real household disposable income



Source: Thomson Financial Datastream.

**Chart 2.3**  
Actual and perceived inflation in Germany



Sources: European Commission and Thomson Financial Datastream.

- (a) As measured by the consumer price index (all items).
- (b) Balance of consumers responding that prices had risen over the past twelve months relative to those reporting falls.

the US and UK consumption slowdown coincided more closely with the peaks in their respective equity markets.

Which other factors could account for the weakness of consumption in the euro area? In answering this question it may help to focus on recent developments in Germany. Although consumption growth has slowed in the main euro-area economies, it has been particularly weak in Germany, where the level of consumer spending actually contracted between 2001 Q3 and 2002 Q1.

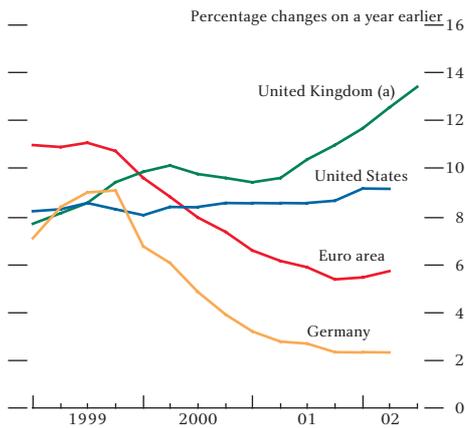
Households are typically assumed to consider consumption and saving decisions in the light of expectations of income over the longer term (or 'permanent' income), rather than simply their income in the current period, which may be prone to short-term fluctuations. Nevertheless, consumption might still move in line with current income if this was thought to contain news about future income, or if households were unable to borrow or liquidate assets to fund consumption when income was temporarily low.

German consumer spending appears to follow real household disposable income more closely than in other countries (see Chart 2.2). So the weakness in German household income (which has, on average, grown in real terms by less than half that in France and the United States since 1999) has probably been a key factor behind the consumption downturn there.

Energy and food price increases, as well as the depreciation of the euro against other major currencies, may have depressed German real incomes in 2000 and 2001. In 2002, the continued rise in unemployment may have further weakened them. And perceptions of price increases resulting from the changeover to euro notes and coins in January may have encouraged households to believe that their real incomes had fallen by more than they actually have (see Chart 2.3), possibly also putting some downward pressure on their spending.

Not all consumption in Germany has been financed out of current income. When bank lending to households grew quickly in Germany during 1999, consumption growth peaked and exceeded income growth. But households' bank borrowing has slowed in Germany since end-1999 (and also, although less so, in the whole euro area), whereas it remained robust in the United States and rose vigorously in the United Kingdom (see Chart 2.4). Some of the slowdown in German households' bank borrowing may have reflected a downward adjustment of their long-term income prospects. Falling house prices may also have been a cause of the weak borrowing. House prices in Germany have fallen in real and nominal terms over the past decade, in contrast to the rises in the

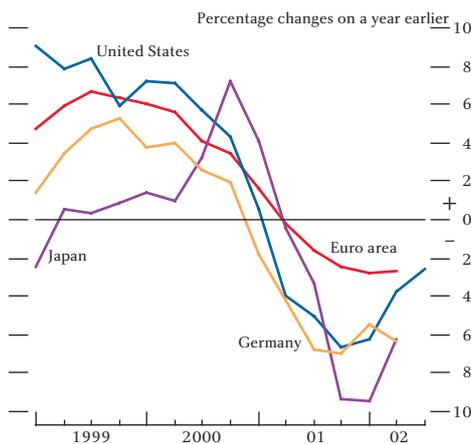
**Chart 2.4**  
**Households' bank borrowing**



Sources: Bank of England, Deutsche Bundesbank, ECB and Board of Governors of Federal Reserve System.

(a) Excluding the effects of securitisations.

**Chart 2.5**  
**Investment**



Source: Thomson Financial Datastream.

**Table 2.C**  
**Contributions to US GDP growth**

Percentage point contributions to quarterly growth (a)

	Averages		2001		2002		
	2000	2001	Q3	Q4	Q1	Q2	Q3
Consumption	0.6	0.5	0.2	1.0	0.6	0.3	0.7
Fixed investment	0.2	-0.3	-0.2	-0.4	0.0	0.0	0.0
Government	0.1	0.2	-0.1	0.5	0.3	0.1	0.1
Change in inventories	-0.1	-0.4	0.0	-0.5	0.6	0.3	0.0
<b>Domestic demand</b>	<b>0.8</b>	<b>0.0</b>	<b>0.0</b>	<b>0.7</b>	<b>1.4</b>	<b>0.7</b>	<b>0.8</b>
Net trade	-0.2	0.0	-0.1	-0.1	-0.2	-0.4	0.0
<b>GDP</b>	<b>0.6</b>	<b>0.0</b>	<b>-0.1</b>	<b>0.7</b>	<b>1.2</b>	<b>0.3</b>	<b>0.8</b>

Source: Bureau of Economic Analysis.

(a) Components may not sum to totals due to rounding.

United Kingdom, the United States and France (see the box on pages 12–13, which examines house price trends in a number of countries and their relationship with consumption). To some extent, the decline in German house prices may have been related to excess supply, resulting from subsidies for construction investment in the early 1990s. Borrowing secured against the value of their home enables households to raise finance more cheaply than at unsecured rates. So part of the fall in credit and hence consumption growth in Germany may be explained by weakness in the housing market reducing the value of households' collateral.

Euro-area retail sales increased by 0.4% in the three months to August compared with the previous three months, suggesting somewhat faster consumption growth in Q3. But, looking further ahead, consumer confidence data for October suggested that consumers have become more pessimistic about the outlook for the economy as a whole and their own financial situation during the next twelve months.

Investment in the euro area continued to fall in Q2 and was 2.7% lower than a year earlier. This was mainly accounted for by a 6.4% annual fall in German investment (see Chart 2.5). German investment has been falling since 2000 Q4, largely as a result of a decline in construction investment (which represents around 50% of the total) following the post-reunification boom. But reconstruction work following the floods in August may provide some temporary stimulus to investment in the near future.

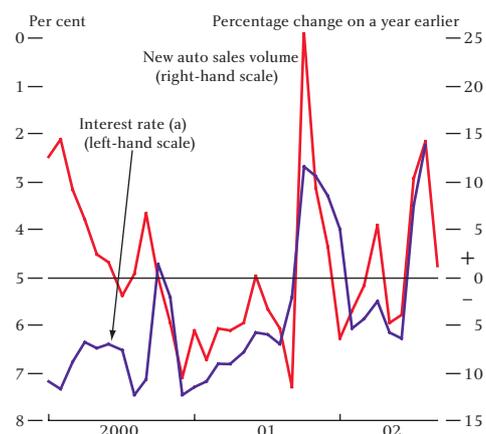
Partly reflecting flood-related disruptions, the recovery in euro-area industrial production remained weak in Q3. Although production was higher than its November 2001 trough, it was still down on levels of a year ago. Industrial activity in the euro area, as measured by the Reuters manufacturing purchasing managers' index (a weighted average of the survey balances for new orders, output, employment, suppliers' delivery times and the stock of items purchased), rose to 49.1 in October, still below the 50 'no change' level.

The Committee continues to expect a small pick-up in euro-area GDP growth early next year. But the recovery is likely to be slightly more subdued than was expected at the time of the *August Report*.

### United States

US GDP increased by 0.3% in Q2, compared with unusually fast growth of 1.2% in Q1, which was partly due to a large contribution from inventories (see Table 2.C). The Q2 slowdown reflected lower contributions from all components.

**Chart 2.6**  
**US new auto sales and interest rate on new loans at auto finance companies**



Source: Thomson Financial Datastream.

(a) Inverse scale.

The advance estimate showed that growth picked up to 0.8% in the third quarter, reflecting a rise in consumption growth. The latter was largely accounted for by strong new auto sales in July and August. The widespread availability of zero-per cent finance deals on new auto purchases reduced the average interest rate on auto loans (see Chart 2.6) and may, in part, have brought forward future spending on autos. But data for September suggest a fall-back in new auto sales as incentives have been withdrawn. The strength of the US housing market has helped to underpin consumer spending by encouraging increased mortgage refinancing. But refinancing has begun to fall back recently. And consumers appear to have become more gloomy about the future. Consumer confidence fell sharply on both the University of Michigan and Conference Board measures in October.

The preliminary estimate suggested that US fixed investment rose by 0.1% in Q3, following seven consecutive quarters of decline. But spare capacity, high corporate debt levels, weakening credit flows, credit-rating downgrades, wider credit spreads and lower equity prices suggest that recovery will be sluggish.

US industrial production fell in August and September, following seven months of growth. But the longer-term profile continued to show a gradual recovery. In its central projection, the Committee expects US GDP growth to ease back in the fourth quarter, with a slowdown in consumer spending. Thereafter, growth should strengthen gradually, underpinned by continued improvements in productivity and the low level of interest rates.

**Table 2.D**  
**Shares in value of international trade of goods and services**

Per cent	World trade (2000)	UK exports (2001)	UK imports (2001)
Euro area	28.3	49.6	48.7
Japan	6.0	2.5	3.7
Non-Japan Asia (a)	17.3	6.4	10.2
United Kingdom	5.4	-	-
United States	18.7	17.4	14.4
Other	24.3	24.1	23.1

Sources: IMF, ONS and Bank of England.

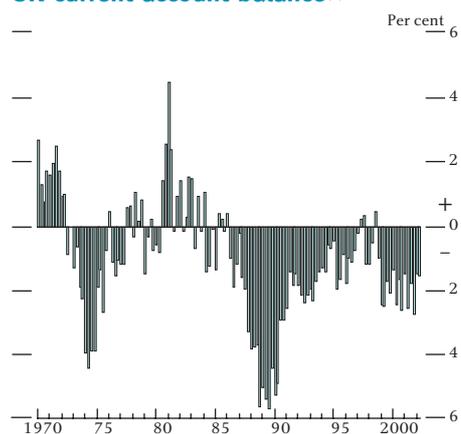
(a) Defined here as China, Hong Kong, India, Indonesia, Malaysia, Philippines, Singapore, South Korea, Taiwan and Thailand.

## Asia

Japanese GDP grew by 0.6% in Q2. GDP growth in Q1 was revised to 0.0%, from 1.4% in the original release, reflecting the adoption by the Japanese authorities in August of a new method for calculating GDP. The recovery in Japan in 2002 Q2 was largely driven by a strong contribution from net trade, and in particular a sharp rise in exports to other Asian economies. Investment was the only component to make a negative contribution to GDP growth. In recent months, industrial production growth has picked up significantly, though output fell in September. But despite these signs of recovery, there is little change to the Committee's view that the prospects for Japan remain weak in the near term.

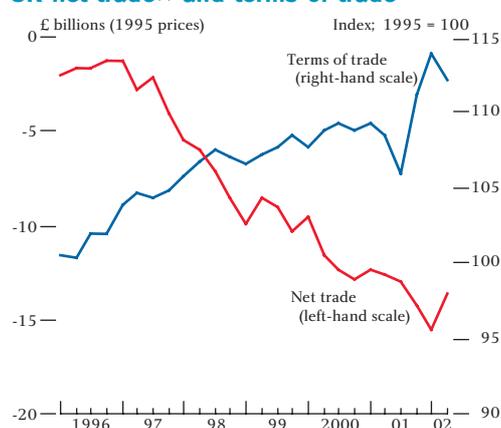
GDP in other Asian countries continued to grow rapidly in the second quarter, reflecting the strength of domestic demand. Although the region continues to be highly dependent on demand in the major industrialised economies, and therefore

**Chart 2.7**  
**UK current account balance<sup>(a)</sup>**



(a) As a percentage of GDP.

**Chart 2.8**  
**UK net trade<sup>(a)</sup> and terms of trade**



(a) Exports minus imports at 1995 prices.

**Table 2.E**  
**UK export outlook<sup>(a)</sup>**

	Series average (b)	2001		2002		
		Q4	Q1	Q2	Q3	Q4 (c)
BCC export orders						
Manufacturing	6.9	-20	1	5	2	n.a.
Services	10.4	-8	-1	8	0	n.a.
CIPS export orders (d)						
Manufacturing	49.5	45.6	49.4	53.4	50.3	49.8
CBI Industrial Trends						
Export orders	-9.0	-36	-18	-14	-19	n.a.
EEF						
Export orders	-3.6	-31	-24	-6	-8	n.a.

Sources: BCC, CIPS, CBI and EEF.

(a) Unless otherwise stated, numbers reported are percentage balances of respondents reporting 'higher' relative to 'lower'. Responses are attributed to the quarter that is most closely associated with the reference period of each survey. For example, the October CBI *Quarterly Industrial Trends* survey is shown as Q3 because respondents are asked about orders in the four months to October.

(b) BCC since 1989; CIPS since 1996; CBI since 1972; EEF since 1994.

(c) CIPS figure is October only.

(d) Average of seasonally adjusted monthly indices. A reading above 50 suggests expansion; below 50 suggests contraction.

remains vulnerable to any slowing in world growth, rising domestic demand may insulate some of these economies more from external shocks than has been the case historically. The region accounts for around 6% of UK exports, and for around 17% of international trade (see Table 2.D). So the strength of demand in the region may stimulate world activity and UK growth.

## Net trade

Economic activity overseas affects UK growth via its contribution to net trade. In Q2, UK export volumes rose at a faster rate than import volumes, although both may have been affected by the Jubilee Bank Holidays. The net trade contribution to GDP growth rose to 0.9 percentage points, compared with a negative contribution of 0.6 percentage points in Q1. But the Q2 fall in the terms of trade (the ratio of export to import prices) led to a slight increase in the current account deficit to 1.6% of GDP. The current account has been in deficit for most of the period since 1986 (see Chart 2.7). Developments in trade volumes and prices in Q2 were unusual relative to trends over recent years. During the past six years, import growth has outstripped that of exports almost continuously, so net trade has detracted from UK growth. But the impact on the current account has been mitigated by a steady improvement in the terms of trade (see Chart 2.8).

In the three months to August, goods export volumes fell by more than goods import volumes, compared with the previous three months, suggesting that net trade will make a negative contribution to Q3 GDP growth. Survey measures of export orders weakened in Q3 (see Table 2.E).

## 2.2 Domestic demand

Growth of real final domestic demand in the United Kingdom slowed to 0.3% in 2002 Q2 (see Table 2.F). Consumer spending grew strongly after a subdued first quarter, but government consumption fell back sharply following a very marked increase in Q1. Quarterly growth of domestic demand in the second quarter was the weakest since 1995, in part because of a significant negative contribution from inventories. However, recent data may not be a good guide to underlying trends because of the impact of the timing of Easter and the two Jubilee Bank Holidays.

## Consumption

Consumer spending rebounded in 2002 Q2, to grow at its fastest quarterly rate since early 2000 (see Chart 2.9), following a muted first quarter which saw the slowest growth since 1997. Nevertheless, the four-quarter growth rate has been consistently above 3% since 1995. However, as discussed

**Table 2.F**  
**Expenditure components of demand<sup>(a)</sup>**

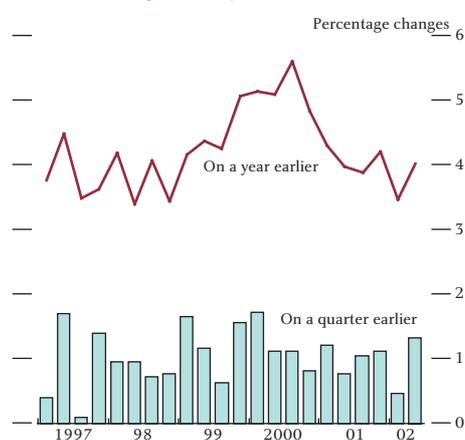
Percentage changes on a quarter earlier

	Average 2000	Average 2001	2001 Q3	Q4	2002 Q1	Q2
Consumption:						
Household	1.2	1.0	1.0	1.1	0.5	1.3
Government	0.3	1.3	2.7	1.8	2.9	-2.7
Investment:	1.1	-1.7	-0.7	-3.3	-1.5	-0.6
of which, business						
investment	1.4	-2.2	-1.0	-4.5	-5.4	-0.2
<b>Final domestic demand</b>	<b>1.0</b>	<b>0.6</b>	<b>1.0</b>	<b>0.5</b>	<b>0.6</b>	<b>0.3</b>
Change in inventories (b)	-0.2	-0.1	-0.5	0.3	0.1	-0.6
Excluding alignment						
adjustment (b)	-0.2	-0.2	-0.1	-0.5	0.7	-0.4
<b>Domestic demand</b>	<b>0.8</b>	<b>0.6</b>	<b>0.5</b>	<b>0.8</b>	<b>0.7</b>	<b>-0.3</b>
Exports	2.1	-1.3	-3.2	-1.6	-0.1	3.5
Imports	2.6	-0.6	-2.3	0.3	1.4	0.6
Net trade (b)	-0.3	-0.2	-0.2	-0.6	-0.6	0.9
<b>GDP at market prices</b>	<b>0.6</b>	<b>0.4</b>	<b>0.3</b>	<b>0.2</b>	<b>0.1</b>	<b>0.6</b>

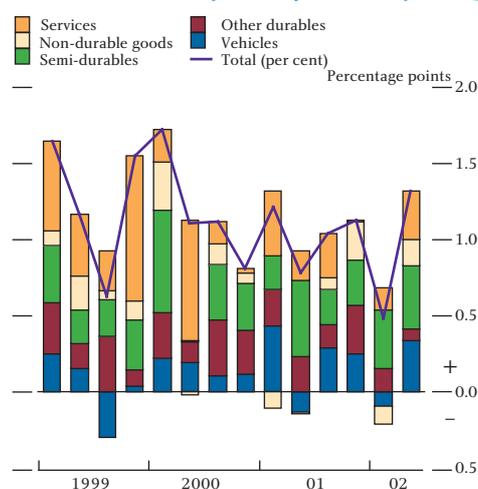
(a) At constant 1995 market prices.

(b) Percentage point contribution to quarterly growth of GDP.

**Chart 2.9**  
**Consumer spending**



**Chart 2.10**  
**Contributions to quarterly consumption growth**



below, the effects of the timing of Easter and the Jubilee Bank Holidays mean that quarterly consumption growth is expected to fall back sharply in Q3. If it does so, the average growth rate over the first three quarters of 2002 might be somewhat lower than for any comparable period over the previous few years, though still above the long-run trend rate.

Recent *Reports* have highlighted the extent to which durable goods, and especially vehicles, have underpinned the strength of consumption. But the latest data contain indications that spending on durables may be weakening.<sup>(1)</sup> The contribution to consumption growth in 2002 Q2 from durable goods other than vehicles was the lowest for nearly five years. A substantial factor in this weak performance was a 9.5% fall in purchases of major household appliances—the weakest quarterly growth in this component for nearly ten years. However, this fall in spending on major household goods sits uneasily with the present strength of the housing market, as the two markets are generally assumed to be complementary. Vehicle purchases rebounded strongly in the second quarter, and accounted for around half of the increase in quarterly consumption growth (see Chart 2.10). But there are signs of a sharp slowing in the third quarter. Private vehicle registrations in Q3 were 2% lower than a year earlier, down from 10.4% growth in the year to Q2.

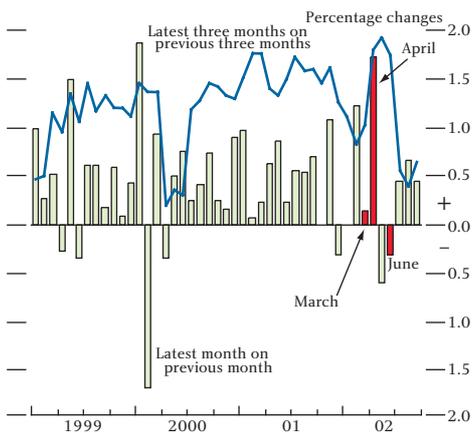
The ONS monthly retail sales index covers around 35% of household consumption—the latter also includes vehicles, energy and consumer services. The most recent retail sales data, up to September, have shown some slowing in growth (see Chart 2.11), with quarterly growth of 0.7% in Q3—the lowest since 2000 Q2.

However, retail sales data and consumer spending this year have been affected by the timing of Easter as well as the two Jubilee Bank Holidays. A box in the *May Report* highlighted how seasonal patterns and other factors can affect economic data. A particular challenge this year was presented by the timing of the Easter holiday period, straddling the first and second quarters rather than the more usual timing of being exclusively in April. Although the ONS attempted to take account of this timing change, it would appear that the seasonal adjustment this year may still have given too much of a boost to sales in April, and perhaps too little in March. On seasonally adjusted data, retail sales this year rose by 0.1% in March and 1.7% in April.

Although the retail sales data were adjusted for the Bank Holiday falling in June rather than May, the ONS did not

(1) The box on pages 24–25 explains how the choice of 1995 as a base year has affected the estimated contribution of durable goods to consumption growth in recent years.

**Chart 2.11**  
Volume of retail sales

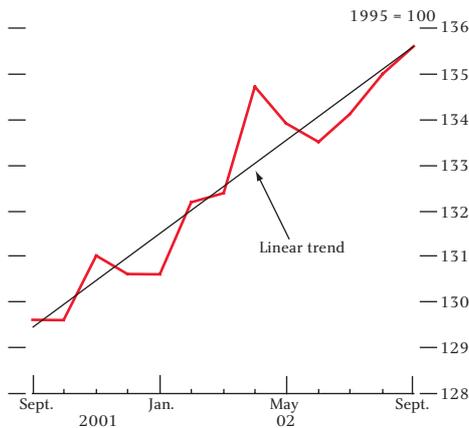


**Table 2.G**  
Possible Easter and Jubilee effects on retail sales<sup>(a)</sup>

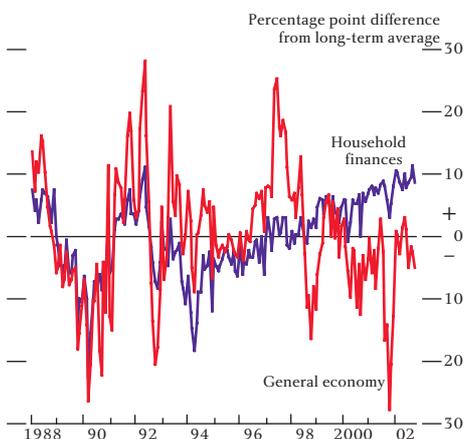
	On levels	On quarterly growth rates	Actual quarter-on-quarter growth (per cent)
Q1	↓	↓	1.0
Q2	↑	↑	1.7
Q3	—	↓	0.7

(a) The arrows in the table are indicative of the direction of any effect, not the size.

**Chart 2.12**  
Retail sales



**Chart 2.13**  
GfK consumer survey: situation over next twelve months



Source: GfK.

adjust the retail sales data for the additional Bank Holiday in June, as this was a one-off event. It seems likely that the level of sales in June was reduced because some shops closed for an extra day. Nevertheless Chart 2.11 suggests that the positive effect in April may have outweighed the negative effect in June, leaving an overall positive impact on the level of sales in the second quarter.

Table 2.G summarises the potential overall direction of these timing effects on the quarterly levels and growth rates of retail sales. In particular, the timing of Easter may have boosted quarter-on-quarter growth in the second quarter because of both lower sales in the first quarter and higher sales in the second. The level of sales in the third quarter should be largely unaffected, but the quarterly growth rate would be reduced because of the exceptionally higher level of sales in Q2.

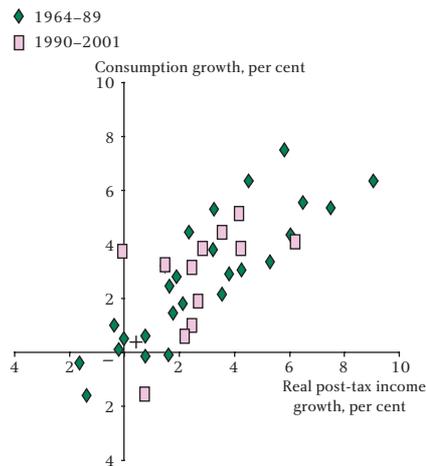
Such timing effects increase the difficulty of judging the underlying trend in retail sales. Although recent three-month growth rates have been low, Chart 2.12 appears consistent with a broadly constant underlying trend in retail sales growth during the past year.

The value of household assets can have an important influence on consumption. Section 1 explains that recent house price inflation has been higher than projected in the *August Report*. That is helping to support strong borrowing and consumption growth through mortgage equity withdrawal. Equity prices fell sharply during late summer, but have since recovered much of that lost ground. As yet, however, there has been little apparent effect of equity market weakness on consumption or consumer confidence. The GfK consumer confidence survey has not picked up any large effect on consumer sentiment from equity prices. Households remain optimistic about their own financial position over the next twelve months (see Chart 2.13), with the September survey recording the highest ever balance and only a small decrease in October. The reading for the general economic situation has been close to its long-term average since the start of the year.

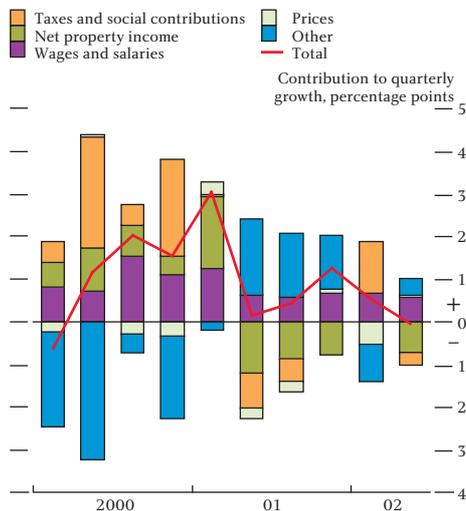
As discussed above, households are likely to look beyond income in the current period when making spending decisions. But Chart 2.14 shows that consumption growth has been correlated with income growth, although the relationship has been less strong since 1990.<sup>(1)</sup> This may be because progressive financial innovation and deregulation have made it easier for households to borrow in order to smooth their consumption.

(1) The correlation coefficient is 0.85 for 1964–89 and 0.50 for 1990–2001.

**Chart 2.14**  
Consumption and income growth 1964–2001

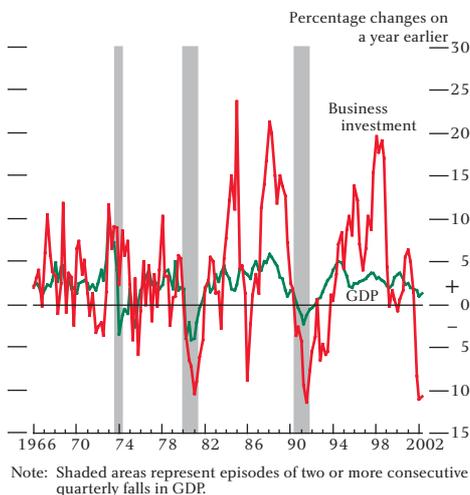


**Chart 2.15**  
Contributions to real household post-tax income growth<sup>(a)</sup>



(a) Deflated by the household consumption deflator. Income is household disposable income before payments to, or receipts from, pension funds.

**Chart 2.16**  
GDP and business investment



Note: Shaded areas represent episodes of two or more consecutive quarterly falls in GDP.

Household real post-tax income growth slowed during the first half of 2002 (see Chart 2.15). This was mainly due to more volatile components, including a significant reduction in net property income in Q2. As such, consumers may have viewed it as a temporary change more than a reduction in their permanent income, particularly given the climate of greater macroeconomic stability since the early 1990s. However, some of the reduction in net property income reflected lower dividend receipts—which consumers could potentially regard as a more persistent change if it were accompanied by reduced expectations of future earnings from equity holdings.

Looking ahead, the Committee expects a sharp, but temporary, slowdown in consumption growth in the third quarter, reflecting a likely fall in spending on vehicles and the timing effects discussed above. But relatively robust growth is expected in the following six months, followed by a moderation through next year to a little below long-run trend rates.

### Public sector spending

For some while, general government spending has been rising strongly, although there have been volatile movements from quarter to quarter. Government consumption rose by 2.9% in 2002 Q1 and then fell by 2.7% in Q2—the largest quarterly increase since 1975 followed by the largest quarterly fall since 1985. Despite the fall in 2002 Q2, the level of government consumption was 4.6% higher than a year earlier.

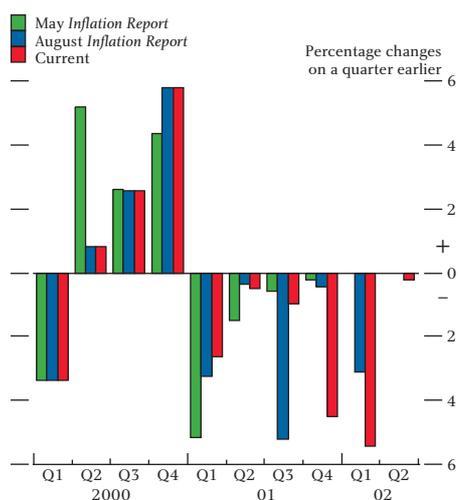
Government investment was even more volatile, but followed the same pattern of a very strong first quarter and a fall-back in the second quarter. Nevertheless, the level in 2002 Q2 was 11.6% higher than a year earlier.

Government spending data for the second quarter may have also been affected by the Jubilee Bank Holidays, for instance reflecting some public services being closed for an extra day in June. So there might be some bounceback in the third quarter. The MPC's projections are based on the Government's nominal spending plans, which imply continued robust growth in government spending over the forecast period.

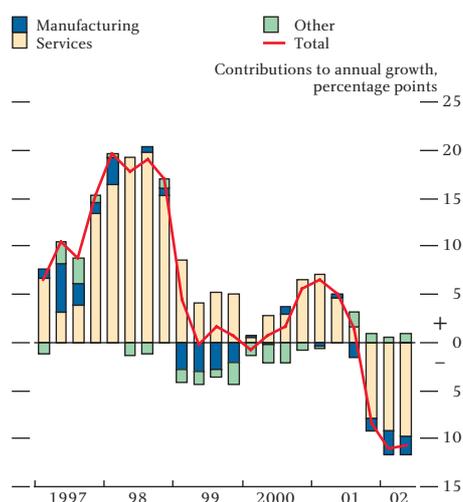
### Investment

Business investment is estimated to have edged down slightly in 2002 Q2, following sharp falls in the preceding two quarters. These were the most severe falls in business investment for nearly ten years, and the Q2 level was almost 11% lower than a year earlier. Moreover, Chart 2.16 shows that such a large year-on-year decrease in business investment is unusual at a time when GDP growth has remained positive. The recent fall in business investment is on a comparable scale

**Chart 2.17**  
**Business investment**



**Chart 2.18**  
**Contributions to business investment growth**



**Table 2.H**  
**Investment intentions<sup>(a)</sup>**

Series	Series average (b)	2001		2002		
		Q5	Q4	Q1	Q2	Q3
<b>CBI Quarterly Industrial Trends (c)</b>						
Plant and machinery	0	-28	-28	-25	-13	-25
Buildings	-17	-29	-29	-30	-18	-27
<b>BCC manufacturing</b>						
Plant and machinery	10	0	-5	-3	7	10
<b>CBI/Grant Thornton service sector survey (d)</b>						
Vehicles, plant and machinery	-7	-21	-29	-15	-9	-26
Land and buildings	-7	-25	-18	-22	-14	-20
Information technology	20	2	-17	4	20	-6
<b>BCC services</b>						
Plant and machinery	15	11	8	15	16	15

Sources: BCC, CBI and Grant Thornton.

- (a) Numbers reported are survey balances, with positive figures denoting more respondents reporting 'higher' than 'lower'.  
 (b) CBI Industrial Trends since 1972, CBI/Grant Thornton since 1998, BCC since 1989.  
 (c) Investment in the next twelve months compared with the previous twelve. Latest survey was published in October but is shown in Q3 as the survey was conducted between 19 September to 9 October.  
 (d) Combined balances covering consumer, business and professional services.

to those seen in the early 1980s' and early 1990s' recessions, when GDP was considerably weaker. The previous episode when business investment dropped sharply while GDP growth remained positive was in the mid-1980s, and was a special case reflecting the effects of phased abolition of tax allowances for investment.

Revisions to the data since the August Report have changed the profile of business investment through 2001. Chart 2.17 compares the quarterly growth rates of business investment in the latest data with those available at the time of the previous two Reports. Although the total fall in investment is similar to that in the August Report, the quarterly profile has changed so that the decline is now estimated to have been concentrated in 2001 Q4 and 2002 Q1. The latest data are much more consistent than the August vintage with investment plans having been put on hold because of increased uncertainty in the aftermath of the September 2001 terrorist attacks.

Investment by the service sector is around 70% of business investment, so it is not surprising that it has accounted for a large proportion of the recent swings in business investment (see Chart 2.18). In 2000, around one third of service sector investment was in ICT assets. Although later data for the composition of service sector investment are not available, it seems plausible that reduced spending on ICT would have played a substantial part in the overall decline in investment, especially given the recent downturn in ICT output and imports. Output of the electrical and optical engineering sector fell by 18.8% in the year to 2002 Q2, while ICT imports fell by 11.2%.

Looking ahead, there is little sign of a turnaround in investment in the near term. High capital gearing may impede future borrowing, and pension fund shortfalls could reduce the internal funds available for investment. Capacity utilisation is currently close to, or possibly below, normal levels (see Section 3). And uncertainty about the global recovery persists. Table 2.H shows that in 2002 Q3 most survey measures of investment intentions fell to levels below the series averages. The Committee expects business investment to dip a little further in the second half of 2002, and then to pick up gradually thereafter.

## Inventories

Inventories (excluding the statistical alignment adjustment) made a negative contribution to growth in four of the past five quarters, largely driven by lower manufacturing stocks. In 2002, the switch from first-quarter stockbuilding to second-quarter destocking reduced Q2 GDP growth by

## Base years and the National Accounts

Real GDP is estimated by weighting together different components of output or expenditure. The choice of weights for those components affects how aggregate measures behave. The weights are currently constructed according to the share in total output or expenditure of each component in a 'base year', most recently 1995.

There has been a five-yearly interval between base years. At the most recent rebasing, in 1998, the data were rebased to 1995 prices, from 1990 prices. Rebasing does not mean that all years of a series are recalculated using weights from the new base year. Instead, a 'link year' is chosen between the old and the new estimates. The link year between 1990 and 1995 prices is 1994. The new weights are only applied to a series from the link year onwards. Before that, data are simply rescaled to the new price basis.

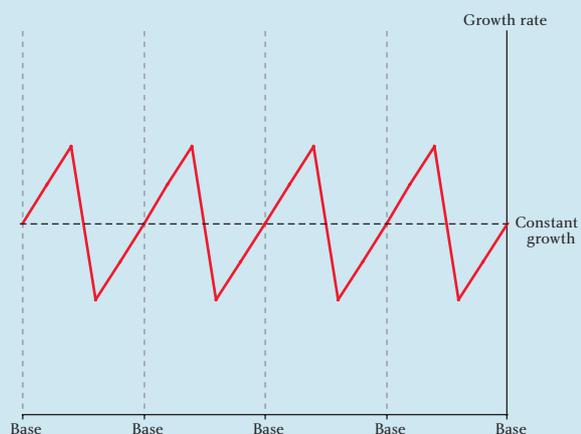
Demand is likely to grow more rapidly for goods and services whose relative prices are falling. Hence rapidly growing sectors tend to be those with falling relative prices. So for years after the base year, estimated real GDP growth would tend to be higher using base year weights, which are larger for the rapidly-growing sectors, than it would be using weights based on shares of current nominal GDP. Conversely, growth might be weaker in the years before the base year but after the link year.

With periodic rebasing of the National Accounts, a highly stylised version of such a pattern is shown in Chart A, on the purely illustrative assumption that the real growth rate abstracting from the effects of using base year weights would be constant.

With five-yearly rebasing, most years will be no more than two or three years away from a base year. However, as is common in the run-up to rebasing, the present year is seven years away from the base year. The potential distortion from base-weighting gets larger, the further away from the base year (see Chart B).

In practice, however, prices and volumes move in ways that can upset the stylised assumptions above. Growth is not constant over time. And there are many instances where the relative price of a component falls but volume growth is low, for example when tastes change and relative demand for a product declines. Indeed, a previous rebasing showed that growth was lower at 1990 prices than at 1985 prices, because of falls in oil prices and production between the two base years. So actual GDP growth does not

**Chart A**  
Stylised impact of changing base years



**Chart B**  
Stylised impact of rebasing



always follow the general pattern shown in Charts A and B.

When GDP was rebased to 1995 prices, a number of other methodological changes were introduced, including moving to the European System of Accounts (ESA95).<sup>(1)</sup> Table 1 summarises the reasons for revisions to GDP growth in the 1998 *Blue Book*. The effect of rebasing was to reduce estimated growth, and in this case by an increasing amount over time.

Within domestic demand, the main changes in relative prices since 1995 have been a strong general government consumption price deflator and a weak investment price deflator (see Table 2). Using 1995 rather than current prices would give a higher estimate of growth in 1998, when investment was rising rapidly, because investment had a higher weight at 1995 prices than it would have at current prices.

(1) The effects of changing the base year and other revisions to the National Accounts were described on pages 14–15 of the November 1998 *Inflation Report*.

**Table 1**  
**Revisions to GDP growth estimates in 1998**

Changes to annual growth rates of GDP (a)

	1992	1993	1994	1995	1996	1997
Rebasing	-	-	-	-0.1	-0.2	-0.4
ESA95	-0.1	-0.1	-0.1	0.1	-0.1	0.1
Non-ESA	0.7	0.4	0.2	0.1	0.6	0.4
<b>Total</b>	<b>0.6</b>	<b>0.2</b>	<b>0.1</b>	<b>0.1</b>	<b>0.4</b>	<b>0.1</b>

Source: *United Kingdom National Accounts 1998*.

(a) Revisions introduced in September 1998 *Blue Book*.

The effect can go the other way too. Government consumption has grown strongly recently, but its relative price has risen since 1995. And investment has fallen in the past six quarters despite a declining relative price. Recent demand growth may therefore be higher at current prices than it is at 1995 prices. This is because using current prices would give greater weight to strong government consumption, and less weight to weak investment, than using 1995 prices.

**Table 2**  
**Demand component price deflators**

1995 = 100

	1995	1996	1997	1998	1999	2000	2001
Consumption	100.0	103.1	105.5	108.3	110.1	110.8	111.3
Government consumption	100.0	102.9	104.5	106.8	111.5	116.6	122.1
Investment	100.0	102.3	102.1	101.8	102.9	104.5	107.0
<b>Domestic demand</b>	<b>100.0</b>	<b>102.9</b>	<b>104.8</b>	<b>106.8</b>	<b>109.0</b>	<b>110.6</b>	<b>112.6</b>

Similar considerations apply to movements within these broad components of demand. For instance, the price of durable consumption goods has fallen relative to that of non-durable goods. And the past few years have seen strong growth in spending on durable goods. So real consumption growth measured using 1995 prices is likely to be higher than

it would be if measured using more up-to-date prices, which would give lower weight to the rapidly growing durables component.

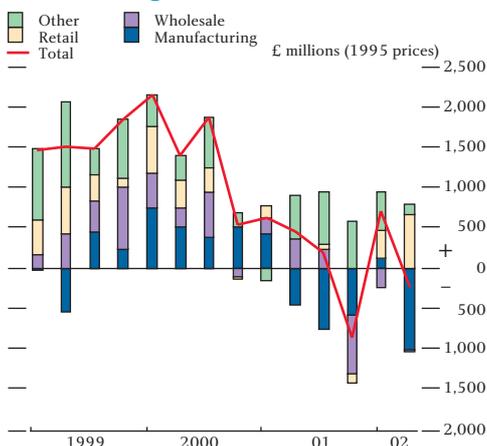
If the effect of using 1995 prices is to increase measured real consumption growth, then it also reduces the rate of increase in the consumption price deflator, which is the difference between observed nominal spending and estimated real spending. The consumption deflator has indeed risen slowly over the past few years, when compared with other indicators of consumer price inflation, such as RPIX which is annually chain-linked.

The MPC's judgment is that the effect of weighting using base year relative prices is purely a measurement issue. It affects estimates of both aggregate demand and potential supply, and therefore has no implications for the assessment of capacity pressures and inflation. But, as noted in the *August Report*, it will need to be taken into account when comparing current forecasts, based on 1995 prices, against subsequent published outturns on a different price basis.

On the usual timetable, data for recent years would be rebased onto 2000 prices in the 2003 *Blue Book*. However, next year the ONS plans to introduce annually chain-linked measures to the UK National Accounts. This will provide a more timely and accurate basis for comparisons and avoid measurement issues from base-year effects in the future. It means that the price base will be updated each year, rather than every five years. The ONS has suggested that the introduction of annual chain-linking may cause estimates of real GDP growth in recent years to be revised slightly downwards.<sup>(2)</sup> This is consistent with the effects of rebasing suggested in the discussion above.

(2) Further details of chain-linking and early estimates of potential effects are given in Tuke, A and Reed, G (2001), 'The effects of annual chain-linking on the output measure of GDP', *Economic Trends*, October, pages 37–53; and also Tuke, A and Ruffles, D (2002), 'The effect of annual chain-linking on components of the expenditure measure of GDP', *Economic Trends*, October, pages 39–43.

**Chart 2.19**  
**Stockbuilding<sup>(a)</sup>**

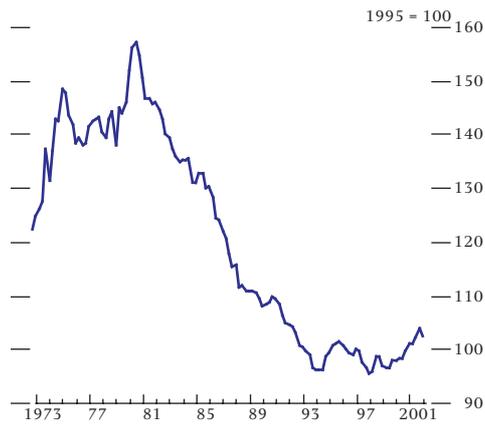


(a) Excluding statistical alignment adjustment.

0.4 percentage points. Chart 2.19 shows that although there was a build-up of retail stocks, manufacturing stocks fell sharply—the largest quarterly fall since 1997. It is likely that there was a Jubilee effect, to the extent that manufacturers' stocks may have been run down to compensate for lost production in June.

Despite the reductions in manufacturers' inventories in recent quarters, the stock-output ratio has continued an increase that began in 1999 (see Chart 2.20). The ratio in 2002 Q1 was the highest for almost ten years. It had been quite steady since the mid-1990s, following a sharp fall from the early 1980s. If the recent rise were unintended, then it might point to further falls in manufacturing stocks in the quarters ahead. But the CBI Monthly Trends survey of manufacturers suggested that

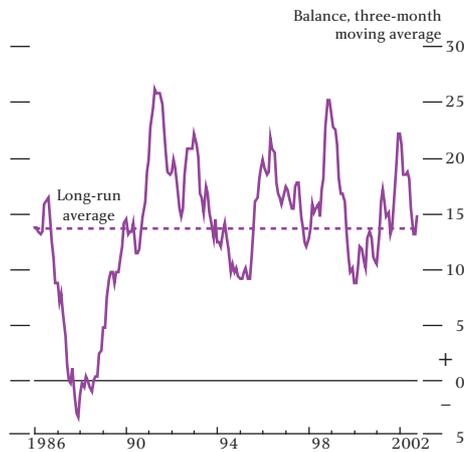
**Chart 2.20**  
**Manufacturing stock-output ratio**



the balance of firms with more than adequate stocks of finished goods was close to its long-run average (see Chart 2.21).

The Committee assumes that the UK stock cycle is close to the end of the destocking phase, which would provide a one-off boost to GDP growth. After that, inventory levels are assumed to move broadly in line with output.

**Chart 2.21**  
**CBI: adequacy of manufacturing stocks<sup>(a)</sup>**



Source: CBI.

(a) Balance of firms saying that present stocks of finished goods are more than adequate against those saying stocks are less than adequate.

*GDP growth in 2002 Q2 and Q3 taken together was a little weaker than expected by the MPC at the time of the August Report. Capacity utilisation appears to be slightly below normal levels across the economy as a whole. Aggregate rates of employment and unemployment have barely changed. The 2001 Census has led the ONS to revise its estimates of the UK working-age population, but that has not affected the MPC's judgment about growth in the near-term potential supply capacity of the economy. The Committee expects annual GDP growth to continue to pick up in the next six months.*

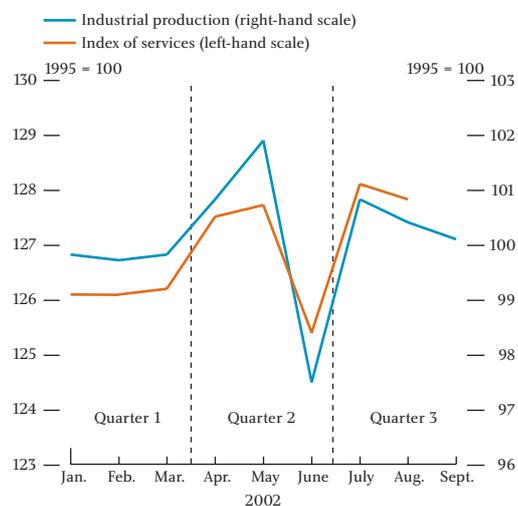
## 3.1 Output

The supply capacity of the economy depends on the available factors of production (such as land, labour and capital equipment); the work effort of labour and capital; and the efficiency with which all the factors are used.

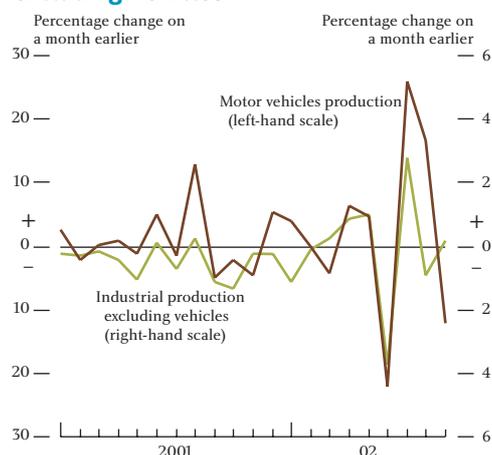
But the extent to which the growth of potential supply can vary, in part, depends on the horizon. In the very short run, the number of people a business employs, the amount of physical capital it owns, and those factors' efficiency of use are relatively fixed. So the business's short-run supply decision is how much to produce given its existing workforce and capital stock, in the light of its expectations for demand and the price of its output. The outcome of these short-run supply decisions is reflected in GDP, which is a measure of the output produced in any period. In the medium term, businesses have more flexibility with respect to the production process. For example they can decide how many people they employ and for how long and this will, in total, depend partly on the availability of labour, including the unemployed, and the number of hours people are prepared to work. In the longer run, the economy's potential to grow will depend on population growth; the profitability of capital investment; and the extent to which innovations and ideas improve the economy's ability to turn labour effort into the goods and services that people demand.

Quarterly GDP growth slowed to 0.1% in 2002 Q1, but has since picked up. Nonetheless, GDP growth in 2002 Q2 and Q3, taken together, was lower than the Committee believed at the time of the *August Report*. GDP is now estimated by the ONS to have increased by just 0.6% in

**Chart 3.1**  
Industrial production and the index of services



**Chart 3.2**  
Motor vehicles and total industrial production excluding vehicles



2002 Q2, somewhat lower than the preliminary estimate of 0.9% reported in the August *Report*. Services output and industrial production increased by 0.6% and 0.3%, respectively, in Q2.

The Jubilee holidays reduced the number of working days in June in many sectors of the economy. In June, the ONS' experimental index of services (IoS) fell by 1.8%, while industrial production fell by 4.3% (see Chart 3.1). These were the lowest monthly growth rates since figures began in January 1995 for the IoS and since January 1979 for industrial production. Weighting together the IoS and industrial production (together representing 93% of GDP), overall output fell by 2.4% in June.

GDP grew by 0.7% in Q3 according to the preliminary estimate. Service sector output and industrial production grew by 0.8% and 0.4%, respectively. Some pick-up in GDP growth might have been expected in Q3, reflecting the effects of the Jubilee holidays on the level of GDP in Q2. Industrial production did indeed recover in July, it then fell modestly in August and September (see Chart 3.1). Motor vehicles production was affected in June as holiday plant closures, which usually occurred later in the summer, were brought forward to the Jubilee week. As a result, output increased strongly in July and August (see Chart 3.2), raising industrial production growth by at least 0.5 percentage points in each month, before falling back in September to around its May level. Output in most other manufacturing industries was subdued in August and September. In the electrical and optical goods sector, it fell by 3.9% in August, reducing industrial production growth by about 0.4 percentage points, and was little changed in September.

Construction output increased by 7.0% in the year to Q2, accounting for half of the growth of whole-economy gross value added at basic prices, despite only having a weight of 5.2% in national output. Construction new orders were strong in Q3 and the future business activity index in the October CIPS construction survey continued to suggest rapid expansion in the sector.

Growth in GDP compared with a year earlier reached a trough of 1.0% in 2002 Q1. It has since recovered to 1.7% in Q3. The Committee expects annual GDP growth to continue to pick up in the next six months.

### 3.2 Capacity utilisation

Potential supply is difficult to estimate. In part this is because the capital stock and the potential efficiency with which the

factors of production are used cannot be measured directly. Estimates of capacity utilisation provide an indication of whether businesses are operating above or below normal levels of supply capacity, given their existing amounts of factor inputs. So they are potentially useful in assessing the balance between demand and supply in the economy in the short run, and hence the degree of inflationary pressure.

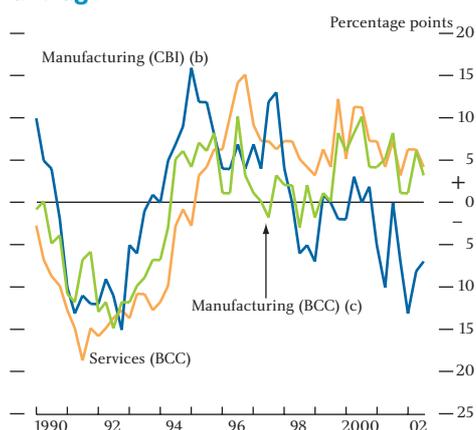
When demand is weaker than businesses expect, initially that surprise may be reflected in some industries by a build-up in inventories. But, thereafter, businesses may decide to lower output by reducing capacity utilisation—that is, the intensity they work their employees and capital equipment—for example by slowing the production line. And businesses might also reduce the hours of their employees, for example by reducing overtime. Hiring and firing costs inhibit frequent changes in employment levels. Hence, businesses tend to hoard labour during slowdowns and only reduce employment if they revise down their expectations of demand in the medium term. Resale values of capital equipment are often so low as to discourage premature disposal by businesses. So it may not be worth their while to reduce the amount of capital significantly and quickly in the face of demand weakness.

The CBI and British Chambers of Commerce (BCC) surveys include questions on capacity utilisation. The CBI Industrial Trends survey asks whether businesses are working below a satisfactory full rate of operation, while the BCC survey asks if businesses are operating at full, or below full, capacity. The CBI survey suggests capacity utilisation in manufacturing is currently well below its average level since 1972 (see Chart 3.3). This is broadly consistent with the latest output figures described above.

In the service sector, the BCC survey was above its historical average in Q3, despite lower output growth in the past year. The BCC ‘manufacturing’ survey covers the rest of the economy—that is, agriculture, energy and construction, as well as manufacturing. Table 3.A shows the BCC measure of capacity utilisation for these industries in Q3 was slightly above its average since 1989, in contrast to the CBI survey balance for manufacturing which was well below its average since 1972. But recent output trends in construction have been very different to those in manufacturing, so the results from the two surveys are not directly comparable. Moreover, the capacity utilisation questions in the respective surveys are not identical, and may be interpreted differently by respondents.

The Bank of England’s regional Agents ask businesses about their capacity utilisation. In manufacturing, the responses are

**Chart 3.3**  
Capacity utilisation: deviations from average<sup>(a)</sup>



Sources: BCC and CBI.

- (a) Averages are calculated since 1972 for the CBI survey and 1989 for the BCC surveys.  
 (b) Percentage of businesses (deviations from the average) responding ‘No’ to the question ‘are you working below a satisfactory full rate of operation’.  
 (c) Includes agriculture, energy and construction.

**Table 3.A**  
Surveys of capacity utilisation

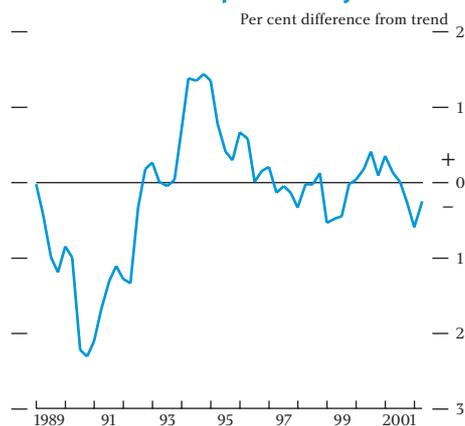
Percentage of employers working at full capacity

	Series average (a)	2001		2002		
		Q3	Q4	Q1	Q2	Q3
<b>Manufacturing</b>						
BCC (b)	32	40	33	35	38	35
CBI (c)	40	40	33	27	32	33
<b>Services</b>						
BCC	32	39	35	38	38	36

Sources: BCC and CBI.

- (a) Averages since 1972 for CBI manufacturing and 1989 for BCC.  
 (b) Includes agriculture, energy and construction.  
 (c) Percentage of businesses responding ‘No’ to the question ‘are you working below a satisfactory full rate of operation’. The October Industrial Trends survey, which was conducted between 19 September and 9 October, has been allocated to 2002 Q3. Earlier surveys have been allocated to their respective quarters accordingly.

**Chart 3.4**  
**Detrended labour productivity<sup>(a)</sup>**



(a) Output per job detrended by a Hodrick Prescott statistical filter.

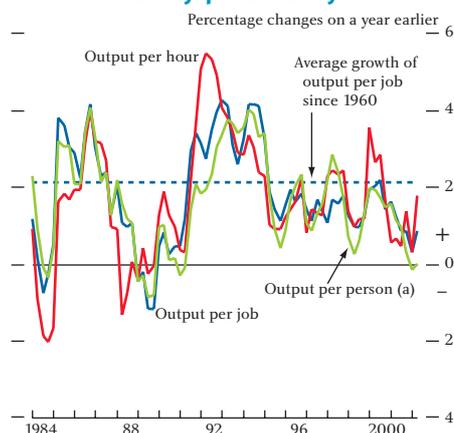
broadly consistent with those from the CBI survey. Capacity utilisation is reported to be below normal levels, if somewhat higher than at the end of 2001. In services, capacity is reported to be close to normal levels, a little weaker than that implied by the BCC survey.

As much of the short-term variation in the supply of goods and services is likely to reflect changes in hours worked and work effort, the variation in labour productivity per person around its trend may also serve as a useful proxy for capacity utilisation.<sup>(1)</sup> Labour productivity is currently below its trend level (see Chart 3.4). So the labour productivity data, together with the CBI survey and the reports of the Bank of England's regional Agents, suggest that, on balance, capacity utilisation is currently close to, but possibly a little lower than, normal.

### 3.3 Labour productivity

In the medium term, potential supply will depend on, among other things, the rate of technical progress, the growth of the capital stock and improvements in the skills of the workforce. These will be reflected in the potential growth rate of labour productivity, which measures the volume of output per unit of labour input, expressed either in terms of persons employed or hours worked.

**Chart 3.5**  
**Whole-economy productivity**



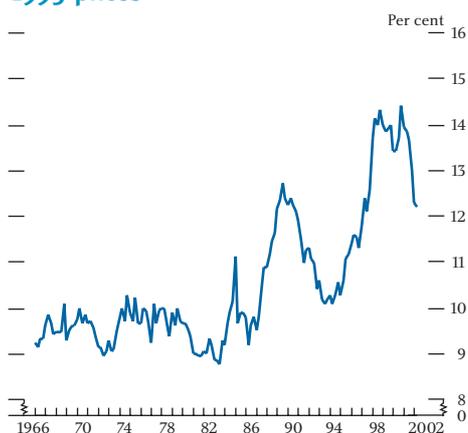
(a) Ratio of GDP at factor cost at 1995 prices to LFS employment. Based on data unrevised for the effects of the 2001 Census (see the box on page 35).

The ONS figures for whole-economy productivity are the ratio of gross value added at basic prices to the total number of jobs in the economy.<sup>(2)</sup> In the Bank of England's main macroeconomic model, an alternative measure of productivity is used, based on the Labour Force Survey (LFS) employment figures which are estimated from a survey of households. Output per job increased by 0.9% in the year to 2002 Q2, while this alternative measure of output per person was little changed in this period (see Chart 3.5). Though short-term weakness is to be expected, given movements in capacity utilisation, output per job has increased at an average annual rate of about 1.4% since the mid-1990s, and output per person by 1.2%. This compares with average productivity growth of just over 2% since 1960. Why has productivity growth slowed in recent years?

Output will depend in part on the average number of hours worked by each employee. Average hours have fallen since the

(1) See Larsen, J, Neiss, K and Shortall, F (2002), 'Factor utilisation and productivity estimates for the United Kingdom', *Bank of England Working Paper no. 162*.  
 (2) The ONS figures for jobs in its productivity series include employee jobs from the Workforce Jobs survey, working proprietors, the self-employed, government-supported trainees and HM Forces.

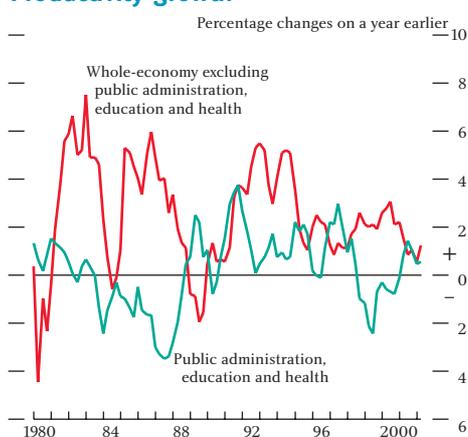
**Chart 3.6**  
Ratio of business investment to GDP at 1995 prices



**Chart 3.7**  
Ratio of the business investment deflator to the GDP deflator



**Chart 3.8**  
Productivity growth



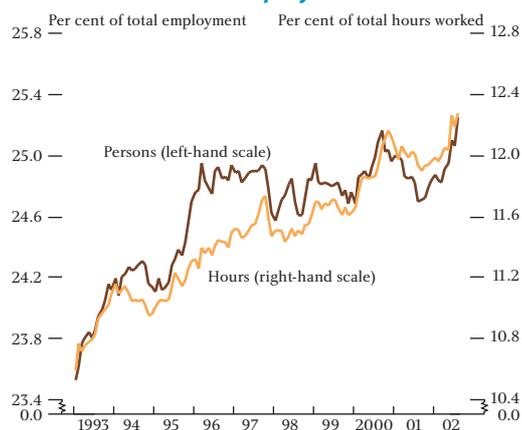
onset of the recent slowdown, but they have also fallen steadily since 1998. Falling average hours of full-time employees have probably reflected in part the introduction of the Working Time Directive in October 1998.<sup>(1)</sup> The growth of output per hour has thus been somewhat stronger than for output per job and per person (see Chart 3.5). Whereas output per job has grown at an average annual rate of 1.4% since 1995, average growth in output per hour has been 1.6% in this period.

Labour productivity growth is affected by the rate of growth of capital employed, net of depreciation. Measuring the capital stock is difficult, in part reflecting the difficulty of measuring scrapping and depreciation. There are official estimates, but the ONS suspended publication temporarily at the time of the 2002 edition of the *Blue Book*. Nevertheless, an indicator of the rate of capital accumulation is given by the ratio of business investment to GDP (measured at 1995 prices). This has been historically high since 1995 (see Chart 3.6). In part, this has reflected the fall in the price of investment goods relative to the general price level (see Chart 3.7), which has encouraged businesses to use more capital equipment rather than increase employment. So the fall in labour productivity growth since the mid-1990s is unlikely to have reflected, even in part, relatively low growth of the capital stock.

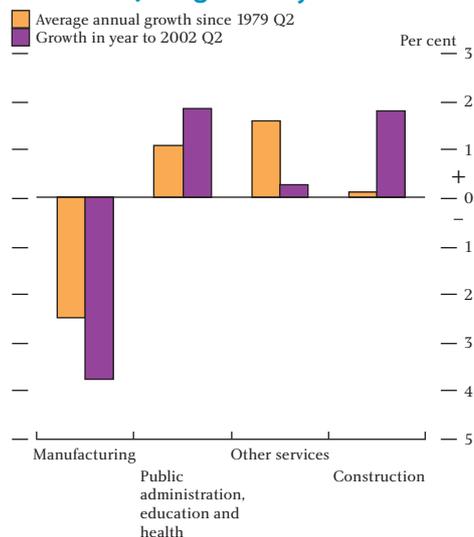
Part of the fall in measured productivity growth reflects weak recorded public sector productivity growth since 1998. As with the rest of the service sector, the public sector is labour intensive and measured productivity growth is relatively low. For example, productivity growth per job in public administration, education and health (which is mostly in the public sector) has averaged just 0.2% a year from mid-1980 to mid-1998, whereas in the rest of the economy it averaged 2.6% in the same period (see Chart 3.8). Even so, since 1998, measured productivity growth in public administration, education and health has averaged -0.4% a year. The decline in its average annual growth from 0.2% to -0.4% since 1998 has reduced annual growth of whole-economy productivity per job by about 0.2 percentage points in this period. But public sector output is very difficult to measure, as it is rarely marketed. For example, estimates of output in the education sector are largely based on the number of pupils, adjusted to allow for their examination results. Other things equal, a decline in the pupil-teacher ratio designed to improve the quality of education could therefore reduce measured productivity. These measurement problems make the public sector productivity estimates particularly uncertain.

(1) The Working Time Directive set a limit of an average of 48 hours a week that an employee can be required to work (though employees can choose to work longer).

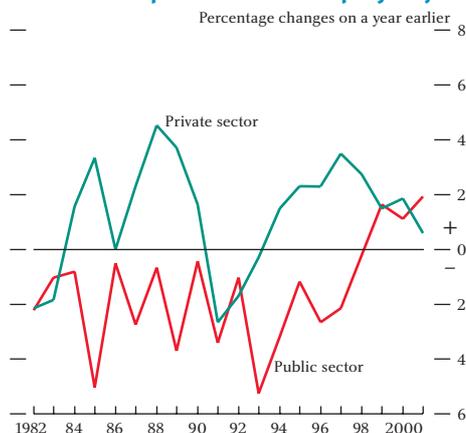
**Chart 3.9**  
**Part-time share of employment**



**Chart 3.10**  
**Workforce Jobs growth by sector**



**Chart 3.11**  
**Private and public sector employee jobs**



The fall in the unemployment rate since 1993, currently to its lowest rate for 27 years (measured by the claimant count), may also have depressed productivity growth temporarily. If, as seems likely, the unemployed have lower skills than the average employee, it may have had some temporary depressing effect on productivity growth. Any such effect might gradually unwind as new employees benefit from additional work experience.

### 3.4 Employment

Beyond the very short run, one way businesses can increase their collective output is by increasing employment. The box on page 33 explains how the results from the 2001 Census will affect estimates of employment and other labour market indicators. The ONS has so far released some provisional estimates only up to August 2001. So the more recent labour market data discussed in the following sections are unaffected by the Census revisions, unless otherwise stated.

Employment measured by the household-based LFS increased by 211,000 in the period June-August compared with the same period a year earlier. Almost all of this increase was in part-time employment. LFS figures show that the part-time share of employment increased to about 25% in 1996, when it levelled off (see Chart 3.9). It has risen again since mid-2001 and is currently at its highest level since the quarterly LFS began in 1992. The part-time employees' share of total hours worked has risen fairly steadily since 1993 (although there was a temporary decline in the second half of 2001). This has reflected falling average hours worked by full-time employees and, until the past year, rising average hours worked by part-time employees.

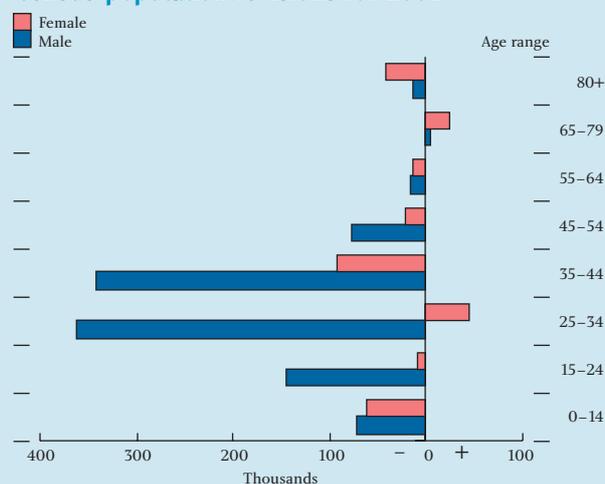
The LFS figures show the number of employees in employment increased by about 180,000 in the year to June-August. But employee jobs measured by the employer-based quarterly Workforce Jobs survey were almost unchanged in the year to 2002 Q2. The apparent difference between these two trends may be reduced by future upward revisions to the Workforce Jobs estimates. This has been the pattern of recent years when new information on jobs becomes available from the ONS' Annual Business Inquiry in December.

Nevertheless, the Workforce Jobs survey is the most reliable source for the industrial breakdown of employment. Public administration, education and health—which is mostly public sector—accounted for the bulk of the growth of jobs in the service sector in the year to 2002 Q2. Jobs in construction increased by 1.8% in the

## The 2001 Census

The 2001 Census estimated that the UK population was 58.8 million on Census day, 29 April. This was about 1.2 million less than the mid-2001 projection of the population by the Government Actuary's Department (GAD). The ONS currently judges that most of this discrepancy is a result of underestimation of emigration<sup>(1)</sup>—in particular of men between 25 and 44 years of age (see Chart A)—although the precise causes are uncertain and other explanations are possible. In light of the Census, the 1991 mid-year estimate of the population has also been revised down, by about 300,000. As a result, the annual growth rate of the population over the past two decades has also been revised down by an average of around 0.1 percentage points.

**Chart A**  
Census population revisions for 2001<sup>(a)</sup>



(a) Census 2001 data less GAD mid-2001 projections.

Labour Force Survey (LFS) estimates of the whole-economy levels of employment and

unemployment are grossed up using estimates of the household population. So a downward revision to the population reduces the LFS estimates of the levels of employment and unemployment. Moreover, since the Census has also revised down the estimated share of prime-age (25–44) men in the population, who have high participation and employment rates, these rates are also being revised. On 30 October the ONS released provisional regressed labour market data for the period 1992–2001. These data show that, for example, in June–August 2001, working-age employment was over 800,000 lower, at about 26.6 million, and the working-age employment rate was 0.3 percentage points lower at 74.3%.

Workforce Jobs estimates of employment will be less directly affected, as they are derived primarily from a survey of companies rather than households and are not grossed up using the population data. However, the Workforce Jobs estimates for self-employment, and employment in the agriculture and construction sectors, are based on LFS data and are therefore likely to be revised. National Accounts data for GDP are expected to be largely unaffected. So estimates of labour productivity based on the Workforce Jobs series should be little changed, although estimates derived from LFS employment figures, such as those used in the Bank of England's main macroeconomic model, will be higher back to the early 1980s.

While the new population figures have important consequences for the interpretation of labour market data, the MPC has concluded that in broad terms they should not significantly affect the inflation outlook.

(1) The number of births and deaths each year is available from registration records. The gross flow of migrants is estimated using data from the International Passenger Survey and administrative data on asylum applications and visitors who become permanent residents. However, there are other data—for example, on applications for permanent settlement and National Insurance numbers—which can be used to corroborate an estimate of the gross inflow. The determinant of population about which the ONS know least is the gross outflow of migrants. Hence, in the view of the ONS, the Census-based revisions most likely reflect changes in the underlying estimates of the gross outflow.

year to Q2 (see Chart 3.10), reflecting the buoyancy of activity in that sector. The increase in jobs in these two sectors fully offset the decline in manufacturing jobs in this period.

The public sector accounts for nearly 18% of jobs. After two decades of relative decline, public sector employment has grown at a slightly faster rate than that of the private sector over the period since 1999 (see Chart 3.11). As noted above, employment growth has been particularly strong in education and health. Public spending has risen from 37.4%

of GDP in 1999–2000 to 39.3% of GDP in 2001–02. The 2002 Spending Review projects the ratio rising to 41.9% of GDP in 2005–06.<sup>(1)</sup> So further significant increases in public sector employment are likely. But reports from the Bank’s regional Agents suggest that companies’ employment intentions in the private sector have generally weakened a little since Q2.

### 3.5 Labour supply

For a given rate of economic inactivity, an increase in the population of working age would provide an increase in labour supply in the long term, thereby adding to potential output. In the shorter term, the most obvious sources of additional labour are the economically inactive and the unemployed.

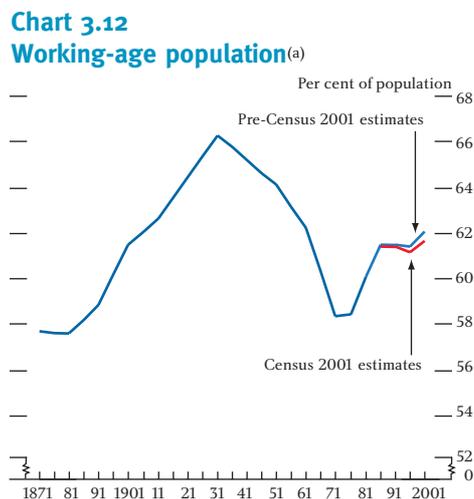
#### Working-age population

The number of people of working age (16–59 for women and 16–64 for men) has risen steadily as a share of the total population since the early 1970s (see Chart 3.12). In the following decade, an increasing working-age population mostly reflected a rising birth rate prior to the mid-1960s, associated with the post-war ‘baby boom’. Since then, births generally have been falling. Nonetheless, the working-age population rate is higher now than in the late 1980s. That reflects inward migration. The 2001 Census has led to a downward revision in the working-age population rate in 2001 of 0.5 percentage points. In particular, the ONS believes that the Census has cast doubt on previous estimates of gross emigration over the past two decades, notably of men aged 25–44 (see the box on page 33). However, the Census did not change the overall picture of an increasing working-age population rate since 1971.

The data for working-age population during the past twelve months are still to be revised using the results of the 2001 Census. On the basis of unrevised data, the working-age population and LFS-based employment have grown at similar rates in the year to June-August and the working-age employment rate has barely changed.

#### Participation

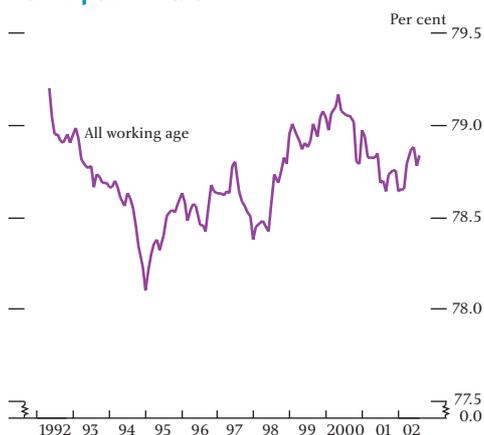
Labour force participation trends reveal whether labour supply is rising or falling, relative to the size of the population of working age.



(a) Males aged 15–64, 1871–1961 and 16–64 1971–2001. Females aged 15–59, 1871–1961 and 16–59 1971–2001.

(1) The average ratio of public spending to GDP in the 1990s was just over 41%.

**Chart 3.13**  
Participation rate<sup>(a)</sup>

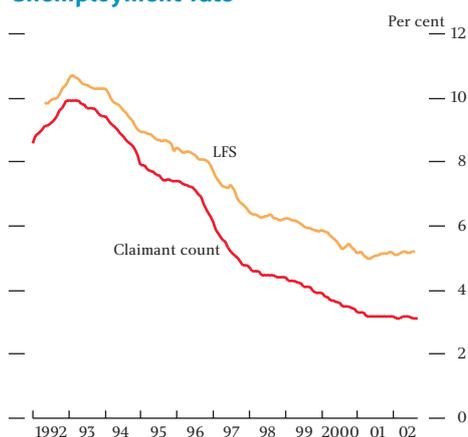


(a) Percentage of population of working age.

The participation rate<sup>(1)</sup> was broadly unchanged in June-August compared with the same three months a year earlier (see Chart 3.13). The participation rate has generally been on a modest upward trend since the mid-1990s. The female participation rate increased by about 2 percentage points between mid-1994 and mid-2000. It fell back a little in the second half of 2001 but it has since been rising again and has now returned to its mid-2000 peak. Its increase since 1994 has more than offset a steadily declining rate for men.

Increased female participation in part reflects the rise in participation of lone parents. The activity rate of female lone parents with children under 16 was 56% in March-May 2002, up from 50% six years earlier. The rise in activity of lone parents since 1996 explains around one third of the 1.6 percentage point increase in the female participation rate in this period. And they have found jobs: the employment rate of female lone parents has risen by about 9 percentage points in six years, to around 50% in March-May 2002. In part these trends have reflected government policy, especially the New Deal for Lone Parents, the Working Families' Tax Credit and the National Childcare Strategy.<sup>(2)</sup> The Government has targeted a 70% lone parent employment rate by 2010. If this were met, and assuming it fully reflected increased activity, rather than falling unemployment, this would increase the overall participation rate by around 0.1 percentage points a year on average during the next eight years—the average rate of increase since 1995.

**Chart 3.14**  
Unemployment rate



## Unemployment

The difference between labour supply and demand is central to the determination of wage inflation.

The most common measure of the excess of labour supply over demand is the unemployment rate. This has barely changed in the past twelve months. The claimant count unemployment rate was 3.1% in September and has been 3.1%–3.2% for 18 months. The International Labour Organisation (ILO) definition of unemployment used by the LFS was 5.2% in the three months to August, compared with 5.1% in the same period a year earlier (see Chart 3.14). Despite this small increase, ILO unemployment has been extremely stable over the past twelve months. Other indicators are generally consistent with the unemployment figures, suggesting that the

(1) The participation rate is defined as the economically active of working age as a percentage of the working-age population. The LFS classifies as 'economically active' those people with a job and those who meet the International Labour Organisation definition of unemployment used by the LFS. Chart 3.13 shows the participation rate prior to the revisions resulting from the 2001 Census. These generally reduced its level by about  $\frac{1}{4}$  percentage point from mid-1993 to August 2001, mostly reflecting the downward revision to the number of working-age males, who have a relatively high participation rate.

(2) See 'The changing welfare state: employment opportunity for all' (November 2001), HM Treasury and the Department for Work and Pensions.

labour market remains tight. While some surveys and reports from the Bank's regional Agents indicate a marginal easing in recruitment difficulties, any such slackening appears to be modest.

Whole-economy average earnings growth has been stable at just below 4% since May. In the past three months, oil prices have risen steeply and then fallen, probably reflecting changing market sentiment about the prospect of a military attack on Iraq. The increase in the price of oil since the beginning of the year is putting some upward pressure on manufacturers' input costs and output prices. RPIX inflation rose to 2.0% in the year to Q3; goods prices continued to fall and strong retail services price inflation persisted. The MPC expects RPIX inflation to move above the 2.5% target by the end of the year, largely reflecting the pattern of oil price movements and an increasing contribution from housing depreciation. It is expected to remain above target during much of 2003 and then drop back.

**Table 4.A**  
**Average earnings growth**

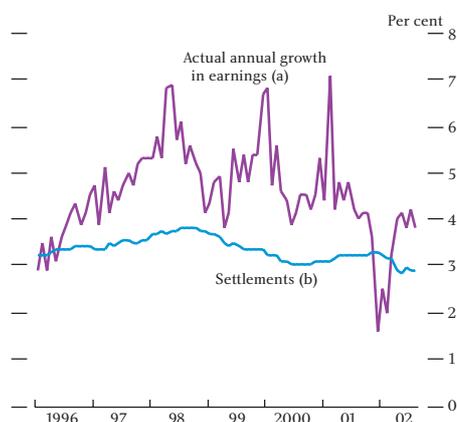
Percentage changes on a year earlier

	2002				
	May	June	July	Aug.	Sept.
<b>Headline (a)</b>					
Whole-economy	3.8	3.9	3.9	3.8	n.a.
Public	3.8	3.5	3.6	3.4	n.a.
Private	3.8	4.0	4.0	3.9	n.a.
<b>Actual</b>					
Whole-economy	4.0	3.8	4.1	3.6	n.a.
Public	3.5	3.5	3.9	3.0	n.a.
Private	4.1	3.8	4.2	3.8	n.a.
<b>Regular pay (b)</b>					
Whole-economy	3.9	4.0	3.8	3.4	n.a.
Public	3.4	3.3	3.2	2.5	n.a.
Private	4.0	4.2	4.0	3.7	n.a.
<b>Settlements (c)</b>					
Whole-economy	3.0	3.1	3.0	3.0	3.0
Public	3.7	3.7	3.6	3.6	3.6
Private	2.8	2.9	2.9	2.9	2.8

Sources: ONS and the Bank of England wage settlements database, that draws on information from the CBI, Incomes Data Services, Industrial Relations Services, Labour Research Department and the Bank's regional Agents.

- (a) Three-month (backward) average of actual rate.  
 (b) Regular pay does not include bonus payments. It is not seasonally adjusted.  
 (c) Twelve-month weighted mean. The weights are the AEI industry shares of the wage bill.

**Chart 4.1**  
**Earnings and settlements in the private sector**



- (a) ONS Average Earnings Index measure.  
 (b) Twelve-month weighted mean. The weights are the AEI industry shares of the wage bill. Sources noted in Table 4.A.

Inflationary pressures are determined by the balance of demand and supply in product and labour markets. They are also influenced by developments in the exchange rate, overseas prices, and the inflation expectations of employers and employees.

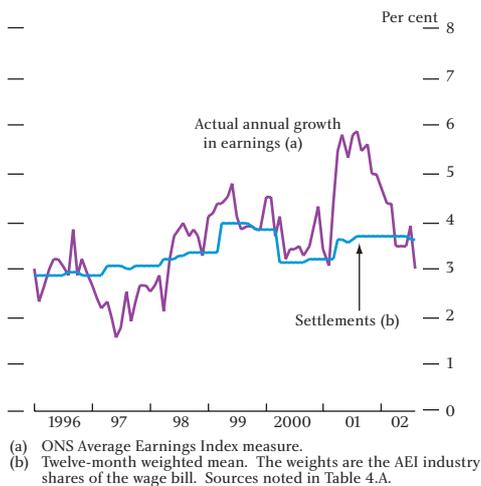
## 4.1 Earnings and settlements

According to the Average Earnings Index (AEI), headline earnings growth has been relatively stable at just below 4% since May. Whole-economy pay settlements have been stable at around 3% (see Table 4.A).

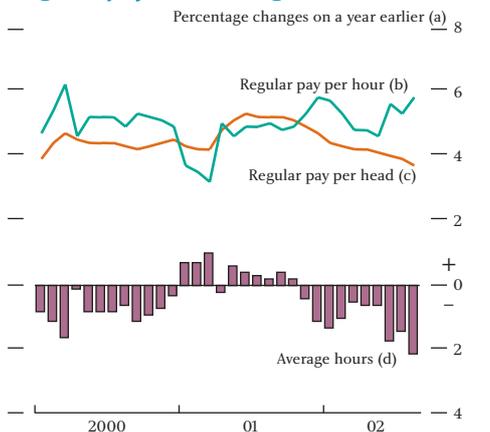
Private sector earnings growth has recovered from the low rates seen at the start of the year (see Chart 4.1). The weakness then was caused by lower bonus payments than in 2001. But in August, for the first time in 18 months, bonus payments grew broadly in line with regular pay and so had no net effect on annual private sector pay growth.

Annual earnings growth in the public sector has continued to ease and settlements have remained stable. In the twelve months to September, public sector settlements were 3.6%, unchanged from August. Chart 4.2 shows that annual public sector earnings growth was 3.0% in August, almost 3 percentage points below its peak in August 2001. This softening in public sector pay growth is somewhat at odds with the continued strength in public sector spending (see Section 2) and the growth in public sector employment (see Section 3). While a number of factors can explain this profile of earnings growth, part of it reflected threshold payments to teachers in 2001, which raised the level of earnings permanently, but raised earnings growth for one year only.

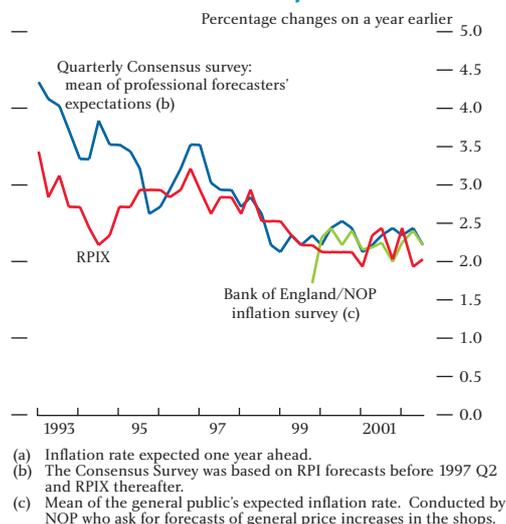
**Chart 4.2**  
Earnings and settlements in the public sector



**Chart 4.3**  
Regular pay and average hours



**Chart 4.4**  
Inflation and inflation expectations<sup>(a)</sup>



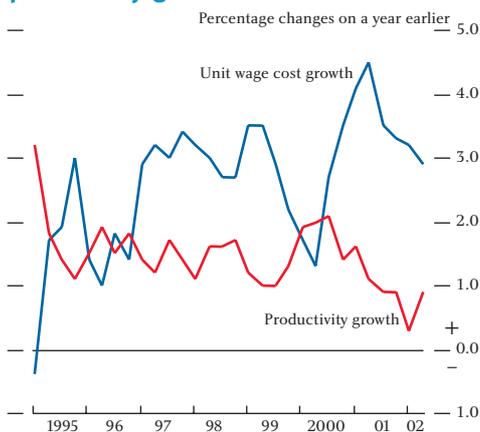
Another factor that might explain the recent fall in public sector earnings growth is the delay to this year's local authority (LA) settlement. The settlement was due in April, but not agreed until September. The higher settlement was due to enter pay packets from October. As this settlement affects 1.3 million workers (about 25% of the public sector wage bill), the delay has depressed public sector earnings growth. While the recently agreed LA settlement is likely to raise public sector earnings growth, the arrears of this settlement (backdated to April) will not. This is because the ONS does not include arrears in its seasonally adjusted data.

Whole-economy regular pay growth per head has been falling gently since the middle of 2001 (see Chart 4.3). When calculated in terms of pay per hour, the trend in the growth rate has been much flatter, and has perhaps picked up more recently. Why might that matter? If everybody were paid by the hour, then the hourly growth rate would be the more relevant for judging trends in wage pressure. But as the *August Report* noted, only about 40% of employees in the economy are paid by the hour, equivalent to a third of the wage bill. So the pick-up in pay per hour is partly related to the recent sharper fall in average hours. The ONS presents its average hours data as a three-month moving average. The final hours observation in Chart 4.3 refers to the three months to August. So the final three observations in that chart may have been affected by the Jubilee holidays in June. If average hours were to recover, as Jubilee effects pass or for purely cyclical reasons, the gap between pay growth per hour and pay growth per head would narrow, probably with both a slowing in regular pay growth per hour and a pick-up in pay growth per head.

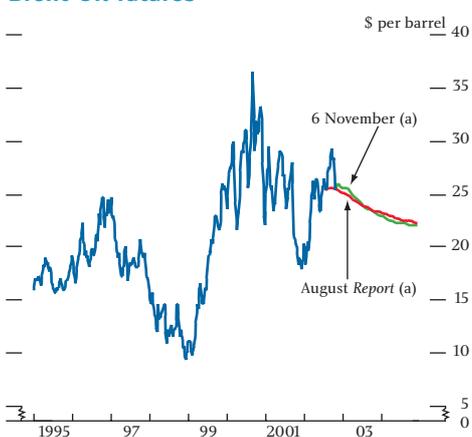
The outlook for real earnings growth depends on employers' demand for labour relative to the available supply (see Section 3). But nominal earnings growth is also influenced by inflation expectations. Employees care about the purchasing power of their earnings (the real consumption wage) and businesses care about the cost of labour relative to the price of their output (the real product wage). But because the basic wage is typically set at discrete intervals, usually yearly, employees and employers care about future inflation. Chart 4.4 shows two measures of inflation expectations, the *Quarterly Consensus Forecasts* and the Bank of England/NOP survey.<sup>(1)</sup> Both fell in Q3 from 2.4% to 2.2%. So inflation expectations seem unlikely to give any upward impetus to wage settlements in the near term.

(1) For more details see 'Public attitudes to inflation', *Bank of England Quarterly Bulletin*, Summer 2002, pages 147–52. For the latest survey results see [www.bankofengland.co.uk/pressreleases/2002/096.htm](http://www.bankofengland.co.uk/pressreleases/2002/096.htm)

**Chart 4.5**  
Whole-economy unit wage cost and productivity growth



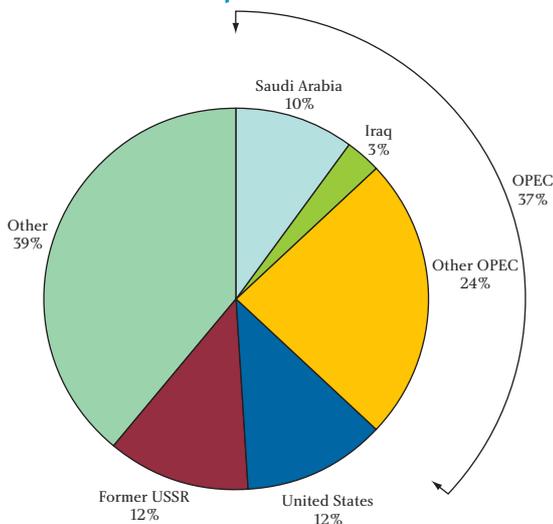
**Chart 4.6**  
Brent Oil futures



Source: Thomson Financial Datastream and Bank of England.

(a) Average during the 15 working days up to the time at which the MPC finalised its projections.

**Chart 4.7**  
Share of world oil production—2002 H1



Source: The Energy Information Administration.

Looking ahead, earnings growth may edge up at the end of the year as local authority employees receive their new settlement. Thereafter earnings growth is likely to increase somewhat through 2003, given the continued tightness of the labour market.

The prices that businesses charge for their products depend, among other things, on the cost of producing those goods or services. So price inflation can be influenced by changes in unit wage costs. While transient changes in unit wage costs can affect inflation, it is the underlying growth that is probably more important. This is because businesses incur costs when they change prices—for example the expense of printing new price lists. So they are more likely to change prices infrequently and when they are confident that any change is unlikely to reverse. Though it is often difficult to discern the underlying trend, it is likely that unit wage cost growth in recent quarters has been boosted by a temporary cyclical lull in productivity growth (see Chart 4.5). Indeed, the MPC projects unit wage cost growth to fall next year as productivity growth is expected to recover.

## 4.2 Commodity prices

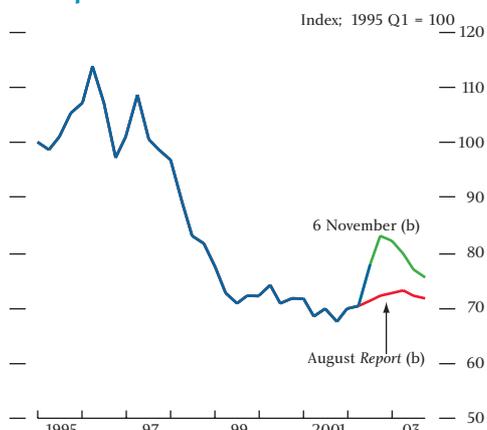
After the publication of the *August Report*, the price of oil continued to increase. It rose to a peak of \$29 per barrel on 23 September. But it has fallen sharply in recent weeks (see Chart 4.6). The average price of oil in the 15 days to 6 November was \$26 per barrel, similar to the 15-day average to 31 July (the day the MPC finalised its August projections). The gyrations in the price are likely to have been associated with changing market perceptions over the prospect of a military attack on Iraq, and the related risk of disruption to world oil supply.

In the first half of this year, Iraq produced 2.0 million barrels of oil a day, or 3% of world output (see Chart 4.7). Most countries, with the exception of Saudi Arabia, do not have significant amounts of spare capacity. In this sense, Saudi Arabia can be thought of as the marginal oil producer, able to influence heavily the price of oil. Saudi Arabia could increase production by between 2.4–2.7 million barrels a day, within 30 days, enough to offset any Iraqi shortfall.<sup>(1)</sup>

In the near term, market participants appear to expect the oil price to continue to fall to around \$22 per barrel in two years' time. The profile of the Brent futures price over the next two years is broadly similar to what it was at the time of the *August Report*. This profile implies that twelve-month oil price

(1) For Energy Information Administration estimates of surplus capacity see <http://www.eia.doe.gov/cabs/opec.html#opectab>

**Chart 4.8**  
**Food prices<sup>(a)</sup>**



Sources: *The Economist*, Thomson Financial Datastream and Bank of England.

- (a) *The Economist* food price index in dollars.
- (b) Average during the 15 working days up to the time at which the MPC finalised its projections. Based on futures prices for around 77% of the food price index.

inflation is likely to rise in the final quarter of this year but turn negative in the middle of 2003. The impact on annual RPIX inflation is therefore likely to be positive for the remainder of this year—both directly through higher petrol prices and indirectly via the pass-through to higher costs of production—and negative in the second half of 2003.

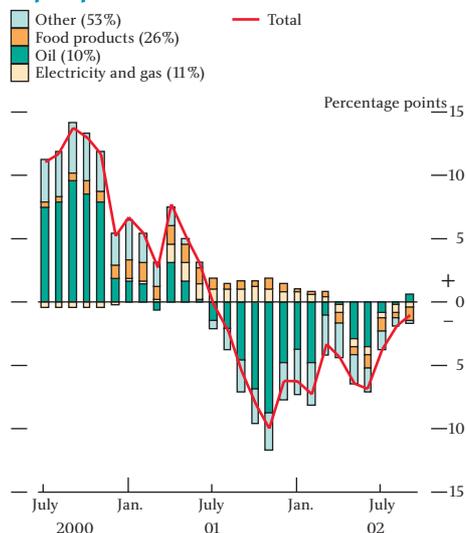
The price of non-oil commodities rose by 6.1% in Q3, mainly due to the higher price of food, which rose by 11.3% in Q3. But the futures curve for non-oil commodities—a weighted average of 25 separate commodities—was broadly similar to what it was at the time of the *August Report*. Within the total, however, there were offsetting movements. Food price futures rose (see Chart 4.8) and the price of metals and other non-food agricultural commodities fell. The rise in spot and futures food prices was quite broadly based and appears to have been driven by a combination of supply-side factors: droughts in different regions of the world have combined to reduce the supply of wheat, corn and soyabean; cocoa prices have been affected by political conflict in the Ivory Coast—the world’s largest producer; and the recent rise in coffee prices was in part due to producers substituting away from coffee, in response to the exceptionally low prices at the beginning of the year.

### 4.3 Import prices

Sterling import prices of goods and services in 2002 Q2 were a little higher than assumed at the time of the *August Report*. The quarterly change in import prices rose sharply from -0.8% in Q1 to 1.6% in Q2. Exchange rate changes seem to account for most of the rise in import prices. The sterling effective exchange rate depreciated by 1.5% between Q1 and Q2. The weighted average price of exports from the major six (M6) economies (a proxy for the prices of internationally traded goods and services) remained unchanged.

The MPC projection for annual M6 export price inflation is little different to its *August Report* projection, but the projection for annual UK import price inflation is a little weaker. In part this can be explained by the around 1% higher starting assumption of the sterling effective exchange rate in the fourth quarter of this year (compared with what was assumed at the time of the *August Report*) which is likely to lower the sterling price of imports.

**Chart 4.9**  
**Contributions to annual manufacturing input price inflation**



### 4.4 Costs and prices in manufacturing

Input prices fell by 1% in the twelve months to September, compared with a fall of 1.9% in the twelve months to August (see Chart 4.9). The change in the annual rate of inflation

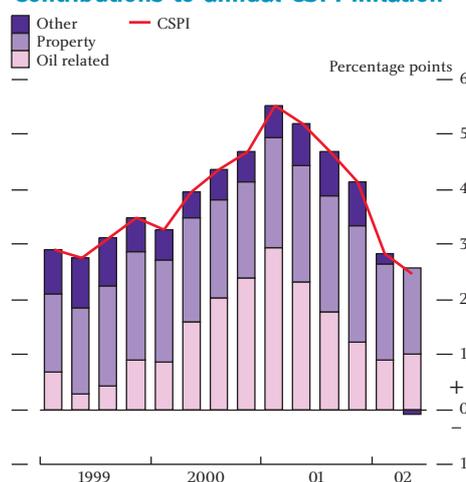
**Table 4.B**  
Measures of service sector costs and prices<sup>(a)</sup>

	2001 Q4	2002 Q1	Q2	Q3	Q4 <sup>(b)</sup>
<b>Backward-looking</b>					
CIPS average costs index (c)	51.8	53.1	53.9	54.6	54.2
CIPS average prices charged index (c)	49.6	50.6	51.6	51.9	52.2
CSPI (d)	4.1	2.8	2.5	n.a.	n.a.
Private service sector unit wage costs (e)	0.0	0.4	2.6	n.a.	n.a.
<b>Forward-looking</b>					
BCC prices balance (f)	16	20	24	20	19
CBI/Grant Thornton selling prices (g)					
Consumer services	23	-34	0	-8	-6
Business and professional services	-13	-16	-1	19	-9

Sources: CIPS, ONS, BCC, CBI/Grant Thornton and Bank of England.

- (a) Responses are attributed to the quarter that is most closely associated with the reference period of each survey. For example, the Q2 BCC survey is shown as Q3 because respondents are asked about prices over the next three months.
- (b) CIPS figures are for October only.
- (c) A reading of 50 suggests rising prices, a reading below 50 suggests falling prices. The CIPS survey is monthly, and the quarterly values shown are averages over the relevant months.
- (d) Corporate services price index (experimental index, including rent). Percentage change on year earlier.
- (e) Private sector unit wage cost is proxied using private sector earnings growth and productivity growth in the service sector less Public Administration, Education and Health.
- (f) Percentage balance of responses to the question: 'Over the next three months, do you expect the price of your services to increase/remain the same/decrease?'
- (g) Percentage balance of responses to the question: 'Excluding seasonal variations, what are the expected trends for the next three months with regard to average selling prices?'

**Chart 4.10**  
Contributions to annual CSPI inflation



depends on price changes both this year and in the previous year. And it was the precipitous fall in the price of oil in 2001 (or base effects) dropping out of the annual comparison that accounted for most of the pick-up in the twelve-month rate for September. The remainder was due to the rise in oil prices since July this year.

Headline annual earnings growth in the manufacturing sector has risen steadily since the start of the year, but manufacturing productivity growth rose more sharply. Annual earnings growth rose from 2.9% in Q1 to 3.5% in Q2, and annual productivity growth rose from -1.9% to -0.6% over the same period. These two effects imply that unit wage cost growth eased from 5.0% in Q1 to 4.1% in Q2.

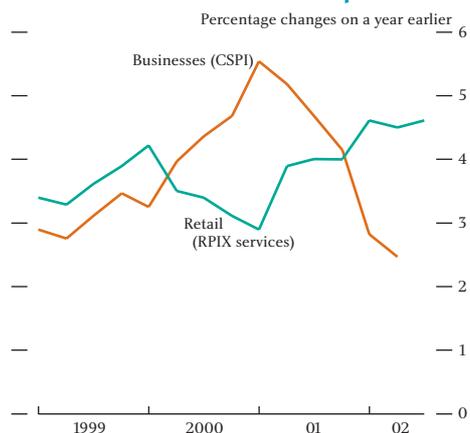
As mentioned above, the underlying growth in costs (of both raw materials and labour) is an important influence on the prices that companies charge for their goods. But it is not the only factor. The pressures on capacity and the degree of competition are also important. Faced with spare capacity (see Section 3) and intense global competition, domestic manufacturing firms have had little scope for passing on cost increases. In the twelve months to September, output prices (excluding duties) rose by 0.4%, unchanged since August.

## 4.5 Costs and prices in the service sector

Labour costs account for the majority of service sector input costs and so are key to determining the short-run pressures on service sector output prices. Headline annual earnings growth in the private service sector recovered from 2.2% in Q1 to 4.2% in Q2. Private service sector productivity growth over the same period fell a little. Consequently private service sector unit wage cost growth rose from 0.4% in Q1 to 2.6% in Q2, raising cost pressures since the start of the year (see Table 4.B). This is consistent with the CIPS survey, which showed a small rise in the balance of firms reporting a rise in input costs since the end of 2001. But private service sector earnings growth rose between Q1 and Q2 because the large negative bonus contribution to annual earnings growth diminished in Q2. In terms of regular pay growth, annual private service sector earnings growth did not change much on the quarter. So underlying private service sector unit wage cost growth, perhaps a more important influence on firms' prices, was relatively flat.

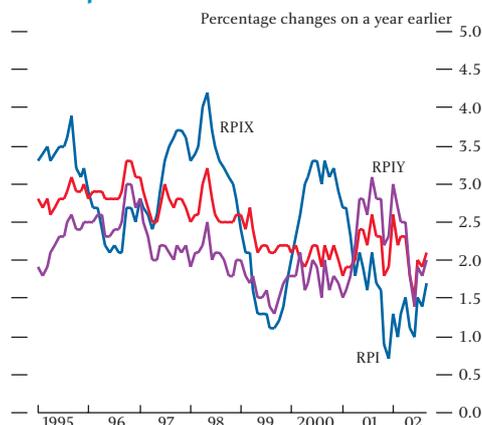
The only official measure of output prices in business services is the ONS' corporate services price index (CSPI). This index captures business-to-business transactions only. This survey remains experimental and to date covers around 50% of its target population. Importantly, it does not yet include insurance premia which, according to the Bank's regional

**Chart 4.11**  
Business and retail services price inflation



Agents, have been rising rapidly recently. The CSPI shows that business services price inflation has been falling since the start of 2001, with the fall being broadly-based across property rental payments, oil-related services (such as sea freight and road transport) and other business services (see Chart 4.10). The fall in the ONS measure of business services price inflation stands in contrast to the increase in the CIPS balance of firms reporting a rise in prices since the start of the year and the continued strength in retail services price inflation (see Chart 4.11). While a large part of the divergence between business and retail services price inflation is accounted for by the impact of the oil price on oil-related business services, some of it may reflect the differences between the state of demand in the respective sectors.

**Chart 4.12**  
Retail price inflation

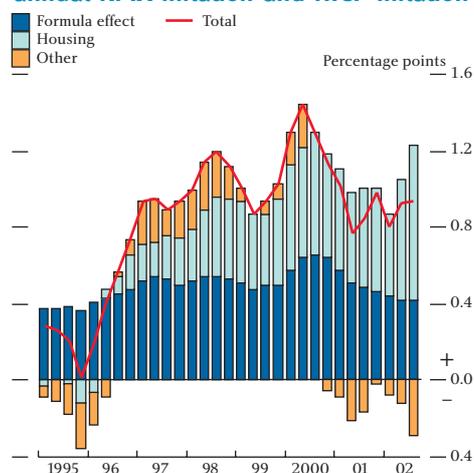


Forward-looking survey indicators offer mixed signals about what might happen to service sector prices in the near future. The volatility of the CBI/Grant Thornton survey makes it hard to read the underlying trend (see Table 4.B). The BCC survey shows that the balance of respondents expecting to raise prices over the next three months is a little weaker than it was at the start of the year.

## 4.6 Retail prices

Annual inflation in retail prices excluding mortgage interest payments (RPIX) rose by 0.1 percentage points to 2.0% in Q3. This rise was echoed in the other main measures of retail price inflation. Annual RPIY inflation (which also excludes indirect and local authorities' taxes) rose by 0.1 percentage points to 1.9%; and the headline rate of inflation (RPI) rose by 0.3 percentage points to 1.5%.

**Chart 4.13**  
Contributions to the differential between annual RPIX inflation and HICP inflation



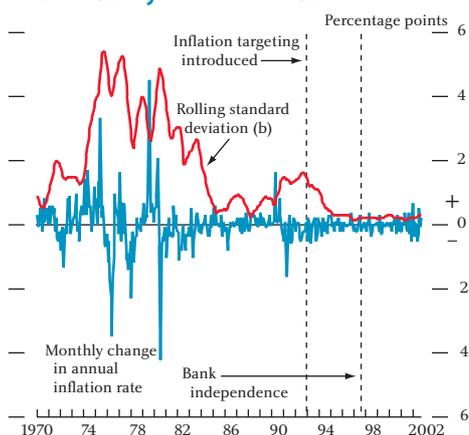
The Harmonised Index of Consumer Prices (HICP) measure of inflation rose by 0.2 percentage points to 1.1% in the year to Q3. What accounts for the 0.9 percentage points difference between HICP and RPIX inflation in Q3? RPIX and HICP measure the average price of a basket of goods and services. The formula used to add together the prices in the RPIX measure is different from that used in the HICP index.<sup>(1)</sup> This 'formula effect' accounts for much of the persistence in the gap (see Chart 4.13). The factor that explains most of the current differential is the inclusion of housing costs<sup>(2)</sup> in RPIX but not in the HICP, and recently house price inflation has been particularly strong (see Section 1).

Since the Bank of England was given operational independence in 1997, the annual inflation rate of RPIX has been very stable; it has averaged 2.3% with a standard

(1) RPIX uses the arithmetic mean and HICP the geometric mean to aggregate price quotes at the most detailed level.

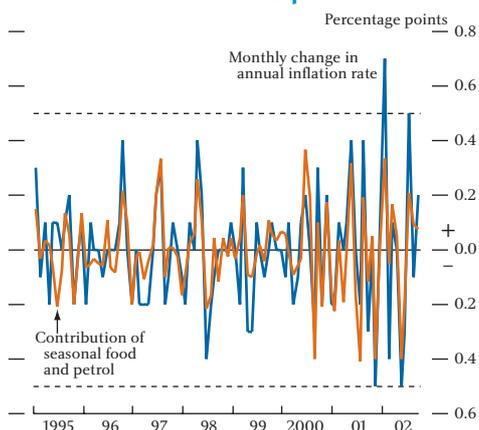
(2) For an explanation of how housing costs are measured in RPIX see page 44.

**Chart 4.14**  
The volatility of RPIX inflation<sup>(a)</sup>

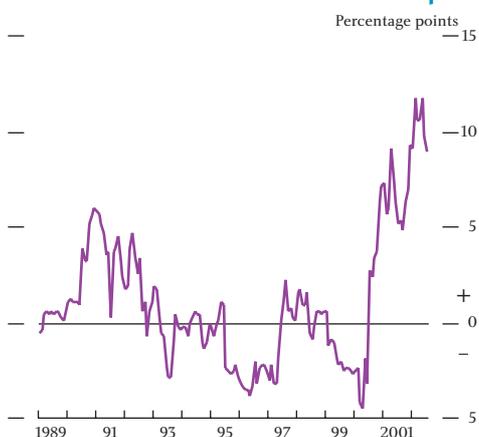


(a) RPI inflation prior to 1976.  
(b) Two-year (backward) rolling standard deviation of the annual inflation rate.

**Chart 4.15**  
Volatility of RPIX inflation and the contribution from seasonal food and petrol



**Chart 4.16**  
Comovement of seasonal foods and petrol<sup>(a)</sup>



(a) Measured as the covariance of the monthly changes in annual petrol price inflation and the monthly changes in annual seasonal food price inflation, over a twelve-month period.

deviation of 0.3 percentage points. This stability has also been evident since inflation targeting was introduced in 1992.

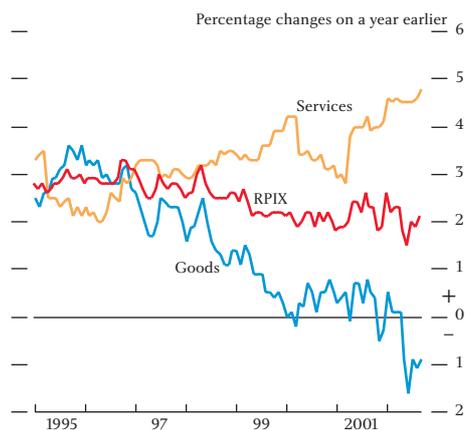
Chart 4.14 shows two measures of inflation volatility: monthly changes to the annual rate of inflation, and the two year rolling standard deviation of the annual rate. The rolling standard deviation is considerably lower now than it was in the 1970s. But recently inflation volatility has ticked up a little. This can be seen from the slightly larger amplitude of the monthly changes in the annual inflation rate in 2001/02. There was also a slight rise in the rolling standard deviation. In the past year the annual inflation rate has changed by 0.5 percentage points or more (from month to month) four times. The previous time this occurred was in 1991, but changes then were related to changes in VAT and the council tax.

Most of the recent volatility in RPIX inflation can be attributed to a few components, notably seasonal food and petrol. Indeed, the contribution of these two components alone can explain most of the volatility in RPIX inflation, particularly over the past year (see Chart 4.15). Seasonal food and petrol prices have not been particularly volatile on their own, when compared with past history. In general, the two series are unlikely to move together because they are influenced by quite different factors: seasonal food prices are typically affected by weather conditions, whereas the oil price is determined by the interaction of global demand for and supply of oil. But in the recent past, seasonal food and petrol prices have moved somewhat unusually together for a prolonged period of time (see Chart 4.16), giving rise to the volatility in annual RPIX inflation.

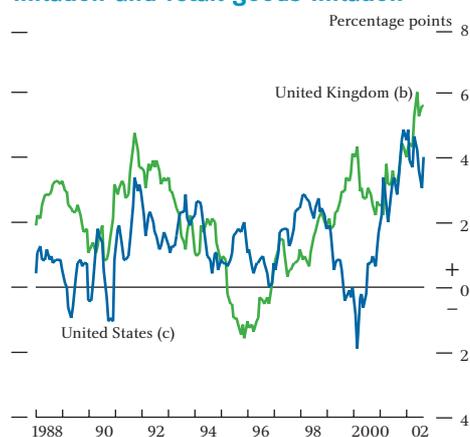
In September, annual retail services price inflation rose to 4.8% and goods price inflation rose to -0.9% (see Chart 4.17), maintaining the gap between goods and services price inflation at 5.7 percentage points. The widening in the differential between goods and services price inflation seen during the past four years has not been confined to the United Kingdom; though less pronounced, it has been a feature of the United States also (see Chart 4.18). One explanation for the fall in goods prices is weak manufacturing input prices (see page 40), magnified by intense global competition in the market for tradable goods.

The rise in retail services price inflation since the start of 2001 was mainly due to the increased contribution of leisure and household services. A large part of the pick-up in leisure services inflation reflected unusually strong increases in cable/satellite TV subscription charges and package holidays abroad. After 11 September 2001, holiday companies were concerned that people would be less willing to fly and so they

**Chart 4.17**  
**RPIX inflation**



**Chart 4.18**  
**The gap between annual retail service inflation and retail goods inflation<sup>(a)</sup>**



Sources: ONS and US Bureau of Labor Statistics.

- (a) Defined as retail services inflation minus retail goods inflation.
- (b) RPIX inflation.
- (c) CPI inflation.

cut back supply. The subsequent price rise suggests that demand may not have fallen back by as much as they had expected. Household services inflation has risen sharply mainly because telephone charges (both for mobile phones and land lines) have not fallen at the rates they had done in previous years.

Looking ahead, the MPC expects that annual RPIX inflation will move above the target by the end of the year. This projected increase is mostly accounted for by two components: petrol prices and housing depreciation. The strength of oil prices now compared with the oil price in 2001 Q4 implies that the contribution from petrol prices to annual inflation is expected to rise in 2002 Q4. The housing depreciation component measures the costs that owner-occupiers face to maintain the quality of their home. It is meant to capture large infrequent renovations, like replacing a roof. As housing depreciation is not directly measured, it is proxied by a weighted average of lagged house prices, as measured by the Office of the Deputy Prime Minister (ODPM) house price index. This method of calculation means that the current strength in house price inflation will continue to have a further upward impact on RPIX inflation in the coming months. The MPC expects RPIX inflation to remain somewhat above the target of 2.5% for much of 2003. Then inflation may drop below 2.5%, before gradually approaching the target by the end of the forecast horizon. The projection is described in greater detail in Section 6.

*This section summarises the economic developments and monetary policy decisions taken by the MPC since the August Report.<sup>(1)</sup> The Bank's repo rate was maintained at 4% in September, October and November.*

The MPC's central projection in the August Report was for RPIX inflation to run a little below the 2.5% target through most of the forecast period, before edging up to around target towards the two-year horizon. Four-quarter GDP growth was expected to return gradually to around-trend rates. The MPC judged that the risks relative to the central projection were weighted marginally on the downside for growth and slightly on the upside for inflation.

At its meeting on 4–5 September, the Committee first discussed the world economy. Equity markets had stabilised during August, above the low points reached in July, but had recorded further sharp falls in the days leading up to the Committee's meeting. However, equity markets remained volatile and little significance could be attached to short-term movements. Long-term forward interest rates had fallen in the major economies, reversing increases earlier in the year. The fall seemed largely to represent lower real rates. It was possible that it reflected market doubts about the speed of recovery, or that the volatility in equity markets had increased the attractiveness of government bonds. But it was not obviously related to any particular economic news.

Recent data from the United States were broadly consistent with the Committee's August projections. Economic news from the euro area continued to be weaker than expected and it was still unclear whether sustained recovery in Japan was under way, although the rest of Asia seemed to be growing quite strongly. A number of Latin American countries continued to face severe economic problems although there was more positive news on the month from Brazil and Argentina.

UK monetary data had shown signs of slowing. The corporate sector, including financial companies, had accounted for the

(1) The minutes of the August, September and October meetings are reproduced under a separate cover, published alongside this Report.

easing. Household borrowing had remained strong and mortgage equity withdrawal as a percentage of personal disposable income was close to the rates seen in the late 1980s. While monetary and some housing indicators suggested that consumption still had considerable momentum, retail sales growth had eased in July and survey evidence pointed to further weakening in August. The latest data suggested that labour demand might be a little weaker than expected. RPIX inflation had picked up sharply in July and had been stronger than expected.

In discussing the immediate policy decision, the Committee noted that the world economy was a little weaker than it had appeared to be a month earlier. UK consumption growth and house price inflation were showing tentative signs of slowing and the key issue was how much weight should be put on these signals. A slowing in consumption growth would be unwelcome if it were too abrupt or too early, particularly if the recovery in world activity were to be less strong. Against this background, the Committee considered whether pre-emptive action to delay the slowing in consumption growth might be warranted. However, the Committee agreed that it was premature to conclude that further stimulus was necessary. Once allowance had been made for the effects of Jubilee holidays on the pattern of output, there was little evidence that the UK recovery was faltering, and the evidence of consumption growth slowing prematurely was not clear cut. Reducing interest rates at this stage could encourage households to accumulate yet more debt and renew the upward pressure on house prices.

The Committee noted that a decision to maintain the repo rate at 4% did not represent a lack of policy response to the slower-than-expected recovery in world activity and falls in equity prices. For much of this year the prospects had been that inflation would be moving sharply above target at the two-year horizon, and it had been widely expected that official interest rates would by now need to be on an upward path. That the repo rate had still not increased in itself represented a response to the changed prospect for inflation. This was reflected in lower market interest rates, maintaining monetary conditions which continued to support the growth of domestic demand.

The Committee voted unanimously to maintain the Bank's repo rate at 4%.

At its meeting on 9–10 October, the Committee began by considering the world economy. The main development since their previous meeting had once again been the substantial fall in most leading equity market indices.

The US economy still seemed to be evolving broadly as envisaged in the *August Report*, while economic news from the euro area had been a little weaker than the Committee had expected. But the export-led recovery in Japan appeared to be continuing, while domestic demand in several other Asian economies was now growing robustly. For the world economy as a whole, the latest indicators and the falls in equity prices, if sustained, suggested that prospects for activity might be a little weaker than envisaged at the time of the *August Report*.

In the UK economy, equity prices had fallen by less than in most other major markets over the month and the sterling exchange rate had risen to 1½% above the level assumed for the third quarter at the time of the *August Report*. Since the *August Report*, government bond rates had fallen by less than in the United States and the euro area, while investment-grade corporate bond spreads had risen by less. This was consistent with a relative improvement in UK growth prospects. House prices had continued to rise sharply, although there were some tentative indications that activity in the housing market might be slowing. The greater-than-expected rise in house prices would tend to offset the influence of falling equity prices on consumption, and might lead to stronger near-term prospects for consumption than envisaged in the *August Report*. Consumption had grown slightly faster in Q2 than predicted in the Committee's forecast, but was expected to grow more slowly in Q3 as the timings of the Jubilee and Easter holidays had affected the profile of retail sales. There had also been a very sharp decline in car sales. But there were also signs of continuing strength. Retail sales had risen by 0.6% in August. And the GfK survey had shown households' confidence in their own economic position over the next twelve months to be at a record high.

Business investment was broadly unchanged in Q2. Although a further fall had been anticipated, revisions to back data meant that the level of business investment in Q2 was broadly in line with the *August Inflation Report*. Manufacturing output and industrial production had been weaker than expected. Current indicators were consistent with a very modest easing in the labour market. There was little sign of any overall change in pay pressures, and private sector settlements were lower than this time last year. RPIX inflation was 1.9% in the year to August, but was expected to rise towards, and possibly above, the 2.5% target by the end of the year.

While discussing the immediate policy decision, the Committee noted that the news over the month suggested that the prospects for the world economy were slightly weaker than envisaged in the *August Report*, largely reflecting

developments in the euro area. Downside risks to the world economy also appeared greater and the recent falls in equity prices, if sustained, posed a further risk to the outlook. The Committee agreed that the key issue was whether, in the face of continuing slow growth in external demand, monetary policy should provide a further stimulus to domestic demand.

The Committee identified a number of possible reasons for reducing the repo rate. First, the outlook for the global economy was a little weaker. Second, equity prices had fallen further and the rise in sterling had not proved temporary. Third, the downside risks to the outlook had increased. Finally, the profile of inflation had already been expected to be below target for most of the next two years at the time of the August *Inflation Report*, and an interest rate reduction had been under consideration for some time, so on this view the recent news would justify a reduction in rates without waiting for the next quarterly forecast.

The Committee also identified possible arguments for leaving the repo rate unchanged: the continued resilience of domestic demand; a rising profile for inflation at the end of the forecast horizon in the August *Report*; and the difficulty in precisely quantifying the net effect on inflation of changes to equity and house prices, the exchange rate and other news. It was not clear either that the world outlook would be significantly softer than in the August *Report*.

The Committee agreed that the decision remained finely balanced. Most members, weighing the arguments, preferred to leave the repo rate unchanged. Others regarded news in the past month, together with other news since August, as sufficient to warrant an immediate reduction to official interest rates.

The Committee voted by 6 to 3 to maintain the repo rate at 4%.

At its meeting on 6–7 November, the Committee voted to maintain the Bank's repo rate at 4%.

*The Committee's current projections for output growth and inflation are described below. Based on the assumption that official interest rates are maintained at 4%, the central projection is that four-quarter growth in UK GDP is likely to settle around trend over the next two years, as the gradual improvement in global demand, continued strong growth in public spending, and a moderate recovery in business investment counterbalance some easing in consumer spending growth. RPIX inflation is likely to rise above target in the coming months, reflecting the pattern of oil price movements and the effects of high house price inflation on housing depreciation. As these unusual influences unwind, RPIX inflation may run slightly below the 2.5% target in the second year of the projection, but pick up very gradually to around target by the two-year horizon. The medium-term outlook for inflation is marginally weaker than in August. There remain a number of major risks and uncertainties around the central projection, principally stemming from international prospects and the outlook for UK consumer spending. If they were to crystallise, these risks could have a material impact on UK inflation prospects.*

## 6.1 The inflation projection assumptions

Supported by macroeconomic policy, the gradual strengthening in world activity has continued in recent months. But the recovery remains patchy and uneven, and there continues to be considerable uncertainty surrounding the pace and solidity of the global upswing.

Business and consumer confidence indicators show no clear pattern at the global level: although some measures point to a gradual improvement in activity, others signal some loss of impetus. Financial markets remain unsettled. Following the steep decline in June and July, global equity prices fell further in the late summer. Although prices have recovered ground in recent weeks, equities remain well down on levels earlier in the year. Market volatility remains high by historical standards. Short-term market interest rates and long-term bond yields have declined again, consistent with some weakening in the near-term demand outlook, although lower interest rates should also help to promote a stronger recovery in activity subsequently. The Federal Reserve lowered interest rates by 0.5 percentage points to 1.25% on 6 November to provide a further stimulus to the recovery in the United States.

The resilience of the upturn in the United States remains hard to gauge. GDP rose by 0.8% in 2002 Q3, much higher than expected three months ago. But the strength can be largely traced to the impact of special incentives on automobile sales which provided a temporary boost to consumer spending.

High levels of secured borrowing are also supporting household demand, although consumer confidence has fallen markedly in recent months. The sharp decline in equity wealth over the past year, weak labour market trends, and relatively subdued growth in household income may be weighing on confidence and spending plans. The near-term outlook is for slower growth in consumer spending. Moreover, any recovery in business investment is likely to be relatively sluggish, given little pressure on capacity and high levels of uncertainty which encourage companies to delay capital expenditure. The Committee judges that US GDP growth will ease in the fourth quarter with a slowdown in consumer spending. Thereafter, growth should strengthen gradually, underpinned by continued improvements in productivity and the low level of interest rates. Taking the further easing of policy into account, the outlook is broadly similar to the August central projection.

Output growth in the euro area remains sluggish, with little or no increase in domestic demand over the past year. Consumer spending has risen only marginally over this period. The recent pattern of household spending in the euro area is much weaker than in the United States or the United Kingdom, perhaps reflecting a combination of factors such as: slower growth in real disposable income; higher levels of unemployment, which may have depressed consumer confidence; and a less buoyant housing market in the larger economies which has consequently provided less additional collateral to support a rise in household credit. Moreover, the low level of construction investment in Germany following the post-reunification boom has exacerbated the contraction from the recent decline in the global demand for plant and machinery, and thus has amplified the investment cycle in the euro area. The Committee continues to expect a modest recovery in euro-area GDP growth over the forecast period. But, reflecting the weaker-than-expected domestic demand outturns for this year, the prospective pick-up may be a little more muted than thought likely three months ago.

There is little change to the outlook in the rest of the world. The most likely outcome in Japan is for a weak cyclical recovery; prospects remain highly uncertain given the continuing challenge of non-performing loans. Growth elsewhere in Asia held up relatively well during the global downswing, bolstered by robust domestic demand. External demand nonetheless remains an important spur, and growth in the region is likely to strengthen further in line with the recovery in the major industrial economies.

Drawing together the picture from different regions, the Committee continues to assume that there will be a gradual strengthening in UK-weighted world demand and trade over

the forecast period, fostered by the stimulative stance of policy. Annual global GDP growth is likely to return to around trend rates in the second year of the projection. Taking into account the lower level of market interest rates, the global prospects are broadly similar to those in the *August Report*.

The upswing in the world economy is not yet durably entrenched, however, and there are downside risks to the global outlook. Confidence in global equity markets remains fragile. Moreover, in the United States, the high level of private sector debt and low rate of household saving continue to be sources of particular vulnerability. Indeed, the drop in US consumer confidence in recent months could foreshadow a weaker outlook for household spending than currently envisaged, and that in turn could check the upward momentum in overall activity. And, in the euro area, given only limited recovery in output growth to date and the absence of any sustained pick-up in domestic demand, there are risks of a renewed downturn in private sector confidence, which could prompt companies and households to rein back spending plans and thus prolong the period of below-trend growth.

The most likely prospect for international prices has changed relatively little since August. Oil prices rose during August and September, given heightened uncertainty regarding military conflict in Iraq and a possible disruption to supplies. But prices fell back in October as market concerns eased. Oil futures prices, which are used to guide the Committee's central projection, edge down over the next two years to around the levels expected three months ago. The projection for non-oil commodity prices is little altered: a stronger outlook for food prices is largely counterbalanced by a weaker picture for industrial commodities. More broadly, global inflationary pressures are likely to remain subdued over the forecast period, given the prospect of only a moderate recovery in world output growth. The outlook for the price of internationally traded goods and services is close to the August projection.

UK import prices also depend on the outlook for sterling exchange rates. The sterling effective exchange rate index (ERI) has changed little over the past three months. In the 15 working days to 6 November, the sterling ERI averaged 106.3. That rate has been used as the starting point in the current projection. It is consistent with bilateral rates of \$1.55 and 63 pence against the euro, and is less than 1% above the level assumed in the *August Report*. The sterling ERI is assumed to depreciate gently over the forecast period to 104.5 in 2004 Q4.

UK equity prices have continued to track international developments closely. Prices fell sharply in September, but

subsequently recaptured much of this additional loss as global markets have rallied in recent weeks. In the 15 working days to 6 November, the FTSE All-Share index averaged 1955, some 4% below the level for 2002 Q4 incorporated in the August projection. Maintaining the conventional approach, equity wealth is assumed to rise in line with nominal GDP over the forecast period.

House prices have again risen more quickly than expected in recent months, with both the Halifax and Nationwide reporting increases in the 25%–30% region over the past year. The market remains very buoyant, although there are some tentative signs of moderation looking forward. In particular, data on new housing reservations and loan approvals are running below levels earlier in the year. This may herald some easing in activity, as recent price increases have increasingly stretched the affordability of houses in terms of average disposable income. In the Committee's central projection, house price inflation slows markedly, with prices broadly stable in two years' time. But there are major risks around the assumed path.

The MPC's projections continue to be based on the Government's nominal public spending plans, which imply further robust growth in government expenditure over the forecast period. In recent months, tax revenues have fallen short of expectations in the Budget. In large part that appears to reflect the influence of weaker-than-expected economic growth and the impact of the slowdown on revenues linked to the financial services sector. Based on recent outturns, the Committee has lowered the estimates of future tax revenue.

## **6.2 The output and inflation projections**

Output growth in the United Kingdom has continued to recover from the cyclical trough around the turn of the year. According to the preliminary ONS estimate, GDP rose by 0.7% in 2002 Q3, slightly above the revised estimate of growth in the second quarter. However, recent monthly and quarterly data for production and demand have been affected by the timing of Easter and by the Jubilee holidays, which have clouded the assessment of trends. Taken together, the Q2 and Q3 GDP estimates are consistent with a gradual rebound in output growth to around long-term trend rates. Nevertheless, the pick-up in activity over the spring and summer appears somewhat weaker than assumed three months ago.

Strong growth in consumer spending has provided the main support to GDP growth in the United Kingdom in recent years. Robust spending has underpinned domestic demand and cushioned the impact of the recent global downturn. However, the resulting divergence between domestic and

external demand has been reflected in uneven pressures on industrial sectors. It has also been associated with a build-up of household debt to historically high levels in relation to income, which increases the risks of a sharp slowdown in household spending at some point. Against this background, the outlook for consumer spending remains central to the overall assessment of future aggregate demand conditions.

There are some signs of easing in consumer spending growth this year from the pace in 2001, adjusting for the impact of the timing of Easter and the Jubilee Bank Holidays which have affected the monthly and quarterly pattern of expenditure. But to date, the slowdown appears to be moderate and underlying spending growth remains quite strong. Several factors point to near-term resilience in spending. Real interest rates are low, and the sharp increase in house prices in recent years has enabled homeowners to borrow more cheaply and to withdraw substantial housing equity against the value of their additional collateral. Unsecured borrowing is also growing very rapidly. Unemployment has been maintained at historically low levels over the past year, and consumer confidence remains relatively high. However, other influences continue to point to a slowdown in spending. In particular, growth in real post-tax labour income has fallen from the rapid rates in recent years, and the sharp fall in equity prices this year has reduced household financial wealth considerably.

The Committee continues to expect a further slackening in the growth of consumer spending over the forecast period. The recent strength of the housing market is likely to sustain growth in credit and spending for a while, with consumption decelerating more sharply as house price inflation slows. Moreover, real household income growth is likely to remain relatively subdued for some time, as employment growth falters, and as the increase in National Insurance Contributions in April 2003 reduces take-home pay. And, although the links between equity prices and consumer spending are uncertain, the sharp drop in financial wealth over the past two years should encourage households to make additional savings over the forecast period in order to rebuild their balance sheet positions. The central projection is that quarterly consumer spending growth will be relatively robust around the turn of the year, following a weak third quarter, but will then moderate through 2003 to a little below long-run trend rates. Largely echoing changes to the assumed profile of house price inflation, consumer spending growth may be a little stronger in the first year of the projection than assumed in August, and a little weaker in the second year.

Business investment remains depressed. Investment has fallen in each of the past six quarters, and in 2002 Q2 capital spending was almost 11% down on levels a year earlier.

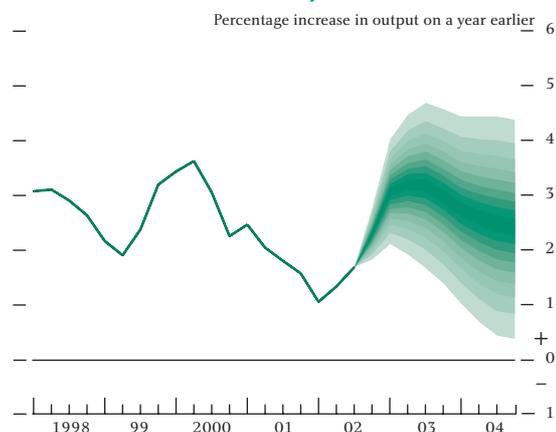
Cutbacks have been equally sharp across the manufacturing and service sectors.

There is little likelihood of an imminent turnaround in investment spending. There are few signs of emerging strains on plant capacity: although there are significant differences across sectors, capacity utilisation, on average, is marginally below normal levels. And, although aggregate profits have edged up in recent quarters, capital gearing at market values has increased given the recent sharp fall in equity prices, which has added to pressure on corporate balance sheets. Internal funds for investment may also be lowered by additional payments to finance pension fund shortfalls brought about by falling equity values. Moreover, uncertainty about the global recovery continues to provide companies with an incentive to postpone investment. Reflecting these factors, investment intentions surveys have generally weakened over the past quarter. The Committee's central projection is that business investment will dip a little further in the second half of 2002, and will then pick up gradually thereafter. Although business investment may rise a little faster than GDP over the forecast period, the recovery in investment is likely to be restrained: in particular, the level of business investment by the end of 2004 is expected to remain below the level at the end of 2000. The trend in whole-economy investment is likely to continue to be a little stronger than that for business investment, primarily reflecting the vigorous growth in public sector investment incorporated in spending plans.

Lower inventory investment subtracted significantly from aggregate demand in 2002 Q2. Surveys of manufacturing firms, in particular, reported that companies were seeking to cut stock levels to lower financing costs and improve cash flow. In some cases, the shutdown in production in the Jubilee Bank Holiday week may have provided an opportunity for companies to meet final demand by reducing inventories. The latest CBI Industrial Trends Survey suggests that the correction of manufacturing inventories may be drawing to an end, thus providing a one-off boost to total demand and output. Combined with reports from the CBI Distributive Trades Survey suggesting that distribution firms added to stock levels, whole-economy inventory investment is likely to have supported GDP growth in 2002 Q3. There is little sign from surveys or reports to the Bank's Agents of any major imbalance in aggregate inventory holdings. The Committee has consequently maintained the assumption that stock levels rise broadly in line with output over the forecast period.

The monthly and quarterly pattern of trade flows has also been volatile this year. Following a sharp bounceback in 2002 Q2, monthly data point to a fall in export volumes in the third quarter, suggesting that the Q2 outturn exaggerated the

**Chart 6.1**  
**Current GDP projection based on constant nominal interest rates at 4%**



The fan chart depicts the probability of various outcomes for GDP growth in the future. The darkest band includes the central (single most likely) projection and covers 10% of the probability. Each successive pair of bands is drawn to cover a further 10% of probability, until 90% of the probability distribution is covered. The bands widen as the time horizon is extended, indicating 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.

strength of the underlying recovery in international demand for UK goods. Indeed, recent monthly outturns have been surprisingly low in relation to estimates of global demand and the relative prices of UK exports. Although some of the unexplained weakness is likely to be erratic, the Committee judges that the low outturn may also signify a more depressed underlying position. The Committee continues to expect a steady recovery in exports over the next two years, predicated on the assumption of a gradual strengthening in external markets. Nevertheless, export prospects are less bright than assumed in the *August Report*, reflecting the combination of a weaker-than-expected starting level, and a slightly stronger profile for the sterling effective exchange rate.

Import volumes have also been relatively weak in recent months and have fallen short of the level expected in the *August Report*. Looking back over the past year, it appears that the lower-than-expected level of imports in relation to UK aggregate demand can largely be explained by the compositional changes within spending: in particular, given the high proportion of capital goods that are imported, the steep fall in business investment is likely to have had a major counterpart in reduced imports. Drawing on disaggregated information on the outlook for the main components of aggregate demand, import growth is likely to rise over the forecast period. Moreover, import growth may rebound more quickly than export growth. In consequence, following the erratic substantial positive contribution of net trade to GDP growth in 2002 Q2, net trade is likely to remain a brake on output growth over the next two years, although the restraint may fade by the end of the period as the global upswing gathers strength.

The Committee's current projection for the four-quarter growth in GDP is shown in Chart 6.1.<sup>(1)</sup> It is based on the assumption that official interest rates are maintained at 4%.<sup>(2)</sup> Four-quarter growth in GDP recovered to 1.7% in 2002 Q3 from the low point of 1.0% in 2002 Q1. On the central projection, four-quarter GDP growth is expected to pick up further to a little above long-run trend rates by early 2003, before settling around trend thereafter. Robust household and public spending are likely to provide the main impetus to GDP growth over the next six months. As consumer spending growth is then likely to slow, the steady upturn in global demand and the moderate recovery in business investment are expected to support the continued strong expansion in public spending, maintaining overall GDP growth around trend. The central projection is broadly similar to the *August* projection, with growth a little stronger in the short run, and slightly

(1) Also shown as Chart 1 in the Overview.

(2) An alternative projection based on market interest rate expectations is shown in Chart 6.5 below.

weaker in the medium term. The change in the profile for consumer spending largely accounts for the small difference.

As expected, RPIX inflation has bounced back from the low point of 1.5% in June. Indeed, RPIX inflation averaged 2.0% in 2002 Q3, slightly higher than in Q2, and a little above the August central projection. RPIX inflation has remained volatile and the underlying trend hard to determine, as the twelve-month rate has been buffeted by the emergence and subsequent unwinding of a number of temporary influences on the price of relatively erratic components such as seasonal food and petrol. The rapid increase in house price inflation over the past year has also had a pronounced direct impact on the housing depreciation component. The marked divergence between services and goods price inflation has persisted, related to differences in demand conditions as well as in productivity growth.

The prospects for inflation depend on the pressures exerted by demand in relation to the sustainable supply capacity of the economy. Previous *Reports* have spelled out the challenges and uncertainties involved in forming estimates of sustainable supply capacity. Given little new information, the Committee has maintained the same assumption on the near-term growth in potential supply capacity as in the *August Report*.

Overall pay pressures remain subdued. Whole-economy earnings growth per employee continues to run a little below 4% per annum, even though bonuses no longer appear to be falling and the downward impact on earnings growth from this source has come to an end. Moreover, average pay settlements over the past year remain around 3%. Underlying earnings growth may, however, be slightly higher than measured, as the delayed settlement for local government workers is not yet captured in the data. Furthermore, average hours worked per head have fallen significantly over the past year, pressing down on total earnings: pay per hour is consequently rising more quickly than pay per employee.

Inflation expectations appear relatively well-anchored to the inflation target and seem unlikely to be a source of particular pressure on nominal earnings.

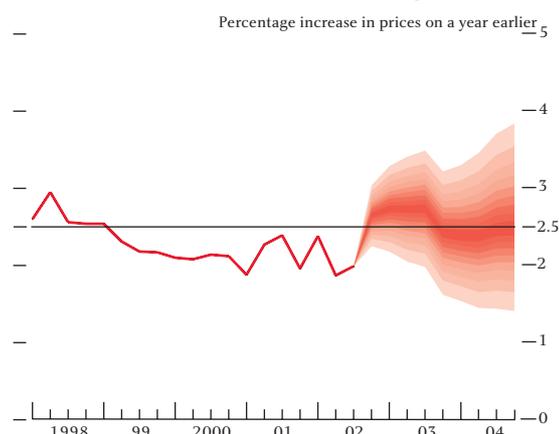
The outlook for real earnings growth depends on employers' demand for labour in relation to the available supply, as well as on the growth of labour productivity. There may have been a weakening in aggregate labour demand in recent months, as total hours worked have fallen, although the downward trend is likely to be exaggerated by the Jubilee holiday distortions. In addition, LFS employment is rising less quickly. Moreover, some surveys and reports from the Bank's regional Agents indicate a marginal easing in recruitment difficulties, although

the pattern is far from uniform, and any such slackening appears very small. Indeed, unemployment remains stable at historically low levels. Overall labour market conditions remain tight.

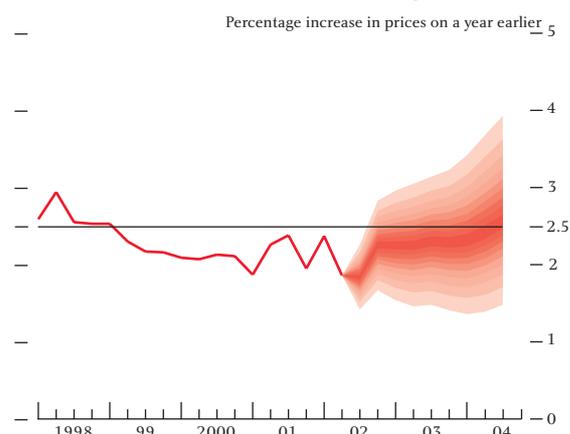
Productivity growth per person has been exceptionally weak over the past 18 months or so, as LFS employment growth remained relatively resilient despite the slowdown in GDP growth. Output per hour has held up better, as average hours worked have fallen, perhaps in part temporarily as firms have lowered overtime to reduce costs, but also perhaps reflecting a desire from some employees to work shorter hours and to seek part-time rather than full-time work. In aggregate, employers have sought to retain labour and in some cases to expand their headcount, presumably on the assumption that the downturn would be relatively shallow and short-lived, and recognising that the costs of shedding labour and subsequently recruiting and retraining could be substantial in a tight market. In addition, public sector recruitment has also increased over this period, helping to underpin demand. Looking forward, projected growth in output at around trend rates would typically be associated with a steady increase in labour demand. However, in the initial phase of recovery, companies are likely to be able to supply the extra output by working off any 'hoarding' of labour during the downswing, and by taking the opportunity to rebuild productivity to more normal levels. As a result, although public sector demand is likely to continue to rise given the planned expansion of public services, total numbers employed could be relatively little changed over the next year or so. Given steady growth in the working-age population, labour market conditions could consequently ease slightly for a time.

Drawing together the various influences on pay, nominal earnings growth is likely to edge up a little in the near term. A number of factors are likely to provide some upward pressure: the payment of the delayed local authority settlement; the current tightness of the labour market; and the prospective rise in inflation outturns. But the upward trend in earnings is unlikely to be sustained beyond 2003, as the projected slight easing in labour market conditions should help to contain any increase in pay pressure. Unit wage costs may rise a little less quickly over the forecast period than over the past year, as the cyclical recovery in productivity growth is likely to exceed the pick-up in earnings growth. But the benign implications for unit labour costs, which include employers' social contributions and other non-wage employment costs in addition to wages, will be tempered by the increase in National Insurance contributions next year. Moreover, in terms of the impact on prices, companies may well pay more attention to a smoothed or trend measure of unit labour costs which attaches less weight to cyclical fluctuations.

**Chart 6.2**  
**Current RPIX inflation projection based on constant nominal interest rates at 4%**



**Chart 6.3**  
**RPIX inflation projection in August based on constant nominal interest rates at 4%**



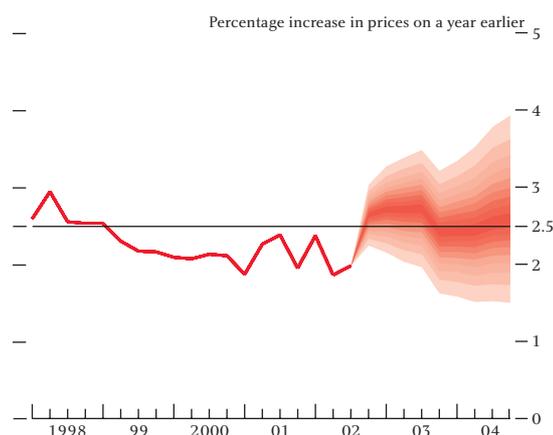
The fan chart depicts the probability of various outcomes for RPIX inflation in the future. The darkest band includes the central (single most likely) projection and covers 10% of the probability. Each successive pair of bands is drawn to cover a further 10% of probability, until 90% of the probability distribution is covered. The bands widen as the time horizon is extended, indicating 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 Committee’s latest projection for the twelve-month RPIX inflation rate is presented in Chart 6.2.<sup>(1)</sup> The projection is based on the assumption that official interest rates are maintained at 4% over the forecast period.<sup>(2)</sup> It is shown alongside the August projection, which was also conditioned on interest rates remaining at 4% (see Chart 6.3).

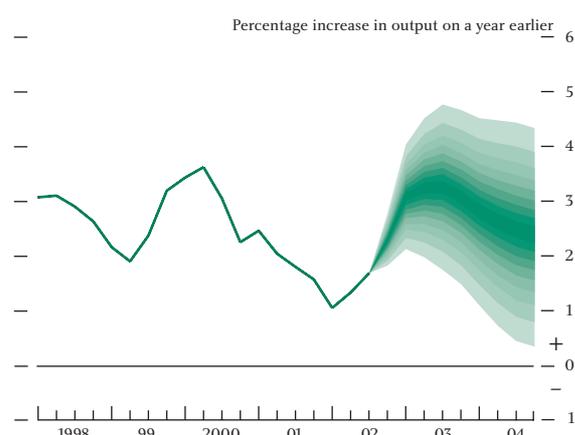
The central projection is that RPIX inflation is likely to move somewhat above target by the end of the year and may remain a little above target through much of 2003. Inflation is then expected to edge down slightly and to run a little below the target, although inching up very gradually to around the target level by the two-year forecast horizon. Two factors account for the near-term pick-up in RPIX inflation. First, global oil prices in late 2002 are much higher than in late 2001, when prices dipped sharply in the aftermath of the 11 September terrorist attacks. Second, the sharp increase in UK house price inflation continues to boost the housing depreciation component of RPIX. Both influences are likely to be transitory. The twelve-month change in oil and petrol prices is likely to decline during 2003, and indeed may well reverse sign by the end of the year. It is highly unlikely that house price inflation can persist for long at the current unsustainable pace. So the projected near-term increase in RPIX inflation may exaggerate the strength of underlying inflationary pressure somewhat. Abstracting from these temporary influences, RPIX inflation appears likely to be broadly flat over the forecast period around the 2.5% target level. Reflecting the prospect of UK GDP in broad balance with supply capacity, underlying

(1) Also shown as Chart 2 in the Overview.  
 (2) An alternative projection based on the assumption that interest rates follow market expectations is illustrated below in Chart 6.4.

**Chart 6.4**  
Current RPIX inflation projection based on market interest rate expectations



**Chart 6.5**  
Current GDP projection based on market interest rate expectations



domestic inflationary pressures are expected to be relatively stable. External influences on prices may be a little stronger than in the recent past, but are also expected to show no clear trend over the forecast period.

Compared with the August projection, RPIX inflation is likely to be noticeably higher over the next year or so, principally reflecting the recent spike in oil prices and the direct effect, via the housing depreciation component, of the persistence of high house price inflation. But inflation is expected to be marginally lower in the second year of the projection than in August, principally reflecting slightly softer external pressures on inflation.

Financial market participants have again lowered their expectations of the likely level of official interest rates in the United Kingdom over the next two years. Employing the same approach as in previous *Reports*, and based on a 15 working-day average to 6 November, market expectations were consistent with the possibility of a slight reduction in official interest rates in the coming months, with the prospect of a reversal by the end of 2003 and a slight increase thereafter to around 4<sup>1</sup>/<sub>2</sub>% by the end of 2004 (see Table 6.A). The Committee's latest projections based on this interest rate trajectory are shown in Charts 6.4 and 6.5. The differences from the constant interest rate projections are negligible.

There remains considerable uncertainty surrounding the prospects for output growth and inflation. The Committee has continued to calibrate the variance of the fan chart drawing on the experience of previous forecast errors. There are a

**Table 6.A**  
Market expectations of the Bank's official interest rate<sup>(a)</sup>

Per cent

2002		2003			2004			
Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
4.0	3.8	3.7	3.8	4.0	4.2	4.4	4.5	4.6

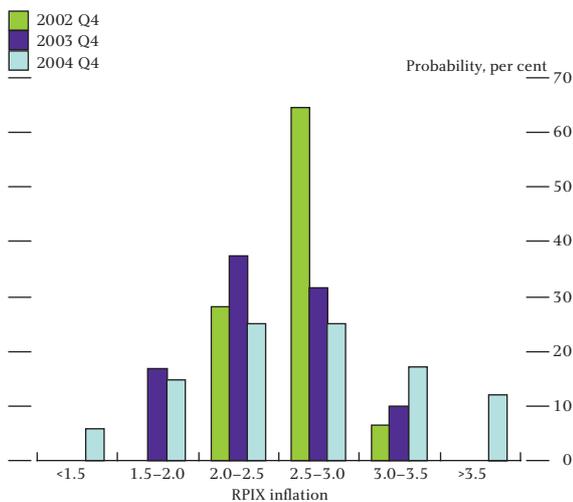
(a) Based on the interest rate available on gilt-edged securities, including those used as collateral in short-term repo contracts, plus a small upward adjustment to allow for the average difference between this rate and the Bank's official interest rate. The data are 15-day averages to 6 November 2002.

number of risks to the outlook that could have a major bearing on inflation prospects. Judgments about these risks consequently form a key consideration in gauging the appropriate level of interest rates.

First, as outlined above, there is a risk that the world recovery could still falter. A much weaker international outlook would have a substantial impact on the prospects for UK GDP growth and inflation.

Second, there is considerable uncertainty surrounding the outlook for consumer spending in the United Kingdom, which is closely linked to the prospects for the housing market. House price increases at current rates are clearly unsustainable. The central projection incorporates a sharp slowdown in house price inflation, with prices broadly stable in two years' time. But there are large risks to this view. Given current high levels of consumer confidence and low unemployment, there is a possibility that continued rapid house price inflation could persist for a time, fuelling a further expansion of household debt and supporting stronger consumer spending than in the central projection. But the longer house prices rise at an unsustainable pace, and the larger the build-up of household debt, the greater the risk of a sharp correction at some point. There are consequently both major upside and downside risks to the outlook for consumer spending and inflation arising from the potential instability in current housing market trends.

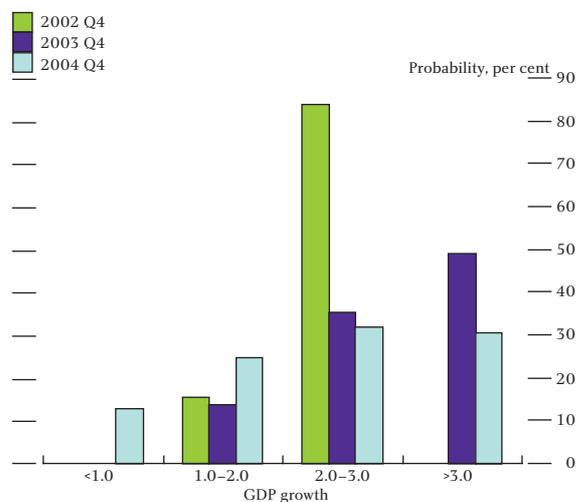
**Chart 6.6**  
The MPC's expectations for RPIX inflation based on constant nominal interest rates at 4%<sup>(a)</sup>



Source: Bank of England.

(a) These figures are derived from the same distribution as Chart 6.2. They represent the probabilities which the MPC assigns to RPIX inflation lying within a particular range at a specified time in the future. Because of the difficulties in precisely quantifying low-probability events, probabilities of less than 5% are not shown in this chart.

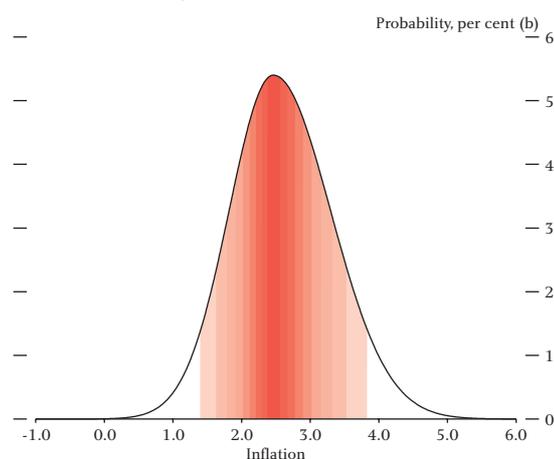
**Chart 6.7**  
The MPC's expectations for GDP growth based on constant nominal interest rates at 4%<sup>(a)</sup>



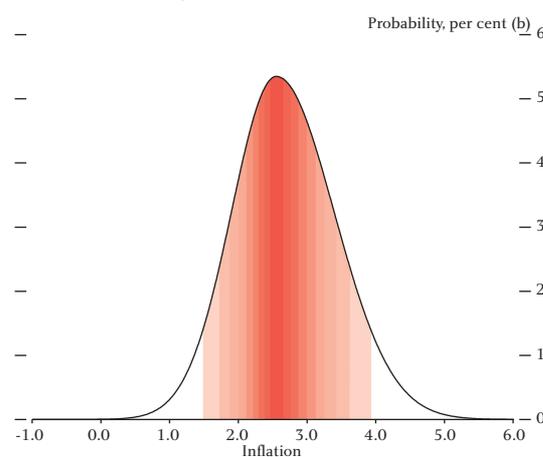
Source: Bank of England.

(a) These figures are derived from the same distribution as Chart 6.1. They represent the probabilities which the MPC assigns to GDP growth lying within a particular range at a specified time in the future. Because of the difficulties in precisely quantifying low-probability events, probabilities of less than 5% are not shown in this chart.

**Chart 6.8**  
Current projection for the percentage increase in RPIX in the year to 2004 Q4<sup>(a)</sup>



**Chart 6.9**  
August projection for the percentage increase in RPIX in the year to 2004 Q3<sup>(a)</sup>



Source: Bank of England.

- (a) These charts represent a cross section of the fan chart at the end of the respective forecast horizons. As with the fan charts themselves, the shaded areas represent 90% of the distribution of possible outcomes for RPIX inflation in the future. The darkest band includes the central (single most likely) projection and covers 10% of the probability. Each successive pair of bands covers a further 10%. There is judged to be a 10% chance that the outcome will lie outside the shaded range. For further details on how the fan charts are constructed see the box on pages 48–49 in the May 2002 *Inflation Report*.
- (b) Probability of inflation being within  $\pm 0.05$  percentage points of any given inflation rate, specified to one decimal place. For example, the probability of inflation being 2.5% (between 2.45% and 2.55%) in the current projection is around 5%.

Third, the Committee has maintained the view from previous *Reports*, that there is a risk that the pass-through into wages and prices of the increase in National Insurance contributions next year could be higher than in the central projection. There is a small upside risk to the central projection for inflation and a slight downside risk to the outlook for GDP growth from this source.

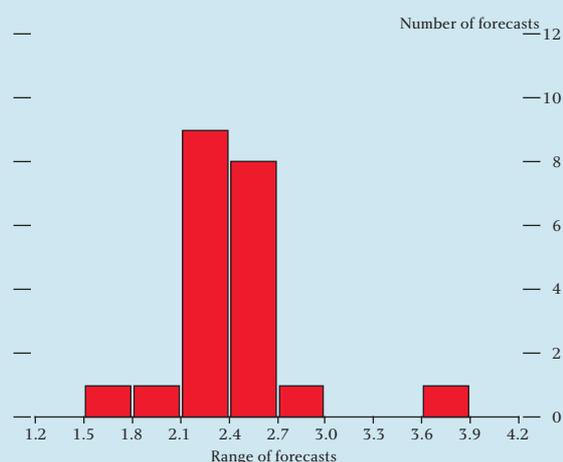
The risks to the outlook are therefore substantial. A material change in the prospects for the world economy or for the UK housing market could have a profound impact on UK inflation prospects. But given the large and uncertain risks in both directions, the best collective judgment of the Committee is that the risks around the central projection from these factors are broadly balanced over the forecast period. Reflecting the possible impact of the rise in National Insurance contributions, the Committee judges that, relative to the central projection, the overall risks to growth are weighted marginally to the downside, with those to inflation slightly on the upside. The probabilities of various outcomes for RPIX inflation and GDP growth are presented in Charts 6.6 and 6.7. The overall balance of risks to the inflation outlook at the two-year horizon is illustrated in Chart 6.8, together with the corresponding balance in the August *Report* (see Chart 6.9). Bearing in mind the major uncertainties, individual Committee members hold a range of views on the overall balance of risks, although the range of opinion is relatively narrow.

The Committee reviewed the latest economic news, alongside the current projections and the risks to the outlook, at the policy meeting on 6–7 November. Given that the central projection of inflation was close to target, and that the large and uncertain risks appeared at present to be in broad balance, the Committee voted to maintain the Bank’s repo rate at 4%.

## Other forecasters' expectations of RPIX inflation and GDP growth

In October, the Bank asked a sample of external forecasters for their latest projections of inflation and output. The average forecast for the twelve-month rate of RPIX inflation in 2002 Q4, based on the results of this survey, was 2.3% (with a range of 1.9% to 2.6%) rising to 2.4% in 2004 Q4 (with a range of 1.7% to 3.7%). Compared with the survey results in the *August Report*, the average forecast for inflation at the two-year horizon was slightly lower. The distribution of the forecasters' central projections has the greatest number of respondents expecting inflation to be between 2.1% and 2.4% (see Chart A). In August, the most popular range was between 2.4% and 2.7%. On average the external forecasters see a 64% probability of inflation being at or below 2.5% in 2004 Q4 (see the table below).

**Chart A**  
Distribution of RPIX inflation forecasts for 2004 Q4



Source: Forecasts of 21 outside forecasters as of 31 October 2002.

### Other forecasters' expectations of RPIX inflation and GDP growth

#### RPIX inflation (a)

Probability, per cent	Range:					
	Less than 1.5%	1.5% to 2.0%	2.0% to 2.5%	2.5% to 3.0%	3.0% to 3.5%	More than 3.5%
2002 Q4	£5	21	48	24	£5	£5
2003 Q4	8	20	35	22	12	£5
2004 Q4 (b)	9	19	36	20	8	8

#### GDP growth (c)

Probability, per cent	Range:			
	Less than 1%	1% to 2%	2% to 3%	More than 3%
2002 Q4	6	41	45	7
2003 Q4	10	24	44	25
2004 Q4 (d)	15	20	42	25

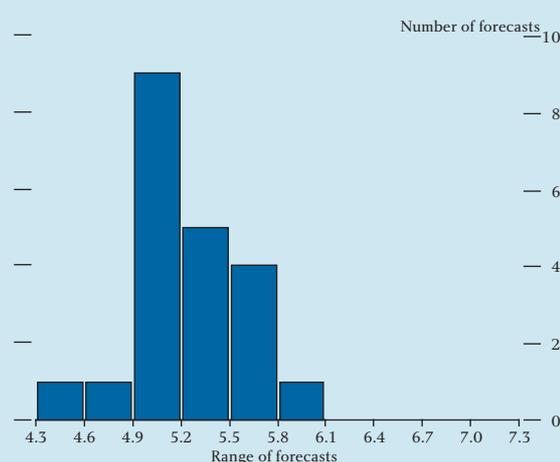
(a) 22 other forecasters provided the Bank with their assessment of the likelihood, at three time horizons, of expected twelve-month RPIX inflation and four-quarter output growth falling in the ranges shown above. This table represents the means of the responses for each range. For example, on average, forecasters assign a probability of 9% to inflation turning out to be less than 1.5% in 2004 Q4. Figures may not sum to 100 due to rounding.

(b) 21 forecasters.  
(c) 22 forecasters.  
(d) 21 forecasters.

The forecasters' average projection for four-quarter GDP growth in 2002 Q4 was 2.1% (with a range of 1.6% to 2.5%), which was somewhat lower than the average forecast reported in August. The average projection for GDP growth in 2004 Q4 was 2.6% (with a range of 2.2% to 3.5%).

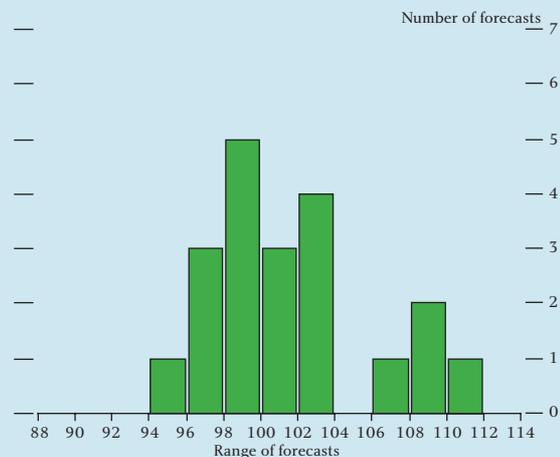
The average forecast for the official interest rate in 2002 Q4 was 4.0% (ranging from 3.8% to 4.5%), rising to 5.2% by 2004 Q4 (with a range of 4.5% to 5.9%). The forecast for 2002 Q4 was slightly lower than the average forecast in August, but the forecast at the two-year horizon was unchanged. On average, forecasters expect that the sterling ERI will be 105.4 in 2002 Q4 (ranging from 101.0 to 110.6), falling to 101.4 by 2004 Q4 (ranging from 95.0 to 110.7).

**Chart B**  
Distribution of repo rate forecasts for 2004 Q4



Source: Forecasts of 21 outside forecasters as of 31 October 2002.

**Chart C**  
Distribution of sterling ERI forecasts for 2004 Q4



Source: Forecasts of 20 outside forecasters as of 31 October 2002.

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# Bank of England

## Agents' summary of business conditions

November 2002

*This publication is a summary of monthly reports compiled by the Bank of England's Agents, following discussions with around 2,000 businesses in the period between mid-July and mid-October. It provides information on the state of business conditions, from firms across all sectors of the economy. The report does not represent the Bank's own views, nor does it represent the views of any particular firm or region. The Bank's Monetary Policy Committee uses the intelligence provided by the Agents, in conjunction with information from other sources, to assist its understanding and assessment of current economic conditions.*

- Agricultural output increased further. Arable yields were substantially above 2001 levels, contributing to continued weakness in cereals prices.
- The recovery in manufacturing output remained slow and uneven. Sub sectors such as civilian aerospace and telecommunications were still depressed, whereas companies producing goods for the public sector, construction or consumers reported increases in output.
- Growth in construction output began to moderate and the balance of orders continued to shift away from commercial buildings to public sector projects. Strong demand for new houses continued. Though there was some easing in the secondary market for higher priced houses, there was no indication of slower demand for other types of property.
- The picture for business services was mixed, with growth in many sectors contrasting with weakness in financial and related services in the London area. Demand for consumer services continued to grow, although overcapacity was becoming evident for some leisure facilities.
- Growth in consumer spending moderated slightly over the period and the outlook was more uncertain. Sales of new cars were lower than expected in September stimulating manufacturers' promotions the following month. Discounting of flights and hotel rooms had boosted demand for short breaks.
- Growth in demand from some smaller export markets did not fully compensate for continued weakness in demand from Germany and the United States. Import penetration continued to increase.
- Low profitability, volatility in world equity markets and weaker confidence resulting from the threat of war with Iraq had led to renewed caution about investment among manufacturing and business services contacts.
- Prices of some raw materials rose during the period, although weak global demand allowed buyers to limit the impact of increases through more efficient purchasing. Some cost increases, such as insurance premia, were less easy to resist. Manufacturing output prices and some professional fees were subject to downward pressure due to plentiful supply.
- Retail goods price inflation remained muted and prices of new and used cars continued to fall. Prices of most consumer services, except rates for flights and hotel rooms, continued to rise.
- The labour market eased slightly as autumn brought more redundancies. But increased public sector employment contributed to continuing labour shortages in some localities. Pay pressures remained subdued but total costs rose more substantially for employers who needed to increase pension fund contributions.

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(1) The Bank of England has Agencies for Central Southern England, the East Midlands, Greater London, the North East, the North West, Northern Ireland, Scotland, the South East & East Anglia, the South West, Wales, the West Midlands, and Yorkshire & the Humber.

## OUTPUT

### Primary production

Agricultural output continued to increase. Substantially higher yields from the domestic cereals harvest than in 2001, and increasing competition from imports, contributed to prices remaining at long-term lows. Prices for potatoes and other root vegetables were also depressed, in some cases significantly below production costs. Agencies reported that, as a result, many farmers would cease to grow potatoes. Restocking of beef and lamb following the end of foot-and-mouth disease (FMD) continued, generally to numbers slightly below pre-FMD levels. Exports of livestock have not yet recovered to pre-2001 levels.

### Manufacturing

The gradual and patchy recovery in manufacturing output continued. Companies producing for the public sector, for construction, or for goods for the consumer were generally seeing some growth in output. Demand for household goods and for processed, chilled and frozen foods continued to increase. And manufacturers of luxury goods increased their output. Manufacturers of specialist safety equipment benefited from health and safety legislation and insurers' requirements. However, increasing import penetration limited the gains from extra demand. Contacts also reported increasing pressure from customers for stock to be held by suppliers, as deferral of delivery of orders by customers became more common. UK manufacturing capacity continued to contract as multinational companies rationalised their production sites, increasingly moving factories to China, eastern Europe, or consolidating production into fewer European plants.

Overcapacity in printing continued. Expected recoveries in production of chemicals and plastics failed to materialise. Orders for machine tools and capital goods generally remained weak, and the civilian aerospace and telecommunications sectors showed little sign of recovery.

### Construction and housing

Prospects for construction output have softened since the previous *Agents' Summary*. Current activity remained high, but orders were weaker. Little work on new commercial buildings was started, unless fully pre-let, even though investor demand for office and industrial property continued to rise. Demand for new distribution sheds and development and refurbishment

of retail and leisure property remained strong. However, the balance of activity was shifting more to public sector work on schools, hospitals, social housing, flood protection and transport infrastructure. Some Private Finance Initiative projects continued to experience long gestation periods.

Growth in house building continued to be constrained by shortages of suitable land and labour. Strong demand was maintained, with many properties selling before they were built. In the secondary housing market, some easing in demand for the highest priced properties was apparent, but in most regions there was no indication of slower demand for mid-market properties, or from first-time buyers.

### Services

Growth in output of business services remained positive overall, but performance was dependent on the nature of the customer. Outsourcing of work, such as recruitment and legal services by the public sector, was underpinning strong growth for some companies. Those providing services to manufacturing were facing reduced orders, particularly for functions such as maintenance of plant, as production moved overseas and companies deferred inessential spending. Warehousing demand at ports was in some cases at record levels, reflecting buoyant imports, especially from the Far East.

Weak private sector demand was reported in sectors such as IT services and marketing. Investment banking and related financial services were particularly subdued in London. Accountants reported a modest increase in demand for insolvency and personal bankruptcy work.

Corporate expenditure on conference facilities, contract catering, taxis, car-hire and international courier services remained depressed. Business travellers also appeared to be cutting costs by lowering spending on corporate credit cards and increasing use of discount airlines and budget hotels.

Demand for consumer services continued to grow but there were signs of overcapacity in some regions in leisure facilities, such as restaurants and fitness clubs. Bookings of long-haul holidays remained below last year's levels, although travel services as a whole saw some growth. Housing-related services, such as estate agencies, mortgage providers and solicitors, reported continued buoyant year-on-year growth in volume and value of business.

## DEMAND

### Consumption

The rate of growth in consumer spending appeared to have eased somewhat, albeit from strong figures earlier in the year. Spending on home entertainment electrical goods and garden centre products remained buoyant.

Although early spending on Christmas merchandise was higher than a year ago, retail contacts were nervous that consumer confidence and spending would weaken rapidly if war broke out in the Middle East.

Total sales of new cars in the September new registration month were lower than a year earlier, although manufacturers' promotions succeeded in boosting sales in October. Over the period, only prestige marques recorded significant growth in sales. Contacts suggested that a significant proportion of car purchases was financed through mortgage equity withdrawal.

The pattern of spending on leisure services was difficult to read. Demand for short breaks, both in the United Kingdom and European cities, grew strongly but was probably influenced by discounting of flights and rooms. Growth in membership of fitness clubs appeared to be slowing, and some restaurants reported lower average spending per meal in recent weeks. However, there was little evidence of declining spending in pubs, and spending at tourist attractions was boosted by good weather in September.

### Exports and imports

There was some growth in exports to the Far East, notably China, Taiwan and South Korea; and eastern Europe. Demand from the Middle East and Australia also increased. However, this was insufficient to compensate for a depressed German export market, only a slight upturn from the United States, and business lost to competitors from low-wage economies. The weaker dollar also lowered margins on US sales. Optimism about exports in 2003 rose, although an outbreak of hostilities with Iraq would dampen prospects.

Import penetration increased further. German manufacturers targeted the UK market to compensate for weak demand domestically. And some UK-based companies switched from manufacturing products themselves to sourcing from China or eastern Europe.

### Investment

The climate for investment has deteriorated since the previous *Agents' Summary*. Cash conservation has

increasingly been prioritised, following falls in world equity markets and low profitability. Weakening confidence resulting from geopolitical uncertainty also led many firms to postpone investment. In some cases funds earmarked for investment projects were diverted to top up company pension schemes.

Investment in extra capacity by larger manufacturing companies was often directed overseas, to economies with lower labour costs. Within the United Kingdom, capital expenditure failed to keep pace with depreciation in many cases and some businesses were restricting investment to what was necessary to comply with health and safety legislation. Projects with substantial and quick paybacks were proceeding, often involving increased automation to reduce labour costs.

Agencies reported that many business services companies were deferring capital expenditure due to uncertainty about future levels of demand from their manufacturing customers. Consumer services companies, however, continued to invest in refurbishment and upgrading of premises in order to retain or improve market share.

## COSTS AND PRICES

### Input prices

Contacts continued to report that prices of a variety of raw materials rose during 2002, mitigated in part by changed purchasing practices as weak global demand increased buyers' negotiating power.

Contacts were increasingly concerned about rising overhead costs. The most significant increases were in public, product and employers' liability insurance premia, with the prospect of further substantial rises in the coming year. Security costs also continued to rise due to insurer requirements or contacts' own perception of a need for greater protection.

### Output prices

Plentiful supply, increased competition through expanding use of on-line auctions, and customers' demands for discounts continued to exert downward pressure on manufacturing output prices. Some manufacturers of niche or luxury products, or those with a dominant market share, were able to raise prices on renewal of contracts, or increase margins on new lines. Most manufacturers, however, were subject to increased competition, including from imports, and had to concede small annual price reductions. Retailers expected manufacturers to fund an increasing

proportion of multibuy promotions, and fashion suppliers were under pressure to concede discounts, because autumn stock had not been selling well in the shops.

Service sector output prices continued to rise overall, although there was less upward pressure on some professional fee rates, for example as competition increased among providers of standard accountancy services. However, consultancy and legal fees continued to increase, by around 5% annually in most cases. Cleaning and security contractors were increasing their prices to reflect an increase in the National Minimum Wage (NMW) to £4.20 in October.

## Retail prices

Consumer goods price inflation remained muted with prices of electrical goods continuing to fall. Weak sales of clothing due to unseasonably warm weather in September resulted in deeper discounting and earlier starts to some mid-season sales. Contacts reported intensified competitive pressure between supermarkets and the re-emergence of loss leaders. Use of two-for-one offers increased in health and beauty products, as well as food.

Agencies reported that new car prices were lower year-on-year. This had a knock-on effect on prices of used cars, which were already falling as a result of high stock levels.

Price inflation for consumer services continued to reflect increased labour costs. Price increases of more than 3%, compared with a year earlier, were reported for pub and restaurant meals, theatre tickets, hairdressing, and car leasing and servicing. Hotel room rates in parts of the United Kingdom had been discounted to boost occupancy rates. Air fares also fell year-on-year as a result of increased competition.

## Pay

Settlements remained subdued, except in areas of significant skills shortages. Pay awards in manufacturing

were mostly around 2% to 3%, and slightly higher in services, between 2.5% to 4%. Higher settlements were made where retention of scarce skills was an issue. Some graduate starting salaries, in areas such as IT, were lower than in Autumn 2001. There were continued reports of pay freezes and deferral of settlements in both manufacturing and services companies.

Other factors caused total employment costs to rise. Falls in investment values led many employers to review their pension funds, with reports of increases of between 3% and 5% in employer contributions. Some employers also faced pressure to restore pay differentials following the increase in the NMW. Firms adjusting pay to meet the increased NMW were mainly outside the South East and included those in cleaning, security, retail, leisure and care.

## EMPLOYMENT

Another wave of job cuts in manufacturing and professional services companies took effect during the autumn. This was particularly the case for professional services in London and the South East as the anticipated upturn in mergers and acquisitions work failed to materialise. Non-replacement of staff choosing to leave or retiring has become a standard policy for contacts in a growing number of areas. More generally, job creation in the private sector slowed because of uncertainty about future demand. Evidence of easing in the market included lower voluntary turnover rates among staff and a significantly higher number of applications per advertised vacancy.

However, increased public sector employment, notably in administration, education and health, contributed to continued labour shortages in some localities. Employment in leisure services, retail and call centres also continued to increase, partly as a result of longer opening hours. But contacts reported that it remained difficult to recruit for jobs that require working in the evenings and/or weekends. In some regions of continued labour market tightness, contacts were recruiting from abroad, to acquire specialist skills or simply to ensure adequate levels of low-skilled labour.

## **Text of Bank of England press notice of 5 September 2002**

### **Bank of England maintains interest rates at 4.0%**

The Bank of England's Monetary Policy Committee today voted to maintain the Bank's repo rate at 4.0%.

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

## **Text of Bank of England press notice of 10 October 2002**

### **Bank of England maintains interest rates at 4.0%**

The Bank of England's Monetary Policy Committee today voted to maintain the Bank's repo rate at 4.0%.

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

## **Text of Bank of England press notice of 7 November 2002**

### **Bank of England maintains interest rates at 4.0%**

The Bank of England's Monetary Policy Committee today voted to maintain the Bank's repo rate at 4.0%.

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

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

## Glossary and other information

### Glossary of selected data

**AEI:** Average Earnings Index.

**BHPS:** British Household Panel Survey.

**CPI:** consumer price index.

**CSPI:** corporate services price index.

**ERI:** exchange rate index.

**GDP:** gross domestic product.

**HICP:** harmonised index of consumer prices.

**IoS:** Index of Services.

**LFS:** Labour Force Survey.

**M0:** notes and coin in circulation outside the Bank of England and bankers' operational deposits at the Bank.

**M4:** UK non-bank, non building society private sector's holdings of notes and coin, plus all sterling deposits (including certificates of deposit) held at UK banks and building societies by the non-bank, non building society private sector.

**M4 lending:** sterling lending by UK banks and building societies to the UK non-bank, non building society private sector. M4 lending includes loans and advances as well as investments, acceptances and reverse repo transactions.

**MEW:** mortgage equity withdrawal.

**RPI inflation:** inflation measured by the retail price index.

**RPIX inflation:** inflation measured by the RPI excluding mortgage interest payments.

**RPIY inflation:** inflation measured by the RPI excluding mortgage interest payments and the following indirect taxes: council tax, VAT, duties, car purchase tax and vehicle excise duty, insurance tax and airport tax.

### Abbreviations

**ATM:** Automated Teller Machine.

**BCC:** British Chambers of Commerce.

**BIS:** Bank for International Settlements.

**CBI:** Confederation of British Industry.

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

**DETR:** Department for the Environment, Transport and the Regions.

**ECB:** European Central Bank.

**EEF:** Engineering Employers' Federation.

**ESA:** European System of Accounts.

**FMD:** foot-and-mouth disease.

**FTSE:** Financial Times Stock Exchange.

**GAD:** Government Actuary's Department.

**GfK:** Gesellschaft für Konsum, Great Britain Ltd.

**HBF:** House Builders Federation.

**ICT:** information, communications and technology.

**ILO:** International Labour Organisation.

**IMF:** International Monetary Fund.

**ISA:** Individual Savings Account.

**IT:** information technology.

**MPC:** Monetary Policy Committee.

**NBER:** National Bureau of Economic Research.

**NMW:** National Minimum Wage.

**ODPM:** Office of the Deputy Prime Minister.

**OFCs:** other financial corporations.

**ONS:** Office for National Statistics.

**OPEC:** Organisation of Petroleum Exporting Countries.

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

**S&P:** Standard and Poor's.

**TESSA:** Tax Exempt Special Savings Account.

**VAT:** Value Added Tax.

### Symbols and conventions

Except where otherwise stated, the source of the data used in charts and tables is the Office for National Statistics (ONS).  
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.