

Inflation Report

May 2003

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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The Overview of this *Inflation Report* is available on the Bank's web site at www.bankofengland.co.uk/inflationreport/infrep.htm The entire *Report* is available in PDF at www.bankofengland.co.uk/inflationrep/index.html

Overview

The recovery in the world economy has been sluggish. The conflict in Iraq was associated with a sharp deterioration in economic sentiment, but there have been some signs of improvement since the conclusion of hostilities. The price of oil has fallen steeply and equity prices have rebounded. In the United Kingdom, GDP growth weakened in the first quarter. Household spending growth has slowed and business investment remains weak. But government spending continues to grow strongly and the substantial depreciation of sterling over the past six months should support net trade. The Committee's central projection assuming official interest rates are maintained at 3.75% is for GDP growth of around trend over the forecast period. The depreciation of sterling will add to import costs, but pay pressures remain subdued. Annual RPIX inflation has risen above the 2.5% target, mainly reflecting transient influences, reaching 3.0% in February and March. It is expected to rise a little further in the near term and then drop back to run close to target during the second year of the projection.

The global economic recovery has been lacklustre. The prospective conflict in Iraq coincided with a downturn in consumer and business confidence and a fall in equity prices. But there are some signs that sentiment has begun to recover since the conclusion of hostilities and equity prices have rebounded to levels last seen at the beginning of the year. Moreover, the spot price of oil has fallen steeply. In the euro area, growth remains weak and recent indicators provide little sign of an imminent pick-up. While the ECB's 0.25 percentage point interest rate cut in March should bolster domestic demand, the substantial appreciation of the euro may restrain net exports, the main driver of growth over the past year. The upturn in the United States faltered towards the end of last year. Consumer spending growth—which had helped to sustain activity during the slowdown—has eased. While the immediate prospects for output growth are muted, lower oil prices, the fall in the dollar and stimulative monetary and fiscal policies continue to point to a recovery in growth over the next year or so. Japanese GDP has been a little stronger than expected, though structural obstacles to growth remain. While activity in some other Asian economies has held up well, the SARS epidemic is likely to curb growth temporarily. The Committee continues to expect UK-weighted world demand growth to recover gradually.

In the United Kingdom, GDP growth is provisionally estimated to have dropped back to just 0.2% in the first quarter—well below February's central expectation—though four-quarter growth was only a little below trend. Service sector output

growth eased rather more than expected and there was also a sharp contraction in energy output following the unusually warm winter. Manufacturing output fell slightly. Assessment of the immediate prospects for growth is complicated by the impact of the war in Iraq. Business sentiment deteriorated in the run-up to war, but surveys conducted since the conclusion of hostilities suggest that a modest improvement is under way.

Household spending appears to have decelerated abruptly in Q1, with retail sales volumes up only 0.1%, the weakest quarterly outturn for four years. Consumer confidence declined sharply in advance of the conflict in Iraq, but has recovered somewhat in April. The Committee had expected household-spending growth to moderate this year as real disposable income growth slows. But that deceleration in spending seems to have occurred rather sooner than expected. House price inflation is slowing, in line with indicators of housing market activity.

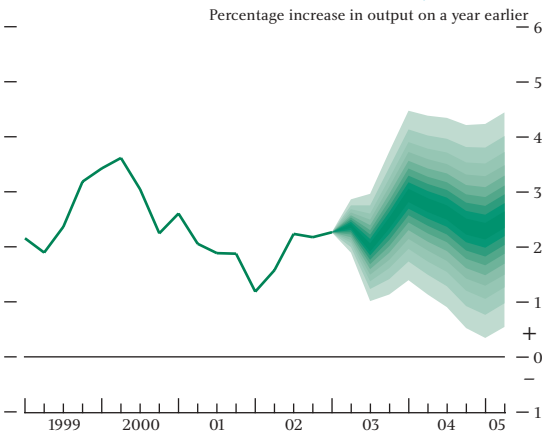
Corporate capital expenditure now appears to have been broadly stable during the past year. But with capacity utilisation below normal, profitability subdued outside the oil sector and balance sheets still under pressure, business investment is likely to recover only gradually.

Public spending has been rising strongly and should support domestic demand growth this year and next. The measures announced in the Budget left the fiscal stance little changed, though the higher-than-expected increase in Council Tax will lower household real disposable income growth and temporarily add to retail price inflation.

The sharp contraction in exports of goods reported for Q4 is hard to reconcile with other indicators of export activity and the data on output and inventories in the National Accounts. But recent monthly data suggest that export growth has continued to be weaker than expected, possibly reflecting the pause in the global recovery. The effective exchange rate for sterling has depreciated sharply. At the time of the Committee's May meeting it was more than 6% lower than in February, and back to levels last seen in the spring of 1997. The resulting improvement in competitiveness, and with it the profitability of the internationally tradable sector, should help to support net trade.

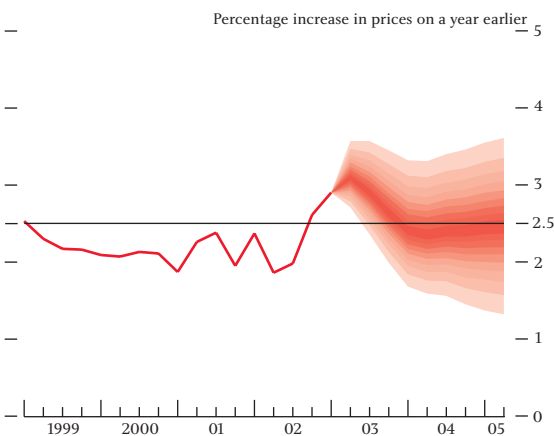
Chart 1 shows the MPC's assessment of the outlook for GDP growth, on the assumption that the official interest rate remains at 3.75%. Under the central projection, quarterly output growth is relatively close to trend throughout the forecast period, though four-quarter GDP growth follows a more jagged profile reflecting the unusual movements in output associated

Chart 1
Current GDP projection based on constant nominal interest rates at 3.75%



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 3.75%



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.

with the Jubilee holidays last year. The broad picture is one of a sharp moderation in consumer spending growth, offset by robust growth in public expenditure, a gradual improvement in the contribution of net trade and a modest pick-up in business investment. Overall the outlook for the level of GDP is rather lower in the near term than was expected in February, but rather higher during the second year of the projection as the lower value of sterling continues to stimulate activity.

Though public sector pay growth has increased, underlying private sector pay growth has moderated despite a sharp rise in tax and price inflation. That suggests that labour cost pressures may be weaker than previously judged and that the inflationary impulse from the exchange rate depreciation may be a little weaker than in the past. Pay pressures also depend on labour market tightness. Although the unemployment rate has altered little in recent months, total hours worked in the three months to February fell slightly, suggesting a modest loosening.

Annual input price inflation has picked up, largely reflecting the earlier increase in the price of oil. Though inflationary pressures will be attenuated by the reversal in the oil price, and prospects for internationally traded goods and services prices have weakened, the depreciation of the exchange rate will raise sterling import costs. The twelve-month inflation rate of RPIX rose from a low of 1.5% last June to reach 3.0% in February and March. That was largely driven by two components: housing depreciation, reflecting last year’s rapid increase in house prices; and petrol prices, sharply up on a year earlier.

Chart 2 shows the Committee’s assessment of the outlook for RPIX inflation. In the central projection, inflation moves further above target in the near term reflecting higher Council Tax. It then drops back slightly below the target by early 2004 as the declining contribution of housing depreciation and petrol prices outweighs the impact of the lower exchange rate on import prices. Subsequently inflation edges up to around the target at the two-year horizon. The profile is a little stronger in the near term than in the February *Report*, but with a sharper return to around target thereafter. Abstracting from the unusual factors dominating the short-term outlook, underlying inflation is drifting up throughout the forecast period, reflecting the continuing influence of the weaker exchange rate.

As always there are considerable risks surrounding these projections. The swift conclusion to the war in Iraq has led the Committee to reduce the adjustment made in February to the width of the fan charts reflecting the associated uncertainties. But particular uncertainties remain regarding: the strength and timing of the global recovery; the prospects for exports; the pass-through into prices of the depreciation of the exchange

rate; and the extent of the slowdown in consumer spending and house price inflation. Relative to the central projection, the Committee judges that the overall risks to growth and inflation are broadly balanced. Individual members maintain a range of views on the risks, though the differences are narrow.

At its May meeting, the Committee noted that inflation, though currently above target as a consequence of temporary factors, was set to fall back to a little below 2.5% by the beginning of next year, and then edge up over the remainder of the forecast period. Given that prospective inflationary pressures were rising into the medium term, and against the background of a weaker sterling exchange rate, the Committee judged that the current level of interest rates of 3.75% remained appropriate to keep inflation in line with the target.

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Sterling has depreciated against most major currencies since the previous Report. Short-term market interest rates have fallen in the United Kingdom. But equity prices and longer-term forward interest rates have risen substantially, with movements influenced by developments in Iraq. Measures of housing market activity and house price inflation continued to slow in Q1. And there are some signs of an easing in household borrowing growth, though it remains strong. Corporate capital gearing fell, albeit from a high level.

Chart 1.1
Sterling ERI



Source: Bank of England.

Table 1.A
Changes in key sterling exchange rates since the February Report

	5 Feb.	7 May	Change (a)
€ per £	1.520	1.402	-7.8
\$ per £	1.646	1.592	-3.3
¥ per £	197.2	185.2	-6.1
£ ERI	104.5	97.3	-6.9

Source: Bank of England.

(a) Per cent.

1.1 Asset prices

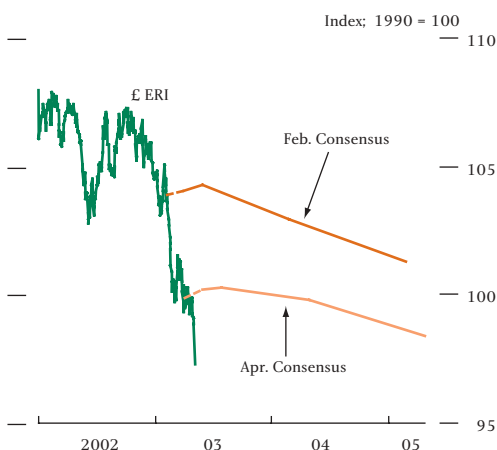
Exchange rates

The sterling effective exchange rate index (ERI) has depreciated markedly since the previous Report (see Chart 1.1). The 15 working day average of the sterling ERI up to and including 7 May, at 99.4, was some 4.3% below the equivalent average used in the February Report. This was the second largest fall between *Inflation Reports* since the Bank of England was granted independence in 1997. The ERI also fell during the 15-day window, such that by the close of business on 7 May the index stood some 2% below the 15-day average. Over the past three months, sterling has depreciated against most major currencies. The largest falls were seen against the euro and the yen, reflecting recent weakness in the US dollar (see Table 1.A). What factors are likely to have contributed to sterling's fall?

Currencies tend to move to equalise the risk-adjusted rates of return on assets across countries. So, other things being equal, a fall in UK interest rates relative to those abroad would be expected to lead to an immediate depreciation in the exchange rate followed by a more gradual appreciation in order to bring the rates of return into balance. But since the February Report, UK interest rates, at most maturities, have not fallen as far, or have risen by more, than those overseas. So movements in market interest rates cannot help explain the depreciation in sterling over the quarter.

The onset and outbreak of war in Iraq may have resulted in investors becoming more concerned about the risks of holding sterling assets relative to other currencies. On that argument, any risk in holding sterling associated with Iraq should have dissipated as the conflict came to an end. But sterling has

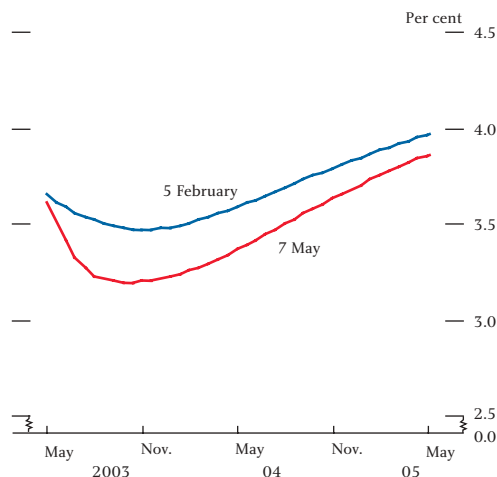
Chart 1.2
Sterling ERI and Consensus forecasts^(a)



Sources: Bank of England and Consensus Economics.

(a) Consensus ERI forecasts are calculated using the euro, US dollar, yen and Canadian dollar. By weight of trade, these bilaterals make up some 90% of the ERI.

Chart 1.3
GC repo/gilt^(a) two-week forward curve^(b)



Source: Bank of England.

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

weakened further since the cessation of hostilities. So it would appear that the war has not been an important influence on sterling.

One possible explanation for sterling's depreciation is that the market's perception of the medium-term sustainable level of sterling has fallen. Chart 1.2, which plots forecasters' expectations of the future path of sterling reported by Consensus Economics in February, and then again in April, is consistent with a downward revision in exchange rate expectations. But the reasons for such a revision are less clear. It may be that market participants believe that prospects for UK domestic demand are now weaker relative to those abroad. As noted in a previous *Report*,⁽¹⁾ such a belief could lead to a depreciation of the exchange rate, and in turn an improvement in net trade, to bring demand for UK goods back in line with supply.

Some commentators have pointed to the planned increase in the United Kingdom's fiscal deficit as an explanation for the downward revision in exchange rate expectations. But the impact on the exchange rate of an increase in the fiscal deficit depends on how it is financed. The nominal exchange rate would only be expected to depreciate in the unlikely event that the increase in the fiscal deficit were money-financed.

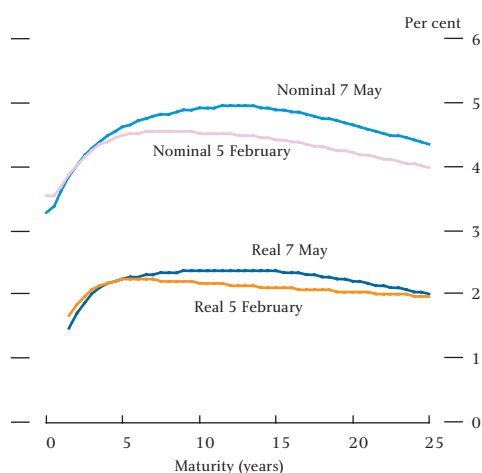
Short-term interest rates

The MPC reduced the Bank's official repo rate by 0.25 percentage points to 3.75% on 6 February in response to muted underlying inflationary pressures and a weaker outlook for output growth. Official rates have been maintained at this level since the *February Report*. On 6 March the ECB announced that it would reduce its minimum refinancing rate by 0.25 percentage points to 2.5%. There has been no change in the official interest rate in the United States, and no significant change in the monetary stance in Japan over the past three months.

Since the *February Report* UK forward interest rates for the second half of this year have fallen by up to 0.3 percentage points (see Chart 1.3). According to the latest Reuters poll of financial market economists, published on 1 May, the average expected policy rate for the end of 2003 was 3.48% with 24 out of 32 respondents expecting a cut of 25 basis points in the repo rate at the MPC meeting on 7 and 8 May. The rate expected for the end of 2004 was, on average, 4.02%. These end-year expectations are around a quarter of a percentage point lower than the equivalent forecasts published on 27 February. So taken together, both forward interest rates

(1) See 'Imbalances in the global economy: sources and potential implications', May 2002 *Inflation Report*, pages 14–15.

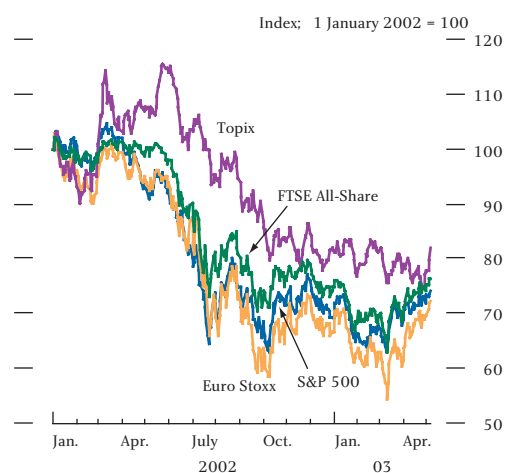
Chart 1.4
Nominal and real forward rate curves^(a)



Source: Bank of England.

(a) See Chart 1.3, footnote (b).

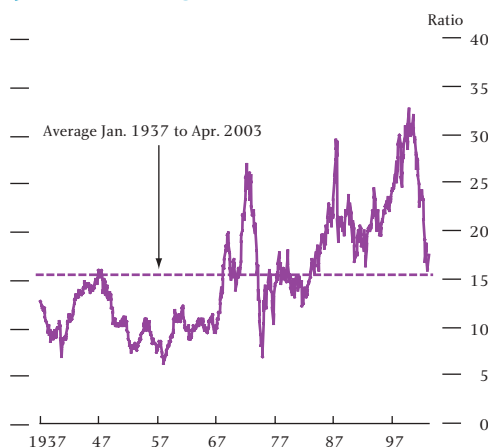
Chart 1.5
World equity markets since January 2002^(a)



Source: Bank of England.

(a) All equity prices have been converted into sterling.

Chart 1.6
FTSE All-Share: ten-year trailing price to earnings ratio^(a)



Sources: Global Financial Data, Inc. and Thomson Financial Datastream.

(a) Using a ten-year moving average of net earnings.

and surveys suggest that expectations of the official repo rate over the near term fell between the February and May Reports.

Government bond yields

Compared with their levels at the time of the previous Report, medium-term and long-term forward interest rates are up to 50 basis points higher (see Chart 1.4). Real forward rates also rose over the period, but to a much lesser extent. Comparisons of yields on nominal and index-linked government debt enable estimates to be made of implied inflation expectations.⁽¹⁾ As a result of the changes in nominal and real interest rates, implied inflation forward rates rose, on average, by some 0.2 percentage points over the past three months. Nevertheless, market-based implied inflation expectations are close to the inflation target of 2.5%.

Equity prices

UK equity prices, as measured by the FTSE All-Share index, increased by 8.9% between 5 February and 7 May⁽²⁾ (see Chart 1.5). But this considerable rise masks significant variation over the period. The FTSE All-Share index fell by 4.3% on 12 March before recovering by 5.2% the following day—the largest daily increase in almost eleven years. The build-up to, and conduct of, the war in Iraq was an important influence on equity price movements over much of the quarter, and appears to have affected UK, US and European markets in a similar way. As a result, price movements have been highly correlated across these markets.

Despite its recent rally, the FTSE All-Share index is some 40% lower than its peak in September 2000. Chart 1.6 shows that the FTSE All-Share price to earnings ratio is now close to its long-term average, having fallen well below the levels of the late 1990s.

Property prices

Measures of housing market activity continued to slow in 2003 Q1 (see Table 1.B). Indicators of activity early in the house purchase process eased the most,⁽³⁾ with survey data from the House Builders Federation (HBF) showing a sharp fall in site visits and net reservations of new properties compared with a year earlier. Mortgage approvals and particulars delivered have also declined over the quarter, though they remain at relatively high levels.

Measures of house price inflation have moderated by more than expected by the Committee at the time of the February

(1) See Scholtes, C (2002), 'On market-based measures of inflation expectations,' *Bank of England Quarterly Bulletin*, Spring, pages 67–77.

(2) The cut-off dates for inclusion of data in the February and May Reports respectively.

(3) For a description of the process leading up to a typical transaction in residential property, see Section 1 of the November 2002 *Inflation Report*.

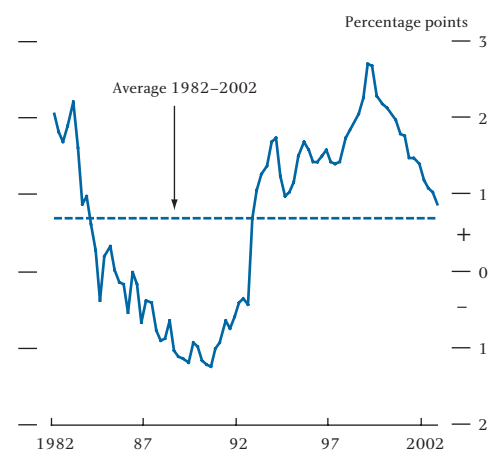
Table 1.B
The housing market^(a)

	2002			2003	
	Q2	Q3	Q4	Q1	Apr.
HBF survey					
Site visitors (b)	19	16	4	-34	n.a.
Net reservations (c)	35	18	9	-33	n.a.
Approvals (d)	118	114	117	101	n.a.
Monthly change in house prices (e)					
Halifax (f)	2.0	1.9	2.2	1.5	0.4
Nationwide	2.7	2.2	1.7	1.3	0.0
ODPM (g)	2.2	2.0	1.5	n.a.	n.a.
Particulars delivered (h)	133	137	130	125	n.a.
Surveys of house price expectations					
RICS (i)	45	33	23	-35	n.a.
HBF (j)	84	90	67	47	n.a.
Woolwich/NOP (k)	65	63	59	50	n.a.

Sources: Bank of England, Halifax, House Builders Federation, Inland Revenue, Nationwide, NOP, Office of the Deputy Prime Minister, Royal Institute of Chartered Surveyors and Woolwich.

- (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 published indices in 2002 have been adjusted by the Bank of England to account for the change in method of calculation by the Halifax in December 2002.
 (g) Index published by the Office of the Deputy Prime Minister based on a 5% sample of all mortgage completions over the quarter.
 (h) The number of transactions in England and Wales registered with HM Land Registry (thousands).
 (i) Percentage balance of respondents expecting to see an increase in the price at which sales are agreed over the next three months.
 (j) Percentage balance of respondents expecting to see an increase in the prices of new homes over the next twelve months. Seasonally adjusted by the Bank of England.
 (k) Proportion of respondents expecting to see an increase in the value of their property over the next twelve months.

Chart 1.7
Rental yield^(a) less ten-year real interest rate



Sources: Bank of England and ONS.

- (a) Ratio of annualised actual rents paid plus imputed rents to household sector's housing wealth.

Report. The three-month on three-month rate of increase in the average of the Halifax and Nationwide indices fell from 6.0% in January to 3.6% in April 2003. Surveys of house price expectations point to a further slowdown in house price inflation over the near term (see Table 1.B).

The strength of the housing market over recent years has elevated house prices—when measured using the ODPM price index—to nearly six times average earnings, a record high. But in a previous *Report* it was argued that the house price to earnings ratio could persist at a higher level than its historic average.⁽¹⁾ And measures of debt-servicing costs remain at relatively low levels (see Section 1.2).

One approach to assessing whether the current level of house prices is sustainable is to use valuation techniques commonly applied to equity markets. Such techniques suggest that rental yields from housing will reflect the return available on a riskless asset together with an extra return to compensate agents for the uncertainty inherent in future rental flows. Chart 1.7 plots one measure of the rental yield in relation to the risk-free rate. By contrast to the previous peak in house prices in 1989, the difference between rental yields and the risk-free rate is actually a little above, rather than a long way below, its long-run average. This would suggest that house prices are not too far away from a sustainable level. Admittedly, this technique is somewhat imprecise. The line shown in Chart 1.7 is related to the housing market risk premium. So any permanent change in agents' risk preferences will mean a different equilibrium rental yield could be supported. Rents are also likely to be measured imperfectly, not least because the imputed rents paid by owner-occupiers have to be estimated. A further complication arises from the fact that actual rents paid will include those from non-marketable properties such as council houses. For example, any change over time in the proportion of these properties in the total housing stock could affect the link between house prices and rents paid.

The MPC assumes that house price inflation will slow to a halt over the next year or so, earlier than had been assumed in its February projection.

1.2 Money and credit

Monetary aggregates

The annual rate of growth of M0—a narrow measure of money consisting of notes and coin, and bankers' operational balances held at the Bank of England—rose to 8.5% in April

(1) See 'Structural economic factors affecting house prices', August 2002 *Inflation Report*, pages 8–9.

Table 1.C
Monetary aggregates

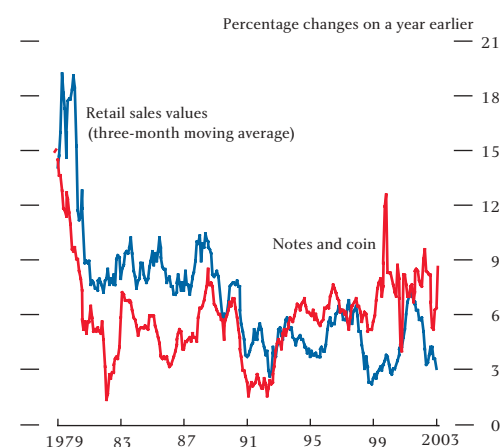
Percentage changes on a year earlier

	2002			2003	
	Q2	Q3	Q4	Q1	Apr. (a)
M0	9.5	8.1	5.5	6.3	8.5
M4	5.8	5.3	7.0	7.2	n.a.
M4 lending (b)	8.3	9.4	10.5	11.0	n.a.

Source: Bank of England.

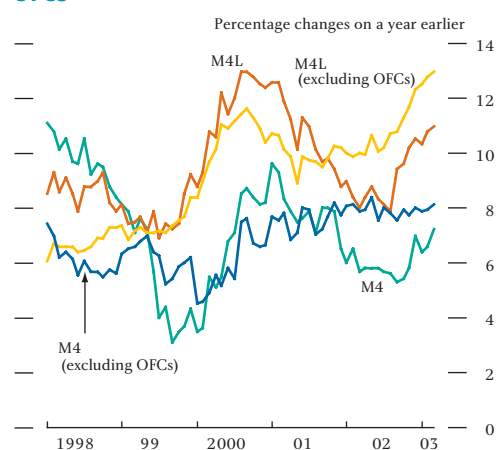
- (a) Provisional estimate.
(b) Excluding the effects of securitisations.

Chart 1.8
Notes and coin and retail sales values



Sources: Bank of England and ONS.

Chart 1.9
M4 and M4 lending^(a) including and excluding OFCs



Source: Bank of England.

- (a) M4 lending excluding the effects of securitisations.

(see Table 1.C). But a number of temporary distortions, such as changes in the number of reporting weeks that fell in December and January compared with the year before, and the recent boost to the note circulation caused by the threat of industrial action at a security carrier, make recent month-to-month changes in growth rates difficult to interpret.

There has been a reasonably close relationship between narrow money growth and growth in the value of retail sales over the long run. But recently the growth in notes and coin has outpaced that in retail sales by some margin (see Chart 1.8). Previous *Reports* have suggested that, due to the reduced opportunity cost of holding cash (as a result of lower nominal interest rates), narrow money might plausibly continue to grow in excess of nominal 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 7.2% in the year to 2003 Q1 (see Table 1.C). Much of the recent volatility in M4 growth can be accounted for by OFCs' money holdings. Excluding the OFCs component, annual growth of M4 has been stable over the past two years at around 8% (see Chart 1.9). A box on pages 8–9 of this *Report* considers the relationship between broad money, output and inflation in different countries.

M4 lending (excluding the effects of securitisations) has continued to grow strongly over the past year. The ongoing strength of M4 lending is a direct result of robust lending to both households and PNFCs (see below). Excluding OFCs, M4 lending grew by 13.0% in the year to 2003 Q1 (see Chart 1.9).

Households

Households' M4 deposits grew by 8.0% in the year to 2003 Q1. Since the middle of 2001, households' M4 deposits have been relatively buoyant, often growing at an annual rate of 8% or more (see Chart 1.10). The falls in equity prices over this period are likely to have been one factor behind the strength in deposit growth, as this may have induced households to add to their stock of deposits in preference to further purchases of equities. Deposit rates have fallen by less than returns on other interest-bearing assets over the past year, so this will also have increased the relative attractiveness of deposit savings (see Chart 1.10).

The annual growth rate of households' M4 borrowing (excluding the effects of securitisations) rose in Q1 to 14.5%.

International broad money

Since end-2000 broad money has grown at a faster rate than nominal GDP in several major economies (see the table). This box considers whether there might be implications for future global economic activity or inflation.

Broad money and nominal GDP growth in four major economies

Percentage changes on a year earlier

Broad money	2002				2003
	Q1	Q2	Q3	Q4	Q1
Euro area (M3)	7.2	7.1	7.1	6.9	7.9
Japan (M2 + CDs)	3.6	3.5	3.3	2.9	1.9
United Kingdom (M4)	5.7	5.8	5.3	7.0	7.2
United States (M2)	8.4	7.6	6.1	6.5	7.2

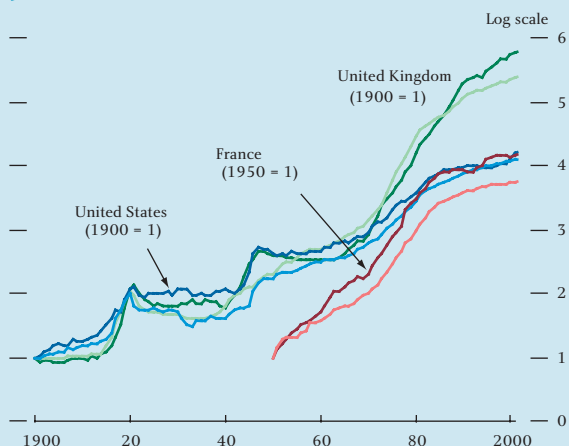
Nominal GDP	2002				2003
	Q1	Q2	Q3	Q4	Q1
Euro area	3.0	3.1	3.5	3.4	n.a.
Japan	-3.7	-1.8	-0.3	0.4	n.a.
United Kingdom	4.4	4.6	5.8	5.3	n.a.
United States	2.8	3.3	4.0	4.3	3.7

Sources: Bank of England, Bank of Japan, ECB, Eurostat, Federal Reserve System, ONS and Thomson Financial Datastream.

Measures of broad money include notes and coin, as well as various classes of interest and non-interest-bearing deposits held at banks and similar institutions (such as building societies in the United Kingdom). In the United Kingdom, more attention is paid to M4 than to any other broad money aggregate, though other central banks may use a slightly different definition. In contrast to notes and coin, broad measures of money include assets that earn a positive rate of interest. So broad money serves not only as a medium of exchange and a unit of account, but also as a store of value. This means that the demand for broad money balances is likely to depend not only on the value and number of transactions in the economy, but also on the stock of wealth and risk-adjusted relative rates of return on alternative assets.

Why do developments in broad money matter for monetary policy? Over long periods of time, the stock of wealth usually grows at a rate similar to that of nominal GDP growth. If the fraction of wealth held in the form of broad money were approximately stable, which requires stability in risk-adjusted relative rates of return, then, in the long run, broad money would also tend to grow at a rate similar to that of nominal GDP growth. In the long run, the level of real output is determined by production factors, such as the capital stock, the working-age population and the rate of technical progress. So over long periods of time, there must be a close relationship between an economy's ratio of broad money to real output and its price level. There is evidence that this relationship holds in a variety of countries with both moderate (see Chart A) and high inflation experience (see Chart B).

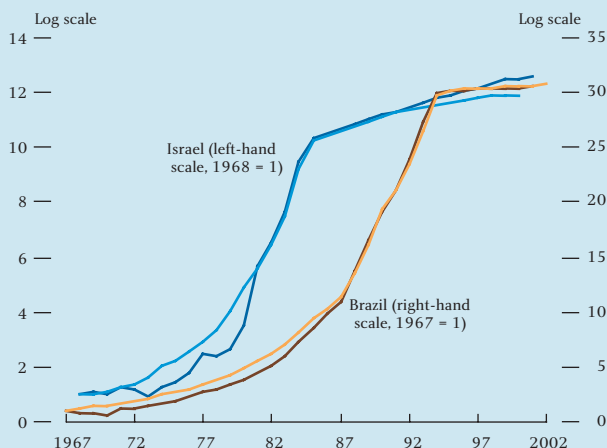
Chart A
Broad money relative to real GDP and the price level in three moderate-inflation economies^(a)



Sources: Capie, F and Webber, A (1985), *A monetary history of the United Kingdom, 1870-1982, Volume 1: data, sources, methods*, Allen and Unwin, London. Bank of England, Federal Reserve System, IMF and Mitchell, B R (1988), *British historical statistics*, Cambridge University Press.

(a) Dark colours represent the broad money to real GDP ratio for each economy, and light colours the GDP deflator.

Chart B
Broad money relative to real GDP and the price level in two high-inflation economies^(a)



Sources: Bank of Brazil, Bank of Israel, Central Bureau of Statistics Israel and IMF.

(a) Dark colours represent the broad money to real GDP ratio for each economy, and light colours the GDP deflator for Brazil and the CPI for Israel.

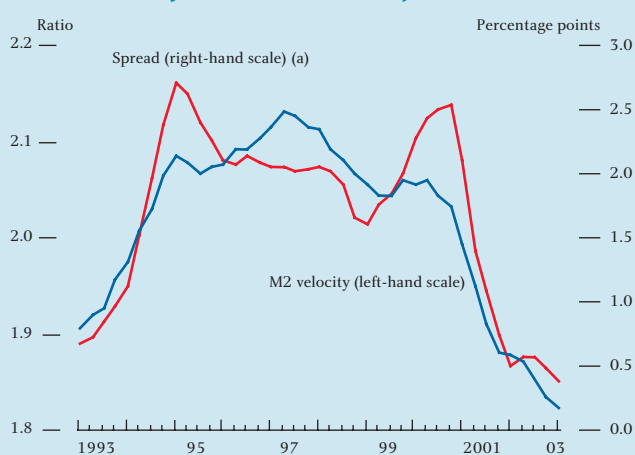
Under certain simplifying assumptions, it is possible to derive an estimate of desired (long-run) money holdings in the economy. These would be likely to depend on the level of real output, the price level, the stock of wealth and the risk-adjusted relative rates of return on alternative assets. The deviation of the actual stock of broad money from its estimated desired level provides a measure of excess money holdings, which may help to assess the implications of broad money growth for future activity and inflation.

Central banks differ in the emphasis they place on broad money in their outlook for domestic inflation

and activity. For example, though the European Central Bank also uses other indicators to assess inflationary pressures, each year it announces a so-called reference value for broad money growth, signalling the fundamentally monetary origins of inflation over the medium to longer term. Broad money plays no formal role in the policy strategy of the US Federal Reserve and the Bank's MPC. Instead, it is used as part of a wide range of indicators of economic conditions.

The table above shows that, since the turn of the year, broad money growth has picked up in several major economies, at a time when nominal GDP growth was broadly stable and wealth had been declining, reflecting global falls in equity prices. It is possible that increased uncertainty about equity returns has led to higher precautionary demand for broad money. But the strength in broad money is also consistent with a trend decline in its velocity of circulation, ie the ratio between nominal GDP and the stock of broad money. As economies become financially more sophisticated and new financial assets are introduced that can serve both as a means of payment and a store of value, such as retail money market mutual funds in the United States, these assets tend to be included in the respective definitions of broad money. So the stock of broad money tends to expand at a faster rate than nominal demand. Part of the fall in velocity may also reflect the narrowing in the spread of market interest rates over deposit rates in most major economies over the past few years (see for example Chart C, which shows that the velocity of US M2 has fallen broadly in line with its interest rate spread).

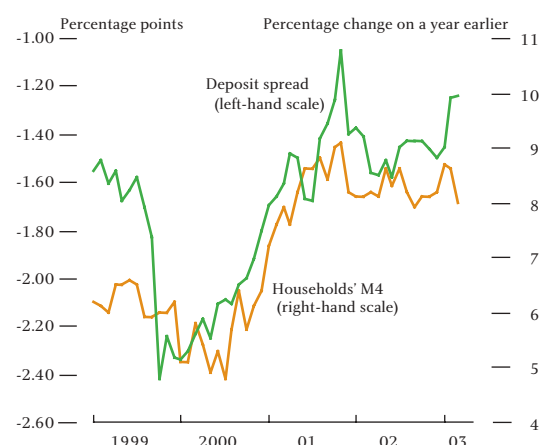
Chart C
US M2 velocity and interest rate spread



(a) Two-quarter moving average of spread of three-month Treasury bill rate over rate of return on M2 assets.

What are the implications of rapid growth in broad money for future nominal demand? If the strength in broad money were merely a reflection of the medium-term fall in velocity, the implications for nominal demand would probably be limited. But if broad money balances had previously been close to, or above, desired levels and if financial market uncertainty were to diminish, some of the recent build-up in broad money might be invested in other financial assets or used for increased spending on goods and services. Due to the global slowdown of the past two years, most major economies are likely to have some spare capacity at the moment. So in the short run, such an increase in nominal demand would be more likely to result in higher output than in a higher price level.

Chart 1.10
Households' M4 and deposit rate spreads^(a)



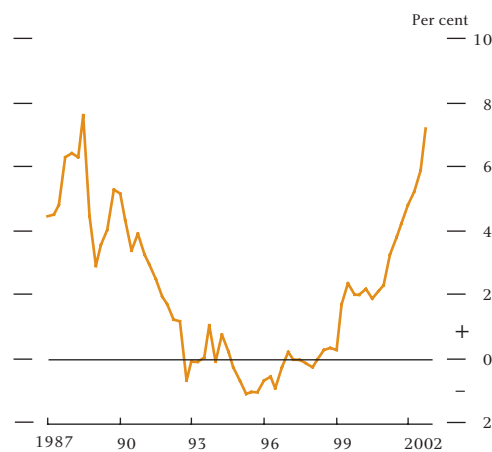
Source: Bank of England.

(a) The spread is the weighted average of the effective sight and time deposit rate minus the three-month Libor rate (proxying the rate of return on alternative assets).

Total lending to individuals, which measures lending by a broader set of institutions than banks and building societies, rose by 13.8% in the year to 2003 Q1, though the recent pattern of quarterly growth rates suggests that the annual rate of growth may be about to slow. Household borrowing continues to be influenced mainly by developments in the housing market. Lending secured on dwellings rose by £22.1 billion in 2002 Q4. Of this, £13.3 billion, or over half, was estimated to be mortgage equity withdrawal (secured borrowing that is not used to maintain or augment the housing stock). As a proportion of personal disposable income, mortgage equity withdrawal (MEW) rose from 5.9% in 2002 Q3 to 7.2% in 2002 Q4, the highest proportion since 1988 Q3 (see Chart 1.11).

An equivalent, albeit less timely, measure of MEW to that shown in Chart 1.11 can be derived from gross withdrawals of equity from housing, less gross injections (see Table 1.D for a

Chart 1.11
Mortgage equity withdrawal^(a)



Sources: Bank of England and ONS.

(a) Percentage of household disposable income. MEW is calculated as the difference between net lending secured on dwellings (plus grants for housing) and households' gross investment in housing.

Table 1.D
Ways of withdrawing and injecting equity

Withdrawals	
Last-time sales	A seller does not buy a new property, so the proceeds of the sale are released from the housing market.
Trading down	A seller moves to a cheaper property but reduces the mortgage by less, to leave a cash sum.
Over-mortgaging	A moving owner-occupier increases their mortgage by more than the difference between the old and new house prices.
Remortgaging	A borrower takes a new mortgage and increases their debt without moving properties or improving the property to the same extent.
Further advances and second mortgages	A borrower raises a further advance on an existing mortgage or takes a second mortgage without improving the property to the same extent.
Injections	
First-time purchases	The deposit paid by first-time buyers.
Under-mortgaging	A mover increases their mortgage by less than the difference between the old and new house price.
Under-remortgaging	A borrower takes a new mortgage and reduces their debt without moving properties or improving the property.
Repayments of mortgage debt	Regular repayments of principal and the redemption of mortgages, except on sale or remortgaging.
Home improvements	Home improvements paid for with non-secured funds.

taxonomy). Using this measure, a study⁽¹⁾ into the various components of MEW found that between 1980 and 2000, last-time sales were the largest single constituent of gross equity withdrawals. Indeed, in 2000, the last year covered by the study, last-time sales corresponded to over 40% of total equity withdrawals.

The proceeds from last-time sales accrue mainly from the sales of inherited properties. The combination of recent rapid house price inflation and the low levels of outstanding debt on such properties mean that, as with other forms of MEW, the value of equity withdrawal from last-time sales has probably increased over the past few years. Survey evidence suggests that much of MEW appears to be used for near-term consumption.⁽²⁾ But withdrawals of equity from last-time sales are perhaps more likely to be used for savings. Last-time sellers tend to be from older households, and such households tend to save a relatively higher proportion of their income. It is also likely that last-time sellers, faced with sharp falls in the value of their pension funds and other equity-based investments, have recently placed a higher proportion of the proceeds on deposit than they have in the past, helping to boost households' M4 holdings.

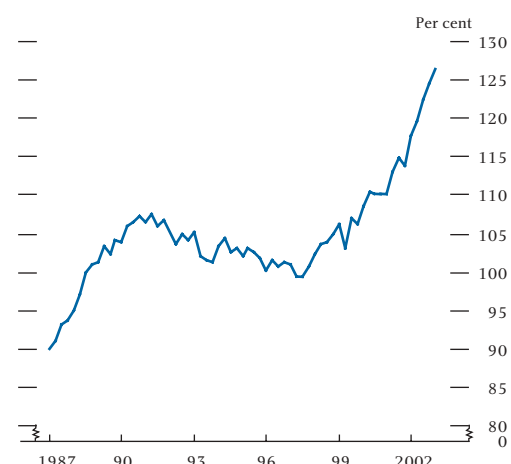
The continued strong increases in household borrowing have raised household debt-to-income ratios to new heights (see Chart 1.12). This potentially increases households' vulnerability to an adverse shock either to their income, or interest rates. But debt-servicing costs remain low by historic standards. Household income gearing (interest payments as a share of personal disposable income) fell further in 2002 Q4 to 6.8%.

Of course, were interest rates to rise, or households' disposable income growth to fall, income gearing could increase quickly again. Chart 1.13 provides a projection of income gearing under the following assumptions. First, with full pass-through into borrowing rates, official interest rates rise from 3.75% to 5.25% by the end of 2004—the highest expectation from the Reuters poll of economists discussed earlier. Second, households' nominal income remains constant. Over the period shown in Chart 1.13 the annual rate of growth of households' nominal income has always been positive. Finally, household debt continues to grow at its current high rate. Taking even these pessimistic assumptions together, Chart 1.13 shows that household income gearing would still remain well below the levels during the late 1980s and early 1990s.

(1) Holmans, A E (2001), *Housing and mortgage equity withdrawal and their component flows: a technical report*, Council of Mortgage Lenders.

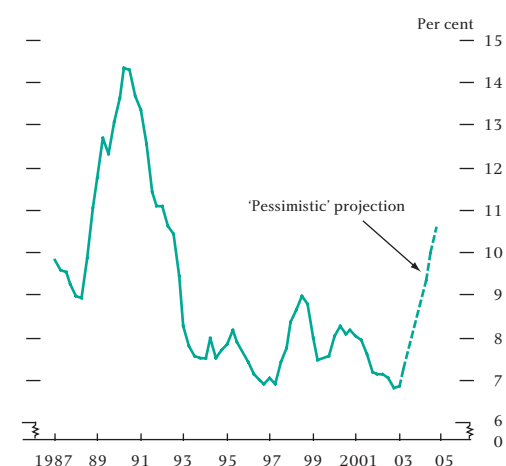
(2) See Davey, M (2001), 'Mortgage equity withdrawal and consumption', *Bank of England Quarterly Bulletin*, Spring, pages 100–03.

Chart 1.12
Households' debt-to-income ratio^(a)



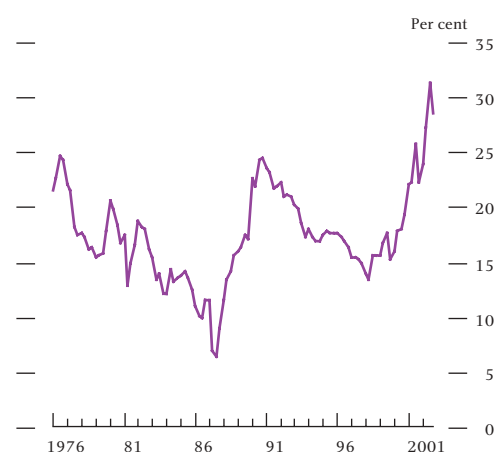
(a) Ratio of households' total liabilities to annualised total income.

Chart 1.13
Households' income gearing



Sources: Bank of England and ONS.

Chart 1.14
PNFCs' capital gearing at market value^(a)



Source: Bank of England.

(a) PNFCs' net debt as a percentage of the sum of net debt and the market value of equity.

Nevertheless, Chart 1.13 represents an average of households' experiences, and the diversity of debt holdings may mean that a rise in interest rates of even one and a half percentage points or less would be difficult for some households to bear. For instance, the December 2002 *Financial Stability Review* noted that there has been a significant rise in the proportion of first-time buyers with high loan-to-income ratios over the past year.⁽¹⁾ For these individuals, even a modest fall in income or rise in interest rates may have a significant impact on their income gearing.

Private non-financial corporations

The annual growth in PNFCs' M4 deposits picked up in Q1 to a rate of 8.4%. As noted in Section 2, PNFCs' liquidity ratio—the ratio of liquid assets to liquid liabilities—is currently at its highest level for over a decade (see Chart 2.11). The recent build-up in deposits may reflect a reaction to increased uncertainty. Businesses may have decided to delay their spending plans until the economic outlook becomes clearer. It is also possible that companies have been building up a buffer stock of cash reserves in uncertain times to protect against a possible downturn in their fortunes.

PNFCs' M4 borrowing (excluding the effects of securitisations) rose by 8.6% in the year to 2003 Q1. However, PNFCs' total external finance—a broad measure of the flow of net new borrowing that includes capital market issues, in addition to sterling and foreign currency borrowing from banks and building societies operating in the United Kingdom—fell to £9.1 billion in Q1. This was some £5.6 billion less than that raised in 2002 Q4, and considerably lower than figures earlier in the year.

Corporate capital gearing at market value fell to 28.5% in Q4, reflecting reduced borrowing from foreign banks and an increase in deposits. Nevertheless, corporate gearing remains high by historic standards (see Chart 1.14). The implications of the current high levels of corporate gearing for PNFCs' discretionary spending are discussed in Section 2.

(1) See *Bank of England Financial Stability Review*, December 2002, pages 69–70.

Final domestic demand growth in the United Kingdom was a little above trend towards the end of 2002, underpinned by consumption and government spending. But consumption growth seems to have slowed sharply in Q1. Business investment levelled out in 2002. With business confidence still low, any investment recovery is likely to be gradual. Growth in the world economy may have slowed a little in 2002 Q4 and eased further in Q1. UK net trade detracted significantly from growth in Q4 and is likely to have remained weak in Q1.

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

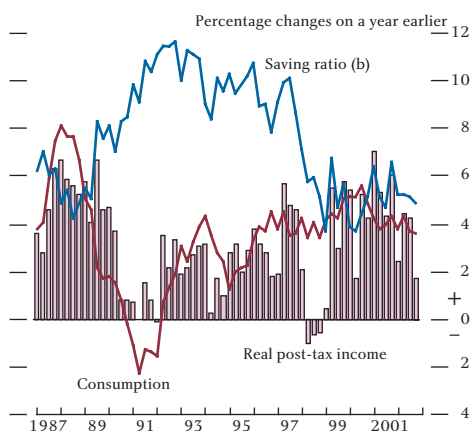
Percentage changes on a quarter earlier

	Averages		2002			
	2001	2002	Q1	Q2	Q3	Q4
Consumption:						
Household	1.1	0.9	0.6	1.1	0.8	1.1
Government	1.1	0.5	2.1	-1.4	0.4	1.0
Investment	-1.2	-0.4	-2.2	0.3	0.6	-0.2
of which, business investment	-1.7	-1.5	-5.6	0.8	-0.9	0.4
Final domestic demand	0.7	0.6	0.4	0.5	0.7	0.9
Change in inventories (b)	-0.1	0.2	0.1	-0.8	0.8	0.8
Excluding alignment adjustment	-0.2	0.1	0.6	-0.4	0.0	0.2
Domestic demand	0.6	0.8	0.5	-0.2	1.4	1.6
Exports	-1.2	-0.1	0.2	4.0	-1.1	-3.6
Imports	-0.6	0.7	1.2	1.3	0.2	0.2
Net trade (b)	-0.1	-0.3	-0.4	0.8	-0.4	-1.5
GDP at market prices	0.5	0.5	0.1	0.6	1.1	0.4

(a) At constant 1995 market prices.

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

Chart 2.1
Household post-tax income,^(a) consumption and saving



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

(b) Household saving as a percentage of nominal income. See footnote (a) for the definition of income.

2.1 GDP and domestic demand

GDP increased by 0.4% in 2002 Q4 to stand 2.2% higher than a year earlier. Final domestic demand increased by 0.9% in Q4, underpinned by private and public consumption (see Table 2.A). GDP is provisionally estimated to have grown by 0.2% in 2003 Q1, significantly weaker than the MPC had expected in February.

Household consumption

Household consumption grew by 1.1% in 2002 Q4, slightly higher than the MPC had projected in February. Household real post-tax income increased by 0.9% in Q4 and the saving ratio fell slightly (see Chart 2.1). But the available indicators suggest a sharp slowdown in consumption growth in 2003 Q1, a little earlier than the Committee had expected. The ONS figures for retail sales cover around 35% of household consumption, and these data provide more timely information than the quarterly National Accounts. Retail sales increased by just 0.1% in Q1 following growth of 1.6% in 2002 Q4 (see Chart 2.2). Growth in Q1 was the weakest for over four years. The CBI *Distributive Trades Survey* indicator of retail sales showed a pick-up in annual growth in April, perhaps boosted by the Easter holidays. Most of the Easter weekend was in March last year, and so might have affected the annual comparisons in April 2003.

Retail sales do not include spending on vehicles, which accounts for over 6% of household consumption. SMMT private car registrations rose by 1.0% on a year earlier in Q1 after declining by 6.8% in the year to 2002 Q4. That suggests vehicle purchases may have boosted quarterly consumption growth slightly in Q1. But private car registrations fell sharply in the year to April.

Chart 2.2
Volume of retail sales

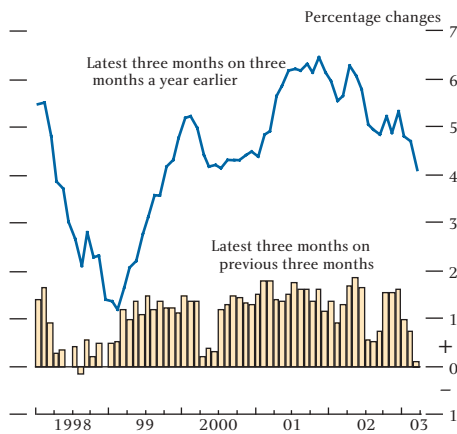
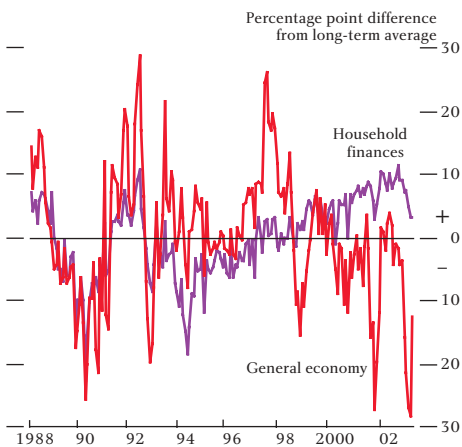
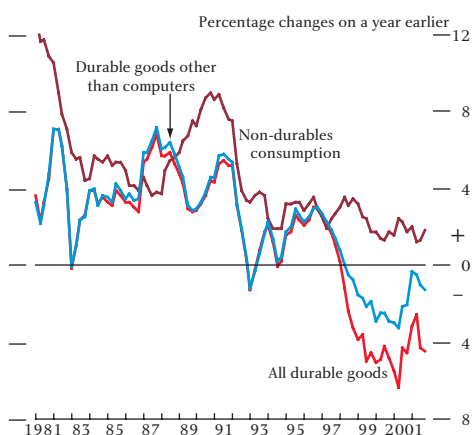


Chart 2.3
GfK consumer confidence: situation over next twelve months



Source: Martin Hamblin GfK.

Chart 2.4
Deflators for consumer durables and other consumption



The GfK consumer survey indicates that households' confidence in the outlook for the economy over the next twelve months declined steeply in the first quarter of 2003 (see Chart 2.3). It recovered somewhat in April, which may have been associated with an easing of concerns following the conclusion of hostilities in Iraq. The same survey indicates that households are also less optimistic than they were in 2002 about their own financial position during the next twelve months. Nonetheless, that indicator remains above its long-term average. And it has been the more reliable indicator of consumer spending. While it points to consumption growth slowing, it does not suggest a dramatic decline in the level of household spending.

Household consumption growth has averaged 4.1% a year since 1995, the highest rate for any consecutive seven-year period in the past hundred years. Growth of spending on durable goods has been exceptional—averaging 9.0% a year since 1995. That has partly reflected a steep fall in their relative price, especially of computers (see Chart 2.4). In the National Accounts, constant-price spending is weighted together using expenditure shares in 1995. The large decline since 1995 in the relative prices of some durable goods means that spending on them has a larger impact on total consumption growth than if more recent weights were used. The box on pages 14–15 explains that the move in September to chain-linking, where the weights used in constructing constant-price National Accounts data will be updated on an annual basis, is likely to lead to a downward revision of recent consumption growth.

The value and composition of household assets has an important influence on consumption. Households' total net wealth is currently over six times their annual disposable income (see Chart 2.5). The ONS recently revised up its estimates of households' pension fund and other indirectly held assets by nearly £150 billion, equivalent to around 20% of households' annual disposable income. Households' housing wealth net of their secured borrowing is currently roughly equal to the rest of their net wealth—mostly held in bank and building society deposits and life assurance and pension funds.

An increase in house prices not only raises people's wealth but also the price of the housing services they consume. So unless people trade down in the housing market to release some of that wealth, rising property values are unlikely to have any direct effect on their consumption patterns. The main channel by which an increase in housing wealth could raise consumption is through facilitating higher borrowing. Greater housing collateral provides more access to lower-cost

The introduction of annual chain-linking into the National Accounts

The National Accounts present measures of GDP valued at current prices and also 'volume' or 'real' measures which attempt to remove the effect of changing prices. This is done by valuing the components of GDP at the prices prevailing in a 'base year'. Up to now the base year has been changed at intervals of five years. The current base year is 1995, and was first used to construct constant-price GDP in 1998. But when the National Accounts *Blue Book 2003* is published in September, real measures of GDP will, for the first time, be constructed on an annual chain-linked basis. This means that the components of GDP in each year will be valued at the prices of the previous year rather than those of up to eight years earlier.

Real, or volume, measures of GDP serve many uses. They are informative as measures of economic welfare, as consumers benefit from the volume of goods and services they buy, rather than their nominal value. They also aid economic analysis, as economists are interested in the separate developments of quantities and prices.

Using the relative value of GDP's components in a base year as weights will only provide a fully representative measure of aggregate real GDP over time if relative prices remain broadly constant in subsequent years. This is unlikely, and the further away the base year is, the less representative of the economy the data become. Moving from weights updated on a five-yearly basis to ones updated on an annual basis will make published data more reliable indicators of developments that policy-makers, economists and commentators wish to understand.

How does chain-linking work?

Table A gives a stylised picture of how chain-linking works. The 'raw volume index' shows how levels are estimated from year to year with updated weights. In the second column the weights for Year 1 are used to calculate the volume of output in Year 2. In the third column the weights of Year 2 are taken (Year 2 = 100) and used to measure output in Year 3, and so on. Thus, each year acts as a base year for the following year.

In order to get a continuous index it is necessary to link the left-hand columns together and scale them to a reference year, which will take the value of 100. In this example the reference year is Year 3. The right-hand side of the table illustrates how the scaling would be done.

Table A
Chain-linking

	Raw volume index				Chain-linking formulae	Chain-linked index
Year 1	100				$(100/118) \times (100/121) \times 100$	70.04
Year 2	118	100			$(100/121) \times 100$	82.64
Year 3		121	100		100	100.00
Year 4			102	100	$(102/100) \times 100$	102.00
Year 5				110	$(110/100) \times (102/100) \times 100$	112.20
Year 6				99	$(99/100) \times (110/100) \times (102/100) \times 100$	111.08

Chain-linking is not a new concept for UK statistics. Expenditure weights used to construct the RPI have been updated annually since the early 1960s. Indeed, as the box in the November 2002 *Inflation Report* explained, GDP is already chain-linked, but only every five years. The introduction of annual chain-linking for measures of GDP will conform to EU requirements and bring UK National Accounts closer into line with practice in the United States, which introduced annual chain-linking into its accounts in the mid-1990s.

The ONS has decided to reference data to the latest year for which weights are available—2000 for the *Blue Book 2003*. Quarterly data for 2002 and 2003 will be calculated using 2000 weights initially, because the data for 2001 and 2002, needed to calculate weights for full chain-linking, will not be ready before 2004 and 2005 respectively. The GDP data will be revised when the appropriate weights become available.

Effects on GDP and inflationary pressures

The ONS has simulated the likely effects of switching to chain-linking for both the expenditure and output measures of GDP,⁽¹⁾ and their findings are summarised in Tables B and C.

Demand is likely to grow more rapidly for goods and services whose relative prices are falling. As a result, a component whose relative price in a given year is low compared with the base year is likely to make an exaggerated contribution to overall growth when measured in base year prices. In Table C the downward revisions to GDP growth have been driven by the private services sector. The principal contribution was from communication services, where volumes rose by over 80%, while prices fell sharply.

But chain-linking need not necessarily result in downward revisions to growth, as the two tables demonstrate. Output growth in manufacturing (part

(1) See Tuke, A and Reed, G (2001), 'The effects of annual chain-linking on the output measure of GDP', *Economic Trends*, October, pages 37–53; 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; Tuke, A (2002), 'Analysing the effects of annual chain-linking on the output measure of GDP', *Economic Trends*, April, pages 26–33; and Tuke, A and Beadle, J (2003), 'The effect of annual chain-linking on *Blue Book 2002* annual growth estimates', *Economic Trends*, April, pages 29–40.

Table B
Contributions to, and overall impact on, the annual growth rate of the expenditure measure of GDP (market prices) from chain-linking

Percentage points							
	1995	1996	1997	1998	1999	2000	2001
Household consumption	0.0	0.0	-0.1	-0.1	-0.3	-0.5	-0.5
Government consumption	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Investment (a)	0.0	0.0	0.0	-0.3	-0.1	-0.2	0.0
Changes in inventories	0.1	0.0	-0.1	0.1	-0.2	-0.1	0.3
Exports	0.0	0.0	-0.1	-0.2	-0.4	-0.8	-0.1
Less imports	0.0	0.0	0.1	0.5	0.7	1.5	0.1
GDP(E) (b)	0.2	0.0	0.0	0.0	-0.1	-0.1	-0.2

Source: ONS.

(a) Includes net acquisition of valuables.

(b) Discrepancies between the sum of the components and total GDP are due to rounding.

of 'production industries' in Table C) was below average in 2001, but the relative price of manufactured goods was falling. As a result, its below-average volume growth makes a larger negative contribution when measured at the relatively higher fixed-base prices, and chain-linking leads to upward revisions to GDP from the manufacturing component. Nevertheless, the overall effect of switching from a fixed-base system to a chain-linked one is likely to reduce measured growth slightly.

(2) See the August 2002 *Inflation Report*, pages 47–48.

Table C
Contributions to, and overall impact on, the annual growth rate of the output measure of GDP (basic prices) from chain-linking

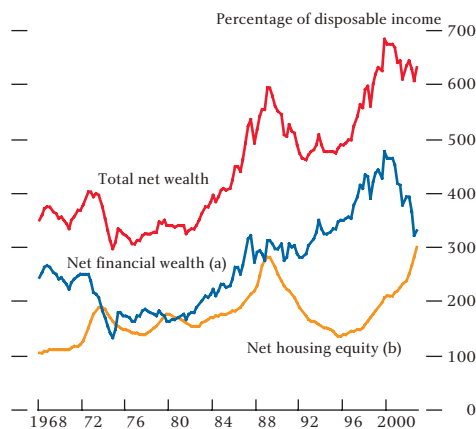
Percentage points							
	1995	1996	1997	1998	1999	2000	2001
Agriculture	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Production industries	0.0	0.0	0.1	0.0	0.1	0.0	0.1
Construction	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Private services	0.0	0.0	-0.1	-0.2	-0.2	-0.2	-0.2
Other services	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GDP(O) (a)	0.0	0.0	0.0	-0.2	-0.2	-0.2	0.1

Source: ONS.

(a) Discrepancies between the sum of the components and total GDP are due to rounding.

Chain-linking affects the measurement of both aggregate demand and potential supply. So, although its introduction may lead to downward revisions to GDP and aggregate demand growth, and may have some compositional effects, it is unlikely to affect the MPC's assessment of inflationary pressures. But the revisions will need to be taken into account when comparing the current projection for GDP growth, which is based on 1995 prices, against subsequent published outturns, which will be on a different price base.⁽²⁾

Chart 2.5
Household net financial wealth and net housing equity

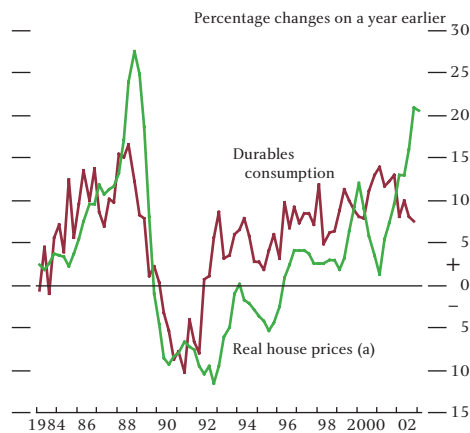


(a) Financial wealth net of unsecured debt.
(b) Housing wealth net of secured debt.

secured borrowing, which may be used to fund additional consumption.

House prices and consumer spending—especially on durable goods—might also move together because they are affected by similar factors, including interest rates and household income. Like housing and other forms of investment, durable goods provide a flow of services over time. So house prices and the consumption of durable goods may be highly correlated, without there necessarily being a strong causal relationship. For example, if households believed that their future income would be 1% higher than they previously expected, their desired consumption of the services provided by durable goods and houses could also be expected to rise by around 1%. That may require a large, but temporary, jump upwards in households' desired spending, perhaps financed by borrowing, as households increase both their stock of durable goods and their housing demand. With the supply of housing relatively fixed in the short term, that would lead to a period of rapid house price inflation. Once the adjustment to the new higher stock of consumer durables is complete, and increased housing demand has been dissipated by higher prices, a slowdown in house price inflation may be associated with a sharp reversal in the growth of spending on durable goods. Trends in the consumption of durable goods have usually led house prices (see Chart 2.6). Although quite strong, the

Chart 2.6
Durables consumption and house prices



Sources: Halifax and ONS.

(a) The Halifax index divided by RPIX.

Chart 2.7
Business investment

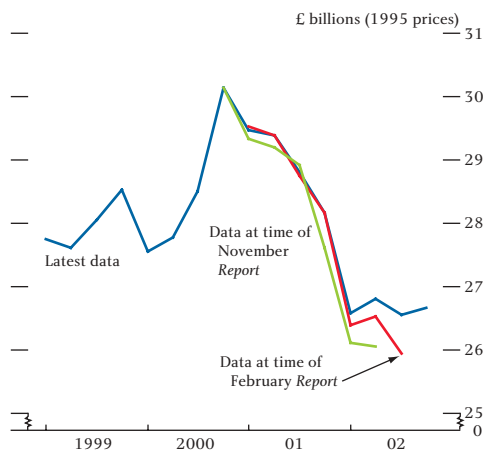
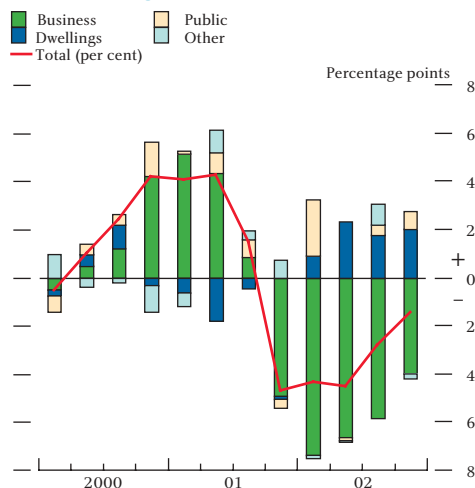


Chart 2.8
Contributions to whole-economy annual investment growth



growth of durables consumption slowed in 2002. And the available indicators point to weaker growth in 2003 Q1.

Having slowed in Q1, the MPC expects consumption growth to be below trend during the rest of 2003. In part, that reflects the end of the stock adjustment described above, much slower growth of housing collateral, and past falls in equity prices. But slowing real income growth, in part reflecting weaker employment prospects and the April increases in Council Tax and National Insurance contributions, is also a major influence.

Public sector spending

The Budget on 9 April announced higher forecasts of government borrowing in the next few years than the November Pre-Budget Report (PBR) projections. That is mostly due to the effects on receipts of temporarily lower GDP growth. The Budget projected slightly higher government spending than the PBR in the next two years. In part, that reflects the Government's commitment of a further £2 billion to finance the United Kingdom's military obligations in Iraq. The Budget forecast a higher level of government consumption in 2003–04, partly offset by slightly lower transfer payments and public investment, than in the PBR. Government consumption increased by 1.0% in 2002 Q4 to stand 2.2% higher than a year earlier. Public investment increased by 8.6% in the year to Q4. But it accounts for less than one tenth of total investment and so added only 0.7 percentage points to the overall growth rate.

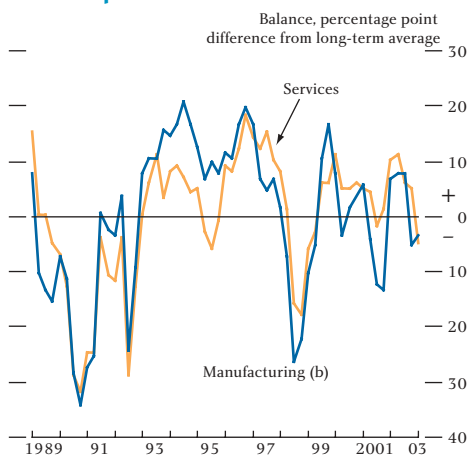
Investment

Whole-economy investment fell by 0.2% in 2002 Q4. Business investment, which accounts for around three quarters of total investment, increased by 0.4% in Q4, but was still 5.4% lower than a year earlier. Revisions have raised the level of business investment and in Q4 it was around 3½% higher than the MPC had projected in February. Having fallen sharply in 2002 Q1, it is now estimated to have remained fairly flat for the rest of the year (see Chart 2.7).

Private investment in dwellings—which consists largely of spending on new houses and home improvements—continued to grow strongly and was 15.3% higher in Q4 than a year earlier. That added 2 percentage points to the annual growth rate of whole-economy investment (see Chart 2.8).

The February *Report* described how the ratio of business investment to GDP had fallen sharply in recent years and was now lower than its long-term trend, whether measured at constant or current prices. Other things being equal, that

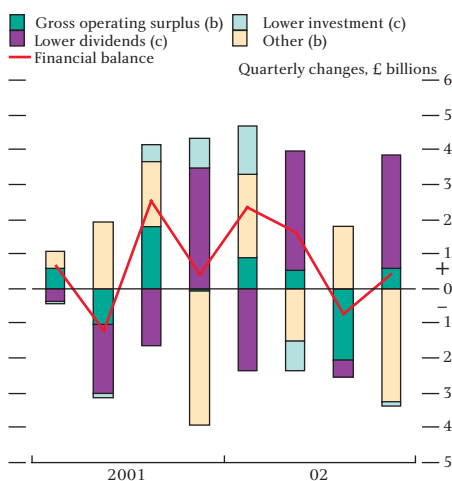
Chart 2.9
Profit expectations^(a)



Source: BCC.

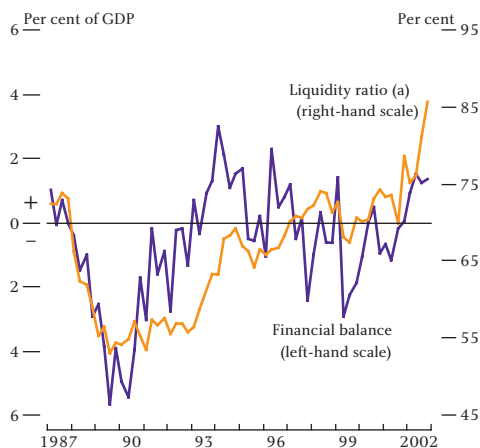
- (a) Percentage balance of responses to the question: 'Do you believe that over the next twelve months profitability will improve/remains the same/worsen?'
(b) Includes agriculture, energy and construction.

Chart 2.10
PNFCs' financial balance^(a)



- (a) The chart shows the contributions of changes in PNFCs' income and expenditure to changes in their financial balance.
(b) The gross operating surplus excludes the statistical alignment adjustment, which is included in the 'Other' component.
(c) A decline in dividend payments or investment increases the financial balance.

Chart 2.11
Financial balance and the liquidity ratio of PNFCs



- (a) Ratio of currency and deposits to short-term loans.

suggested some future recovery in investment. What other factors might be relevant to that assessment?

Future prospects are important for investment decisions—for example, a business is likely to reduce its investment if its expectations of future profits or sales deteriorate. The British Chambers of Commerce (BCC) Q1 survey reported that expectations of profitability in the service sector had fallen to their lowest level for four years (see Chart 2.9). In part, that might reflect a loss of business confidence associated with the conflict in Iraq. The BCC survey was undertaken from 3–24 March, with military action in Iraq commencing on 20 March. The CIPS April survey of private services (excluding the distributive trades), which was undertaken after the conclusion of hostilities, reported some recovery in business expectations of activity a year ahead. Nevertheless, those expectations have fallen quite sharply in the past year and remain well below their long-term average level.

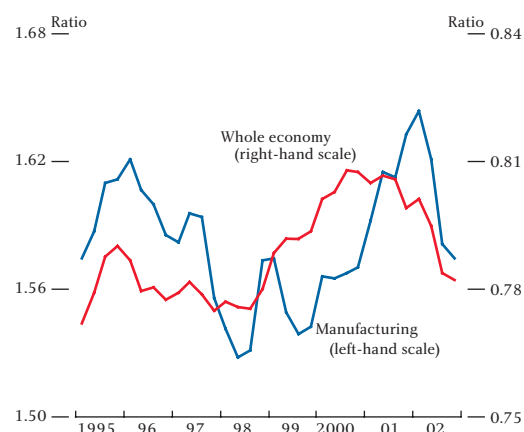
When making investment plans, businesses may also take into account indicators of their current financial position, such as debt, cash-flow and holdings of liquid assets. These factors would be important if, for example, firms had limited access to credit or were worried about future solvency. Section 1 described how the indebtedness of private non-financial corporations (PNFCs) is high in relation to the market value of capital employed. And the profits of PNFCs (excluding the alignment adjustment) declined sharply in the second half of last year, despite rising profits of oil companies. These factors may partly explain why companies have curtailed their discretionary spending recently. PNFCs sharply reduced their dividend payments and, to a lesser extent, their investment in 2002. These cutbacks were reflected in improvements in PNFCs' financial balance in the past two years (see Chart 2.10). In 2002, PNFCs were in surplus by 1.3% of GDP and in 2002 Q4, PNFCs' liquidity ratio was at its highest level for over a decade (see Chart 2.11). Nevertheless, despite spending cutbacks and improvements in their financial position, capital gearing remains high. That suggests that firms may be cautious about future spending plans.

Looking ahead, the MPC believes that business investment will gradually increase during 2003. But only a modest pick-up is expected, in part reflecting subdued profit expectations and the high level of capital gearing. Furthermore, capacity utilisation is probably below normal levels (see Section 3). With existing spare capacity, companies also have less reason to invest.

Inventories

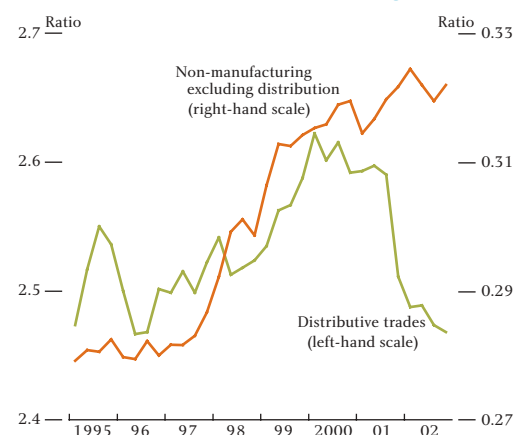
Inventories added 0.8 percentage points to GDP growth in 2002 Q4. But this mostly reflected the statistical alignment

Chart 2.12
Stock-output ratio:^(a) whole economy and manufacturing



(a) Inventories (excluding the alignment adjustment) as a proportion of gross value added at 1995 prices.

Chart 2.13
Stock-output ratio:^(a) distributive trades and the rest of non-manufacturing



(a) Inventories as a proportion of gross value added at 1995 prices.

Table 2.B
GDP growth in the major economies

Percentage changes on a quarter earlier

	Averages		2002			2005 Q1
	2001	2002	Q2	Q3	Q4	
Euro area (a)	0.1	0.3	0.4	0.3	0.1	n.a.
of which, Germany	0.0	0.2	0.2	0.3	0.0	n.a.
France (a)	0.2	0.4	0.5	0.3	-0.1	n.a.
Italy	0.2	0.2	0.2	0.3	0.4	n.a.
United States	0.0	0.7	0.3	1.0	0.3	0.4
Japan	-0.6	0.7	1.4	0.8	0.5	n.a.

Sources: Eurostat, INSEE, Japanese Cabinet Office and US Bureau of Economic Analysis.

(a) The French GDP figures were revised by INSEE on 29 April, after the Eurostat release for GDP in the euro area, dated 10 April.

adjustment, which the ONS adds to its estimates of changes in inventories to ensure the same growth of the expenditure and output measures of GDP. The Q4 alignment adjustment was the highest proportion of GDP since 1986. Stockbuilding excluding the alignment adjustment was negligible in Q4 and the ratio of stocks to output declined slightly (see Chart 2.12). Manufacturers continued to reduce stocks in Q4.

The stock-output ratio of the whole economy increased in the late 1990s and fell back from mid-2001. Charts 2.12 and 2.13 show that the recent decline has reflected falling stock-output ratios in manufacturing and the distributive trades. Initially, manufacturers may have accumulated unwanted stocks as they were surprised by the severity of the slowdown in demand for their goods. Recent declines in stocks may have reflected firms' attempts to unwind that involuntary build-up. Manufacturers have also probably been trying to improve their cash-flow by cutting discretionary spending, including on stocks. By contrast, the growth of demand in the distributive trades has been strong in recent years. Distributors responded in the late 1990s by accumulating stocks; more recently they may have anticipated a slowdown in demand and so reduced stocks. The CBI *Distributive Trades Survey* has reported a sharp slowdown in both actual and expected sales in retailing since the end of 2001.

The Committee expects stockbuilding to make a small positive contribution to GDP growth in 2003, reflecting the gradual pick-up in aggregate demand growth. That would be consistent with a broadly stable stock-output ratio.

2.2 External demand and UK net trade

In 2002 Q4, GDP growth slowed in all the G7 economies other than Italy, where demand was supported by various temporary tax incentives (see Table 2.B). GDP growth in the United States is provisionally estimated to have remained weak in 2003 Q1, at 0.4%. Weaker Q4 growth in the euro area and the United States partly reflected a decline in the net trade contribution to GDP. Despite the slowdown in the G7, available indicators of activity in the rest of the world suggest that world GDP growth declined only slightly in Q4.

GDP in the euro area increased by just 0.1% in 2002 Q4, continuing the period of low growth since early 2001. Although it picked up in Q4, Table 2.C shows that domestic demand growth has been weak in the past two years. Much of the weakness of euro-area consumption growth last year reflected a decline in consumer spending in Germany. That may have reflected concerns about employment prospects—the unemployment rate in Germany has risen steadily since mid-2001. Consumer confidence may also have been dented

Table 2.C
Contributions to euro-area GDP growth

Percentage point contributions to quarterly growth

	Averages		2002			
	2001	2002	Q1	Q2	Q3	Q4
Consumption:						
Household	0.2	0.1	-0.1	0.1	0.3	0.2
Government	0.1	0.1	0.2	0.2	0.1	0.1
Investment	-0.1	-0.1	-0.2	-0.3	0.0	0.0
Change in inventories	-0.2	0.0	0.1	0.1	-0.3	0.1
Domestic demand	0.0	0.2	0.1	0.2	0.1	0.5
Net trade	0.1	0.1	0.3	0.2	0.2	-0.3
GDP (a)	0.1	0.3	0.4	0.4	0.3	0.1

Source: Eurostat.

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

Table 2.D
Contributions to US GDP growth

Percentage point contributions to quarterly growth

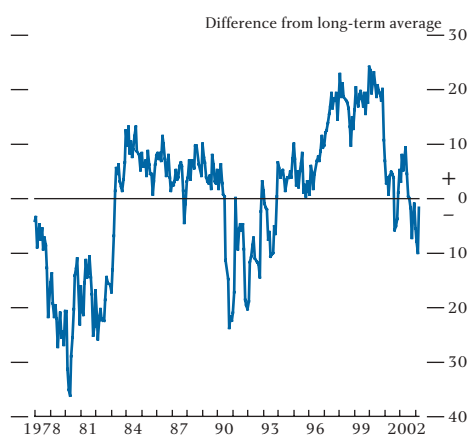
	Averages		2002			2003 Q1 (a)
	2001	2002	Q2	Q3	Q4	
Consumption:						
Household	0.5	0.5	0.3	0.7	0.3	0.2
Government	0.2	0.2	0.1	0.1	0.2	0.0
Investment	-0.2	0.0	-0.1	0.0	0.2	0.0
Change in inventories	-0.4	0.3	0.3	0.1	0.1	-0.1
Domestic demand	0.0	1.0	0.7	1.0	0.7	0.2
Net trade	0.0	-0.2	-0.4	0.0	-0.4	0.2
GDP (b)	0.0	0.7	0.3	1.0	0.3	0.4

Source: US Bureau of Economic Analysis.

(a) Advance estimate.

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

Chart 2.14
US consumer confidence^(a)



Source: Thomson Financial Datastream.

(a) University of Michigan index.

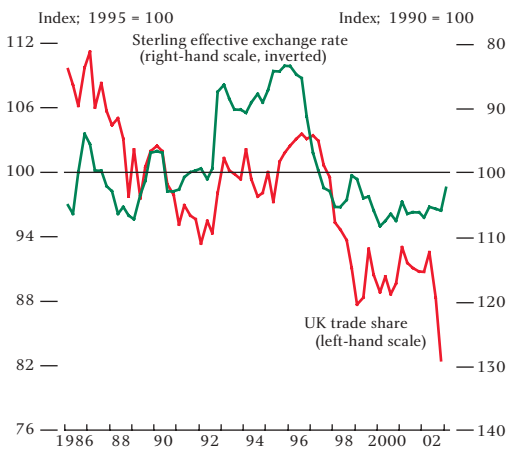
by expectations of prospective fiscal tightening, with Germany's budget deficit exceeding 3% of GDP in 2002. Looking forward, the Committee has reduced slightly its forecast of euro-area GDP growth in 2003 since February, partly reflecting a weaker outlook for consumption.

In the United States, household consumption has underpinned GDP growth for several years. However, consumer spending slowed in 2002 Q4, reflecting a decline in vehicle purchases from unusually high Q3 levels. As a result, US domestic demand growth also weakened (see Table 2.D). Retail sales declined in early 2003, perhaps partly reflecting the severe February weather in the north east. Although retail sales bounced back strongly in March, including a sharp recovery in vehicle purchases, advance estimates indicate that the growth of total consumer spending weakened further in Q1. Consumer confidence started to decline last summer and it fell sharply between December and March, when the University of Michigan indicator was at its lowest level for nearly ten years (see Chart 2.14). The Michigan indicator recovered almost all of its 2003 Q1 decline in April, with confidence increasing following the conclusion of hostilities in Iraq. Nevertheless, it remained slightly below its long-term average. Low consumer confidence may also partly reflect increased job insecurity at a time of relatively high unemployment. However, federal tax and spending policies are supportive of growth, lower oil prices should boost real incomes, and short-term and long-term interest rates are around their lowest levels for many years. Following below-trend growth in Q1, the MPC expects US GDP growth to strengthen over the remainder of the year to around trend.

GDP in Japan grew by 0.5% in 2002 Q4, largely reflecting a pick-up in investment and net trade. That was somewhat stronger than the Committee expected. The March 2003 Tankan survey indicated a slight improvement in business sentiment since December. That, with other indicators, points to modest growth continuing in Q1. The emerging Asian economies grew strongly in 2002. The recovery in demand in the major economies projected by the MPC should help to support continued buoyant growth this year, although there is likely to be some temporary disruption to economic activity in the region from the outbreak of severe acute respiratory syndrome (SARS).

The Committee judges that the world economy in early 2003 has been slightly weaker than projected at the time of the February Report. That in part reflects weaker-than-expected consumer and business confidence. But prospects thereafter are little changed since February. Equity prices have

Chart 2.15
UK share of major six trade^(a)



Sources: Bank of England and ONS.

(a) Volumes of goods, ratio of UK exports to UK-weighted imports of the G7 excluding the United Kingdom. The major six proxies the world economy, recent outturns for which are not available.

Chart 2.16
Net exports

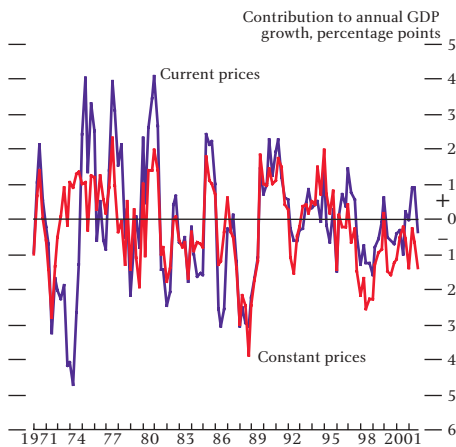
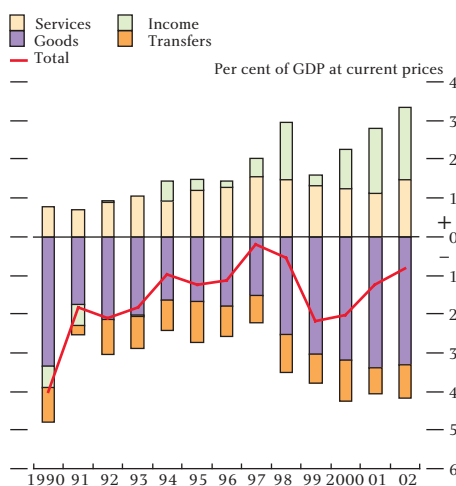


Chart 2.17
The balance of payments current account



Note: A positive figure indicates a surplus; a negative figure a deficit.

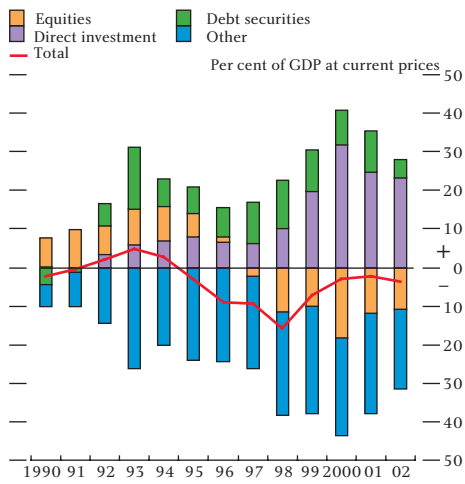
recovered, while oil prices have fallen. Those factors should support growth in the future.

Net trade in services added 0.3 percentage points to quarterly UK GDP growth in 2002 Q4. By contrast, exports of goods were particularly weak, having also fallen sharply in Q3. Overall, net trade detracted 1.3 percentage points from GDP growth in Q4, the most negative contribution for over seven years. That helped to give rise to a much lower estimate of GDP growth in Q4 when measured by the expenditure, rather than the output, figures. The ONS resolved this discrepancy by adding a large alignment adjustment to stockbuilding (see above). The Committee has maintained the view that at least some of this weakness of exports is exaggerated by the ONS data and may be reversed subsequently. Trade in goods in the G7 excluding the United Kingdom increased in the second half of last year. So the ONS export figures imply a large decline in the UK trade share in this period (see Chart 2.15). In the past, declines of this magnitude have usually followed a sharp appreciation of sterling. But sterling changed little last year. Recent monthly data suggest that export growth remained weak in early 2003. While the volume of goods exports rose sharply in January, it fell back again in February.

Net trade has detracted from annual constant-price GDP growth in every year since 1995. But a box in the February *Report* described how there has been a steady improvement in this period in the terms of trade—the average price of UK exports relative to the average price of UK imports expressed in sterling. So net trade has made a higher contribution to GDP growth measured at current prices than at constant prices (see Chart 2.16). In current prices, net exports added to annual GDP growth in 2002.

Net exports of goods and services measured at current market prices (or the trade balance) form a component of the current account of the balance of payments. The current account also includes net transfer payments overseas, and income from UK residents' holdings of foreign assets, net of payments on their liabilities held abroad. The current account deficit has narrowed in recent years, to 0.8% of GDP in 2002 from 2.2% of GDP in 1999 (see Chart 2.17). The average annual deficit has been 1.3% of GDP in the past 30 years, implying that overseas residents have increased their claim on UK resources. The ONS data indicate that the United Kingdom has been a net debtor since the mid-1990s, with a larger stock of overseas liabilities than assets (see Chart 2.18). But measured UK net overseas indebtedness is small—less than 4% of GDP in 2002—and lower than that of the United States, for example, which had net overseas liabilities amounting to about 23% of GDP at end-2001.

Chart 2.18
Overseas assets and liabilities



Note: A positive figure indicates that the United Kingdom has net assets; a negative figure net liabilities.

Looking forward, the Committee expects sterling's recent depreciation to boost export volume growth relative to imports compared with the outlook in February. Even so, the current account deficit is projected to increase somewhat in 2003.

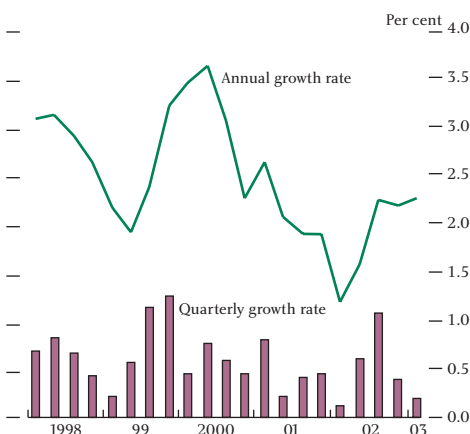
The preliminary estimate of GDP growth in Q1, at 0.2%, was significantly weaker than the Committee had expected at the time of the February Report. Usage of labour and capital is somewhat below normal. Average hours worked have fallen further. That has probably reflected some combination of weaker labour demand, a desire on the part of individuals to work fewer hours, and the effects of government legislation. The number of people in employment has probably continued to rise. Nevertheless, vacancies data, together with evidence from recruitment specialists, suggest that the demand for new staff, outside of construction and public services, has weakened slightly. But the unemployment rate is still low, and some organisations that want to recruit labour continue to find difficulty in doing so.

3.1 Output

The amount produced by a company depends on the quantities of labour and capital it employs, on how hard it works these factors of production, and on the efficiency with which it combines them (sometimes referred to as total factor productivity, or TFP). Large adjustments in the quantity of labour or the quantity of capital are unlikely from one day to the next. That is because hiring and firing costs are incurred when a business changes the number of staff it employs. And, although a firm may be able to choose the number of overtime hours worked, core hours are usually fixed by an employment contract. There can be a delay of several months before new investment plans are realised. Moreover, the resale value of capital equipment, buildings aside, tends to be so low that a company will rarely choose to reduce its stock of capital, except through natural wear and tear. Output can increase following improvements in TFP, but these take time to design and implement. In practice, therefore, short-term fluctuations in output are often achieved by varying the utilisation rate of capital and worker effort.

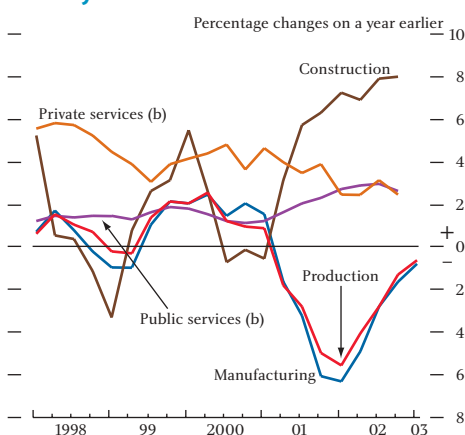
The outcome of the supply decisions of all firms is apparent in the output measure of gross domestic product (GDP). In the March release of the National Accounts, it was reported that GDP, measured at constant market prices, had grown by 0.4% in 2002 Q4. That had followed growth of 1.1% in Q3 and 0.6% in Q2 (see Chart 3.1). As explained in the previous *Inflation Report*, the pattern of quarterly output growth last year was affected by the Jubilee holiday, which took place in June. Businesses appear to have deferred until Q3 some of the

Chart 3.1
GDP^(a)



(a) At constant market prices.

Chart 3.2
GDP by sector^(a)



(a) At constant basic prices.
(b) 'Public services' is defined here as public administration, education and health and social work. 'Private services' includes all other service sectors.

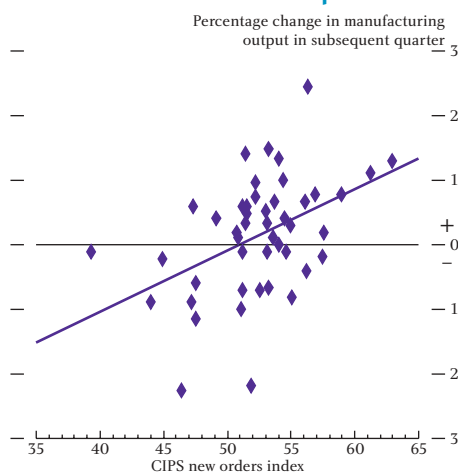
Table 3.A
CIPS new orders^(a)

	2002				2003	
	Q1	Q2	Q3	Q4	Q1	April
Manufacturing	51.2	54.4	51.1	51.2	47.8	49.8
Construction	57.2	57.2	55.6	58.9	56.9	58.7
Services (b)	52.9	55.5	54.1	53.8	50.5	49.3

Source: CIPS.

(a) Respondents are asked to compare the level of new orders with the situation one month previously. A reading of 50 indicates no change.
(b) Excludes the public sector and distribution.

Chart 3.3
Relationship between CIPS manufacturing new orders and official output data^(a)



Sources: CIPS and ONS.

(a) Correlation coefficient = 0.5.

production that would normally have taken place in Q2. That had the effect of reducing output growth in Q2, boosting it in Q3 and reducing it again in Q4. Using a set of assumptions published by the ONS,⁽¹⁾ growth in Q4 might have been up to 0.2 percentage points higher if the extra holiday had not occurred.

The divergence between the rates of growth of output in different industry sectors is still in evidence (see Chart 3.2). Construction output rose by 7.9% in the year to 2002 Q4—the fastest rate of increase since 1988. Growth in the output of public sector services has risen during the past two years. By contrast, growth in the output of private sector services has slowed somewhat. Output of the production industries, which consists largely of manufacturing output, fell through most of 2001 and 2002.

According to the preliminary estimate published in late April, GDP grew by just 0.2% in 2003 Q1. Although based on incomplete data, this estimate was, nevertheless, significantly weaker than had been expected by the Committee in February. Growth in total service sector output is estimated to have fallen from 0.5% in Q4 to 0.3% in Q1. The ONS reports that output of the hotels and restaurants sector fell markedly, while output of the financial services industries rose at a much slower rate than during the second half of last year. Index of production data published in early May showed that total production industry output fell by 0.5% in Q1. Output of the energy, gas and water supply industries contributed significantly to this fall, owing to an unusually warm Q1. Manufacturing output fell by 0.1% in Q1.

Surveys suggest little immediate prospect of a marked recovery in manufacturing output. The CIPS new orders index for manufacturing averaged 47.8 in Q1, with the figure for March particularly weak, as some clients delayed making new purchases until the uncertainties associated with the war in Iraq had diminished. Although it rebounded somewhat in April, the new orders index for manufacturing remained below the 'no change' level of 50 (see Table 3.A). In the past, the CIPS new orders index for manufacturing has been informative about manufacturing output growth one quarter ahead (see Chart 3.3). It would be surprising if there were a significant increase in manufacturing output in Q2, following such a low reading on the new orders index in Q1. The CIPS new orders index for services also fell sharply in Q1. By April it stood at 49.3, suggestive of a small reduction in new orders. It should be noted, however, that this survey excludes the public sector, in addition to retail and wholesale distribution. The available

(1) Contained in the *Quarterly National Accounts* release dated 23 December 2002.

evidence points to a further increase in the number of construction new orders in Q1 (see Table 3.A).

3.2 Capacity utilisation

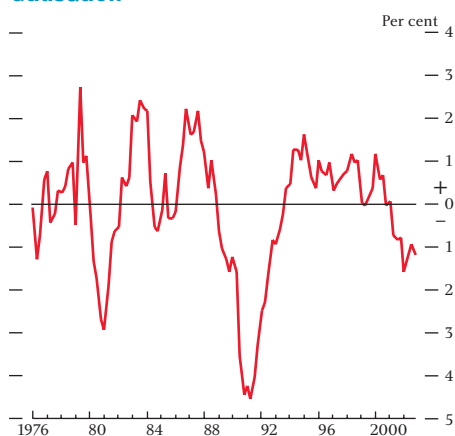
Capacity utilisation is an indicator of how hard the currently employed factors of production are being worked. A reliable estimate of capacity utilisation would be informative about the short-run balance between the demand for, and supply of, goods and services in the economy, and hence about pressures on prices. But in practice, capacity utilisation is hard to measure.

One approach involves comparing data on actual output with what would usually be produced, given the stock of capital and the amount of labour employed. Chart 3.4 shows an estimate of capacity utilisation derived in this way. Its construction is described more precisely in a box on pages 26–27 of this *Report*. On this measure, whole-economy capacity utilisation appears to have been falling for the past two years or so, and is now somewhat below normal rates.

Another approach relies on companies' responses to surveys. Each quarter the CBI and the British Chambers of Commerce (BCC) ask employers directly whether they are operating at or below full capacity. In the April CBI *Quarterly Industrial Trends* survey, the balance of manufacturers who reported that they were operating at full capacity was significantly below its average since 1972 (see Chart 3.5). The latest BCC manufacturing survey seems to tell a different story: the balance of respondents who said they were operating at full capacity was above its average since 1989. But the BCC manufacturing survey includes responses from firms operating in all sectors other than the service sector, including agriculture, energy and construction. It seems probable that the rather different reading from the BCC manufacturing survey is at least partly explained by the buoyant construction sector. The balance of respondents to the BCC services survey who stated that they were operating at full capacity has fallen during the past two years or so. Nevertheless, it was still above its historical average in Q1.

Each month, the Bank's regional Agents ask business contacts about their capacity utilisation. In manufacturing, the responses have been much closer to the CBI than to the BCC survey. Capacity utilisation is reported to have been below normal for the past two years or so. Results for the service sector are a little weaker than the BCC survey, with firms apparently operating at or close to normal capacity during

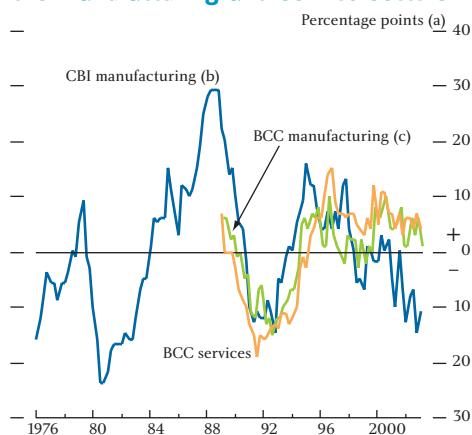
Chart 3.4
A measure of whole-economy capacity utilisation^(a)



Sources: Bank of England and ONS.

(a) The construction of this series is described in a box on pages 26–27 of this *Report*.

Chart 3.5
Survey measures of capacity utilisation in the manufacturing and service sectors



Sources: BCC and CBI.

(a) Percentage point deviation from series mean.
(b) The April 2005 *Quarterly Industrial Trends Survey*, which was conducted between 20 March 2005 and 9 April 2005, has been allocated to 2005 Q1. Earlier surveys have been allocated to their respective quarters accordingly.
(c) Includes agriculture, energy and construction.

2002, and then dipping marginally below normal capacity in early 2003.

3.3 Employment

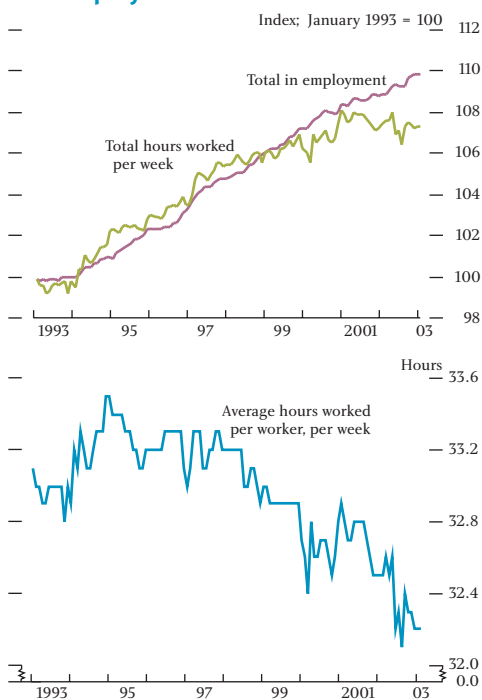
If existing resources are underutilised, then companies might be expected to cut back on total hours worked. Initially, this could be achieved by cutting average hours. But ultimately, in the absence of a pick-up in demand, it is likely that the number of people in employment will be reduced.

The Labour Force Survey (LFS) of households provides the most comprehensive measure of total hours worked in the economy. Chart 3.6 shows that total hours worked have been broadly flat for the past two years or so. At the same time, the number of people in employment has continued to rise, so average hours have been falling. When a company experiences a downturn in demand that it expects will be relatively short-lived, it may choose to keep its existing workforce, but allow each individual to work less intensively and for fewer hours. By hoarding labour in this way, the costly process of dismissing the existing workforce, only to have to recruit and train new staff when demand picks up again, can be avoided. The hoarding of labour by some firms provides one explanation for the reduction in average hours apparent in Chart 3.6, but there are others.

Average hours worked depend on labour supply as well as labour demand. The labour supply decision of an employed individual is effectively a choice between the consumption of goods and services, and the consumption of leisure. The more hours an individual chooses to work, the more goods and services he or she will be able to consume. But consumption of leisure will be reduced. In this context, leisure is used as a convenient shorthand for all non-market activity. It encompasses time devoted to study, to looking after the family home, and to caring for sick or elderly relatives. Sometimes, an individual who places a high value on these sorts of activities will not seek paid work, and will instead be described as 'inactive' in the labour force (see Section 3.5 below).

The real hourly wage rate has tended to rise through time, reflecting improvements in labour productivity. An increase in the real hourly wage rate has two effects on the labour supply decision of an employed individual, and these work in opposite directions. On the one hand, an increase in the hourly wage rate means that an employed individual will be better off if he or she works the same number of hours as before. Some of this extra income could be used to buy more goods and services, and some of it to buy more leisure by working fewer hours. On

Chart 3.6
LFS employment



Assessing total factor productivity and capacity utilisation

An economy's gross domestic product depends on the quantities of capital and labour employed, on how hard these factors of production are worked (capacity utilisation), and on the efficiency with which they are combined by entrepreneurs. This final concept is sometimes referred to as total factor productivity (TFP). This box describes how, by controlling for the potential effects of the quantities of capital and labour, a rough estimate of the contributions to output of both capacity utilisation and TFP can be identified. Capacity utilisation provides a measure of the current balance between the demand for, and supply of, goods and services. It might contain useful information about any immediate upward or downward pressure on wages and prices, and is consequently of particular interest to policy-makers.

Total hours worked provide a straightforward measure of the quantity of labour. In principle, more sophisticated measures, which seek to allow for the impact of improved education and training on labour quality, could also be constructed. Data on total hours worked in the United Kingdom are provided by the Labour Force Survey. And Bank staff have constructed a measure of the aggregate productive (or non-housing) capital stock using estimates of the stock of four different classes of capital asset: buildings; plant and machinery; transport equipment; and intangible fixed assets. These are derived from information on the flow of gross investment in each class of asset published by the ONS, and assumptions about the rate at which each class of asset depreciates.⁽¹⁾ Chart A shows how total hours worked, a Bank estimate of the capital stock and GDP have varied since the mid-1970s. During the

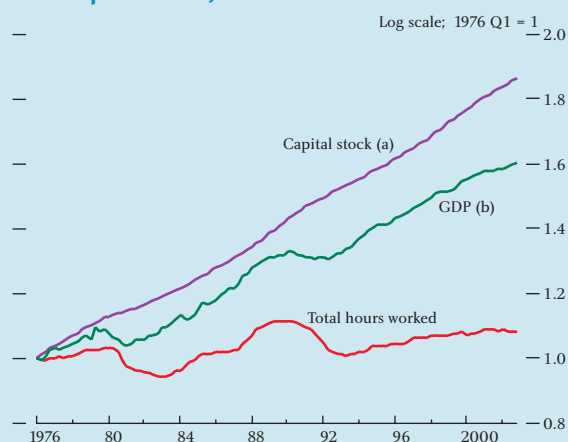
period shown in the chart, GDP has grown at an average annual rate of 2.3%, while the capital stock has grown at an average annual rate of 3.3%. In comparison, total hours worked have barely changed.

How much of the growth in output can be accounted for by growth in the capital stock and growth in total hours worked? The answer to this question depends on the elasticity of output with respect to both capital and labour. The elasticity of output with respect to capital (labour) is the percentage increase in output that would occur following a 1% increase in the stock of capital (total hours worked). If product markets are competitive, then these elasticities can be measured indirectly by observing the share of national income that is paid to each factor. The income shares of capital and labour in the United Kingdom vary over time, but they are generally close to 0.3 and 0.7 respectively. A simple estimate of the increase in output that can be accounted for by changes in the capital stock and total hours worked can be obtained by assuming that the two elasticities are fixed at these average income shares.

After weighting changes in the capital stock and total hours worked accordingly, it is clear that output has risen by more than can be accounted for by measured changes in the factors of production. This extra output, sometimes referred to as the Solow residual,⁽²⁾ is plotted in Chart B. One interpretation of Chart B is that, last year, a given quantity of capital stock and hours worked produced over 30% more than it would have done in the mid-1970s.

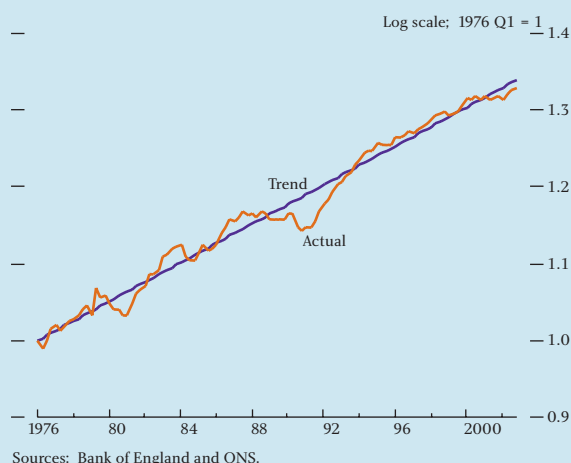
In this example, the Solow residual reflects the contribution to output of everything apart from the

Chart A
The capital stock, total hours worked and GDP



(a) Excluding housing.
(b) At constant factor cost.

Chart B
The Solow residual



(1) Some of the different approaches to measuring the capital stock are discussed in *Bank of England Working Paper no. 192* by Oulton, N, and Srinivasan, S. The paper can be downloaded from the Bank of England web site at www.bankofengland.co.uk/workingpapers/wp192.pdf.
(2) After Solow, R M (1956), 'A contribution to the theory of economic growth', *Quarterly Journal of Economics*, Vol. 70, No. 1, pages 65–94.

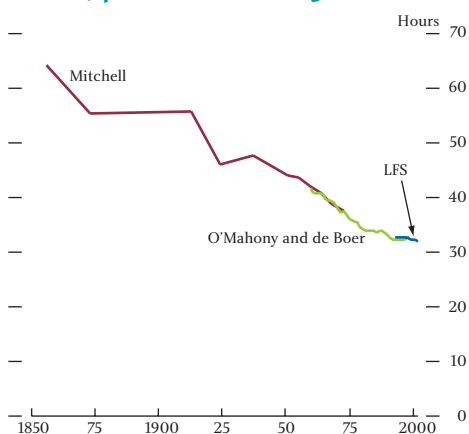
capital stock and total hours worked. Part of this residual will stem from the fact that output depends additionally on how intensively each factor is employed. So output depends on the utilisation rate of capital in addition to the capital stock, and on worker effort per hour in addition to total hours worked. The remainder of this residual is TFP.

The separate effects of TFP, the utilisation rate of capital and worker effort on the Solow residual cannot be disentangled without making further assumptions. Neither the utilisation rate of capital, nor worker effort, are likely to rise or fall permanently. Instead

they should, on average, be at some 'normal' level. One crude way of adjusting for the effects of TFP is, therefore, to fit a trend line through the Solow residual. This has been done in Chart B. This trend line can be taken to describe the average contribution of TFP to output. The gap between the Solow residual and this trend line then provides a rough guide to the degree of capacity utilisation, which is an amalgam of the utilisation rate of capital and worker effort. Other measures, which seek to identify the utilisation rate of capital and worker effort separately, are discussed in a recent *Bank of England Working Paper*.⁽³⁾

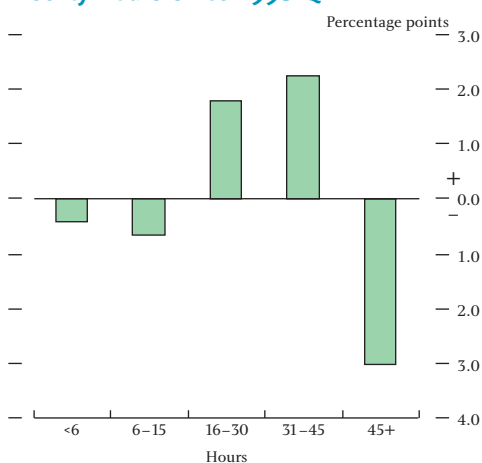
(3) Larsen, J, Neiss, K and Shortall, F (2002). 'Factor utilisation and productivity estimates for the United Kingdom', *Bank of England Working Paper* no. 162.

Chart 3.7
Measures of average hours worked per worker, per week since 1856



Sources: Mitchell, B R (1988), *British Historical Statistics*, Cambridge University Press; O'Mahony, M and de Boer, W (2002), 'Britain's relative productivity performance: has anything changed?', *National Institute Economic Review*, No. 179, January, pages 38–43; and ONS.

Chart 3.8
Changes in the distribution of usual weekly hours since 1998 Q1^(a)



(a) Each bar represents the change in the proportion of all in employment whose usual weekly hours worked fell within the ranges indicated.

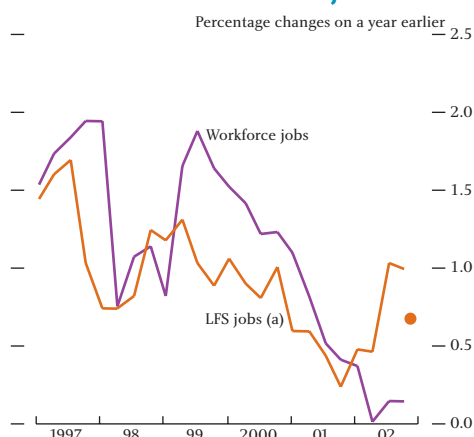
the other hand, an increase in the real hourly wage rate raises the price of leisure, because more labour income is foregone for each extra hour spent out of work. This creates an incentive for employed individuals to work additional hours and consume more goods and services, since these have become cheap relative to leisure. Which of the two effects is more powerful is an empirical matter.

Chart 3.7 uses data from a number of sources to investigate the pattern of average hours worked by those in work during the past 150 years or so. It shows that average hours worked have approximately halved since the 1850s. Rather than work longer following improvements in labour productivity in order to consume even more goods and services, it would seem that individuals have, on balance, taken the opportunity to enjoy more free time.⁽¹⁾ Some of the decline in average hours apparent in Chart 3.6 may be a continuation of this long-term trend.

Government legislation can also have a bearing on the length of the working week. In October 1998, the United Kingdom adopted the EU Working Time Directive (WTD). Among other things, this limited most employees to working, on average, a maximum of 48 hours per week. Chart 3.8 shows the shift in the distribution of usual working hours since 1998 Q1. There has been a large reduction in the proportion of all those in employment that usually work more than 45 hours per week. There has been a near offsetting increase in the proportion that usually work between 31 and 45 hours per week. The proportion that usually works fewer than 15 hours per week has also fallen slightly. This apparent narrowing of the

(1) Part of the decline in average hours worked by those in work shown in Chart 3.7 might be a consequence of more widespread labour market participation, particularly towards the end of the sample period. The average hours worked by households have probably fallen by less than the average hours worked by individuals.

Chart 3.9
Measures of the number of jobs



(a) The LFS measure of employment adjusted for the number of people with second jobs. The line represents three-month averages centred on the month of the corresponding Workforce Jobs survey. The final data point is for the period from December 2002 to February 2003.

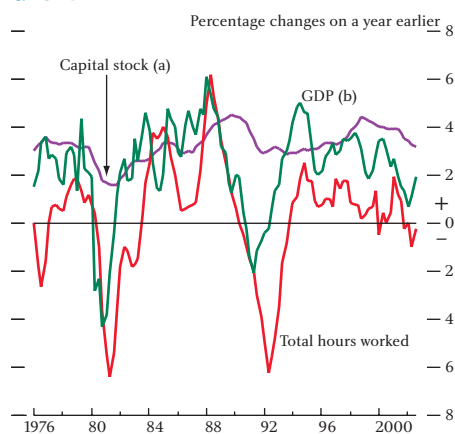
Table 3.B
Job vacancies^(a)

Percentage changes on a year earlier

	Employment share (b)	2002 Q2	Q3	Q4	2003 Q1
Manufacturing	14	-12	-9	3	-7
Other production industries (c)	1	-20	-33	-21	-17
Construction	4	-10	-23	4	2
Private services (d)	55	-10	-8	-1	-3
Public services (d)	25	2	1	8	6
Total (excluding agriculture)	99	-8	-7	2	-1

(a) These data are taken from an experimental ONS survey of job vacancies. The survey excludes firms operating in the agricultural sector.
 (b) Percentage of all employee jobs in December 2002.
 (c) Includes mining and quarrying, and electricity, gas and water supply.
 (d) 'Public services' is defined here as public administration, education and health and social work. 'Private services' includes all other service sectors.

Chart 3.10
The capital stock, total hours worked and GDP



Sources: Bank of England and ONS.

(a) Excluding housing.
 (b) At constant factor cost.

distribution of usual hours is consistent with the kind of strategy an employer might adopt in response to the WTD. Staff working for only a few hours each week might have been encouraged to work for longer in order to offset the reduction in labour supply from those at the top end of the hours distribution.

With existing resources apparently underutilised, at least in certain industries, and with average hours falling, probably due to a combination of weaker labour demand and weaker labour supply, what is the outlook for the number of jobs? The two main measures paint a slightly different picture of the recent past. The employer-based Workforce Jobs survey provides an estimate of the number of jobs on a single day towards the end of each quarter. The LFS measures the number of people in employment. But even after adding in the number of people with second jobs, growth in the number of LFS jobs has been broadly stable, at around 0.5% to 1.0% year on year, since the beginning of 2000 (see Chart 3.9). During that same period, growth in the number of Workforce Jobs slowed considerably. In the year to 2002 Q4, the number of Workforce Jobs rose by just 0.2%.

The stock of job vacancies provides a direct measure of the willingness of companies to hire new staff. Towards the end of last year, the ONS started to publish an experimental vacancies series based on a survey of employers. It is more comprehensive than the old measure of Jobcentre vacancies, for which no consistent data are available beyond April 2001. Table 3.B shows that there was a small reduction in the total number of vacancies in the year to 2003 Q1. Although the number of vacancies in both the construction and the public services sectors has been increasing year on year, the number of vacancies in other sectors, which together account for two thirds of all employment, has tended to fall. The Deloitte & Touche/REC *Report on Jobs* is also consistent with a slowdown in the demand for new staff. The indices for permanent placements and for temporary billings were both below the 'no change' level of 50 in March and April.

3.4 The capital stock

Historically, the rate of growth of the capital stock has varied by much less than the rate of growth of GDP, or the rate of growth of total hours worked (see Chart 3.10). The rate of growth of the capital stock is estimated to have eased somewhat since the late 1990s, while remaining positive. Even though non-housing investment has fallen during the past two years, it has been more than sufficient to cover depreciation. In light of the prospects for investment discussed in Section 2,

there is unlikely to be a substantial pick-up in the growth rate of the capital stock in the near term.

3.5 Labour supply

The size of the potential workforce is an important determinant of an economy's medium to long-term productive capacity. Some of the factors that affect the labour supply decision of an employed individual have already been discussed. The supply of labour in the economy as a whole depends additionally on the size of the working-age population, and on the participation rate.

Population of working age

The most reliable population data are contained in the national Census, but this is carried out only once in every ten years. Between Census dates, the ONS publishes mid-year population estimates. These estimates are derived from near-comprehensive data on births and deaths. But the size of the population is also affected by net migration, where the data are less reliable.

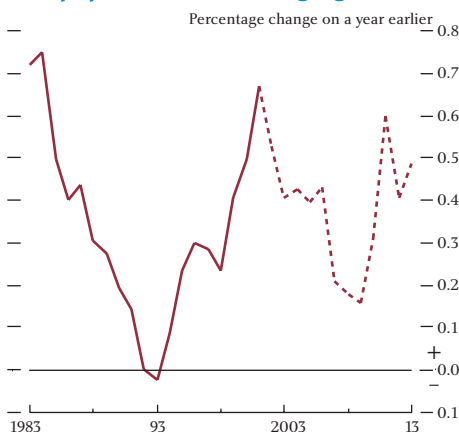
Estimates of the rate of growth of the working-age population since 1982, together with projections made by the Government Actuary's Department, are shown in Chart 3.11. The rate of growth of the working-age population is estimated to have reached 0.7% in the year to June 2001. Based on assumptions about the birth rate, the death rates of different age groups, and future net migration, the annual rate of growth of the population of working age is projected to average some 0.4% over the next ten years or so. Around one half of this projected increase reflects an assumption that more working-age people will migrate into the United Kingdom than will migrate out. The Committee bases its projections for the population of working age on the estimates shown in Chart 3.11.

Participation

The participation rate is that fraction of the working-age population who are either in work, or who want to work and are actively looking for work. People not participating in the labour force are described as inactive. The modest upward drift in the participation rate since the mid-1990s has been driven entirely by a higher participation rate of women (see Chart 3.12).

Changes in the participation rate may be cyclical or structural. When the economy has been expanding rapidly for some time, to the point where few people remain out of work, real wages are likely to increase substantially as companies compete with

Chart 3.11
The population of working age^(a)



Sources: GAD and ONS.

(a) Dashed line is a projection published by the Government Actuary's Department (GAD).

Chart 3.12
Participation rates

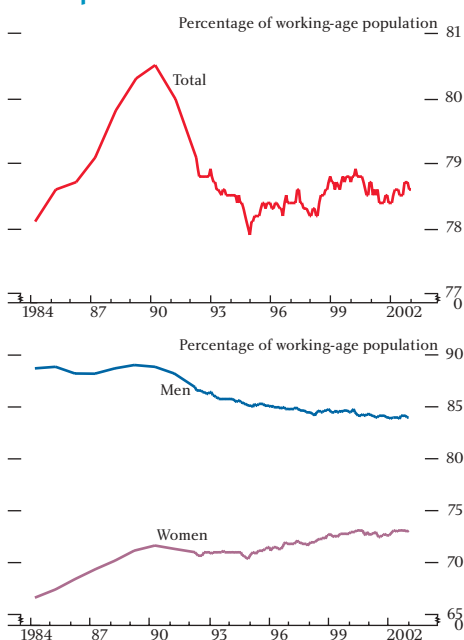


Chart 3.13
The unemployment rate

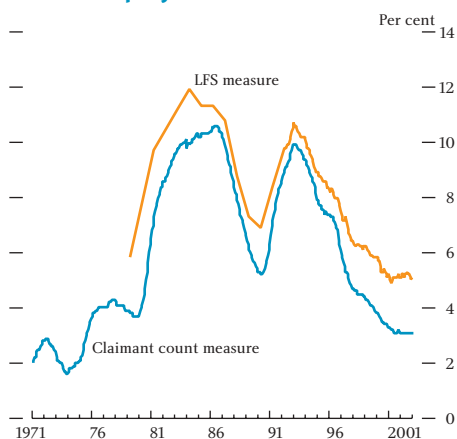


Table 3.C
Surveys of labour shortages and recruitment difficulties

	Series average (a)	2002			2003
		Q2	Q3	Q4	Q1
CBI labour shortages (b)					
Skilled	13	9	10	9	7
Unskilled	3	2	3	2	1
BCC recruitment difficulties (c)					
Manufacturing	58	66	62	74	61
Services	52	58	60	63	62

Sources: BCC and CBI.

(a) CBI average from 1972 and BCC from 1989.

(b) Percentage of firms citing labour shortages as a constraint on output over the next four months. The April 2003 *Quarterly Industrial Trends Survey*, which was conducted between 20 March 2003 and 9 April 2003, has been allocated to 2003 Q1. Earlier surveys have been allocated to their respective quarters accordingly.

(c) Balance of firms experiencing recruitment difficulties.

each other to recruit extra staff. Certain classes of inactive people, such as those who were discouraged and did not search because they believed no work was available, might then be tempted to search for work, and participate in the labour force. Much of the rise in participation during the late 1980s, and much of the fall in participation during the early 1990s, was probably cyclical.

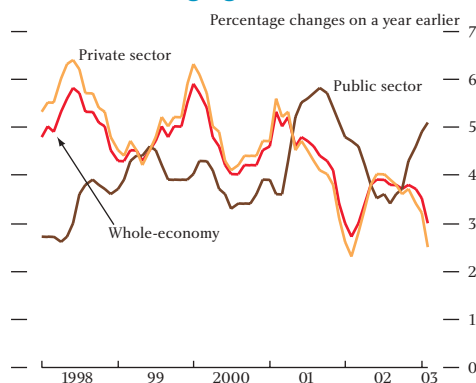
Structural factors that might affect the participation rate include the number of students, and incentives created by government legislation, particularly with regard to the tax and benefit system. Recent examples, which have aimed to increase labour force participation, include the New Deal schemes and the Working Tax Credit. The number of students in full-time higher education has increased markedly since the 1980s. An increase in student numbers will depress labour force participation in the short term. But it is likely to boost participation thereafter (according to the LFS, the participation rate of people with higher education qualifications is around 90%, well above the average for the whole of the working-age population).

Unemployment

The LFS measure of unemployment is defined as all those participating in the labour market who have not yet found work. It is often used as an indicator of the amount of spare capacity in the labour market. The LFS unemployment rate was 5.1% in the three months to February. After falling steadily from a peak of 10.7% in the three months to February 1993, it has been broadly stable for the past two years. The claimant count unemployment rate was 3.1% in March. Both the LFS and the claimant count measures remain at, or close to, historic lows (see Chart 3.13). This picture of a labour market that remains relatively tight is supported by surveys of labour shortages and recruitment difficulties (see Table 3.C). Most companies outside the manufacturing sector experienced above-average difficulties in recruiting throughout last year. Nevertheless, there are some signs that conditions have started to ease. Part of the reduction in average hours is likely to reflect weaker labour demand. Recruitment agencies have seen an improvement in staff availability in recent months, according to the Deloitte & Touche/REC *Report on Jobs*. And the latest reports from the Bank's regional Agents tell a similar story, with business contacts receiving a significantly higher number of applications for each advertised job vacancy than a year ago.

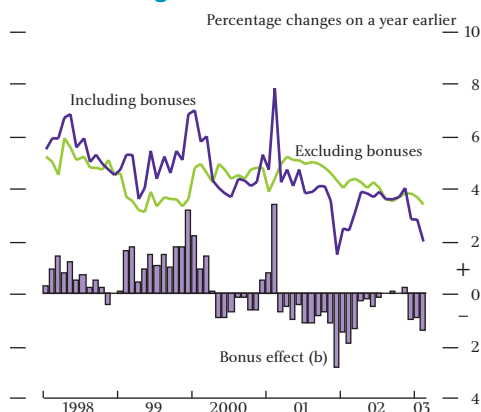
With overall cost pressures from the labour market muted, levels of capacity utilisation below normal and import prices lower than a year earlier, underlying inflationary pressures remained subdued in the second half of 2002. Nevertheless, annual RPIX inflation rose further above the 2.5% target in 2003 Q1 to its highest rate for five years. The lion's share of that increase reflected the impact of just two components: petrol prices and housing depreciation, directly associated with the earlier surges in oil and house price inflation. With annual oil and house price inflation likely to be past their peaks and expected to slow sharply, the upward impetus from those two sources is probably close to its maximum and is expected to diminish substantially over the forecast period. Despite this, annual RPIX inflation may edge up further in the next few months, and by a little more than envisaged in February, following higher-than-expected increases in Council Tax in April and as the effects of the recent depreciation of sterling begin to feed through. But then inflation is projected to fall back more quickly than assumed three months ago, and to dip just below target in early 2004.

Chart 4.1
Headline earnings growth^(a)



(a) Three-month moving average of the annual rate of growth of the ONS average earnings index, seasonally adjusted.

Chart 4.2
Private sector earnings growth including and excluding bonuses^(a)



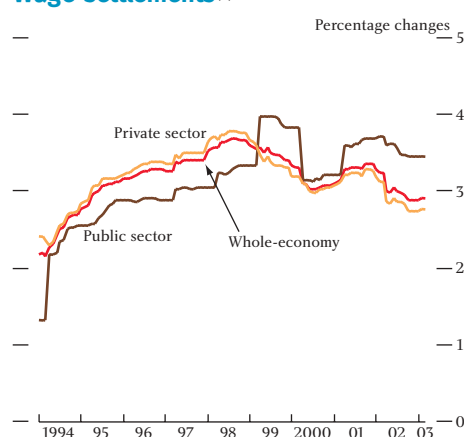
(a) ONS average earnings index measure, not seasonally adjusted.
(b) Percentage point contribution to annual growth of private sector earnings including bonuses.

4.1 Labour costs

Pay pressures have softened since the February *Report* and recent outturns for pay growth have been a little weaker than expected three months ago. Headline whole-economy earnings growth has fallen to its lowest rate for almost a year (see Chart 4.1). This reflects the marked decline in earnings growth in the private sector, which accounts for around four fifths of the total payroll in the United Kingdom. Headline private sector earnings growth fell to 2.5% in February from 3.7% in November, mainly owing to the downward effects of lower bonuses. Bonus payments reduced pay growth by over 1 percentage point in February (see Chart 4.2). Lower bonuses, which were concentrated in financial services, were probably a response to reduced profitability and the uncertain economic outlook in that sector, although they may also have been a consequence of the different timing of payments relative to the previous year. Excluding the impact of bonuses, private sector pay growth has fallen to its lowest rate for over three years and was around 1 percentage point lower than a year earlier in February. This moderation in pay growth has been associated with falling employment in the private sector.

In contrast, headline earnings growth in the public sector has risen further in the past three months to 5.1% in February (see Chart 4.1), buoyed by the large increases in public sector employment associated with the Government's expansion of public service provision. As highlighted in the February

Chart 4.3
Wage settlements^(a)



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

(a) Twelve-month weighted mean. The weights are the AEI industry shares of the wage bill.

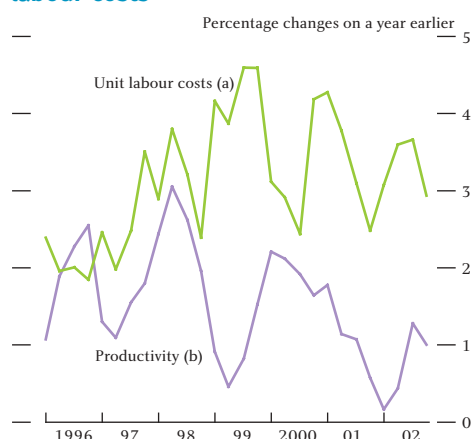
Report, the marked increase in public sector pay growth also reflects a number of temporary factors relating to the timing of last year's local authority settlement and of other increases in public sector pay. These effects are likely to continue to raise measured public sector pay growth for the next few quarters, before dropping out of the annual comparison by the end of the year to reveal a clearer picture of underlying trends.

A number of factors are likely to impinge on earnings growth over the coming months. These include the recent pick-up in retail price inflation, April's increases in National Insurance contributions and the forthcoming uprating of the National Minimum Wage (NMW).

Despite the recent substantial increase in retail price inflation (see Section 4.6) whole-economy pay settlements have so far remained relatively stable (see Chart 4.3). Workers care about their real take-home pay and thus may seek compensation for unexpected past rises in inflation and any increase in their inflation expectations. But because much of the recent pick-up in inflation reflects a higher contribution from the housing depreciation component of the RPI, which is not a visible price, employees' perceptions of the erosion in their real take-home pay from this increase may have been relatively small. Furthermore, as highlighted in Section 4.6, inflation expectations appear to have become more firmly anchored around the inflation target following the change in monetary regime in 1997, so that they are less closely linked to actual inflation, than in the past. Although there has been an increase in near-term inflation expectations, it is small in comparison with the rise in actual inflation (see Section 4.6). So, the upward impetus on settlements and overall earnings growth from recent retail price developments is likely to be modest, and, in any case, will depend on how successful employers are in resisting any demands for higher settlements.

The pre-announced increases in employees' and employers' National Insurance contributions came into effect in April. In the long run, the burden of these higher contributions might be expected to be borne largely by employees, with relatively little effect on the real cost of labour to firms. Otherwise, firms would reduce their demand for labour in the face of the higher costs, leading to a higher level of unemployment. That, in turn, would produce downward pressure on nominal wage growth until the higher contributions were reflected in lower real take-home pay. The eventual downward adjustment to consumers' real wages will depend on a number of factors including the degree to which employees resist lower growth in their take-home pay and on prevailing labour and product market conditions. There is little sign as yet that employees

Chart 4.4
Whole-economy productivity and unit labour costs



Sources: Bank of England and ONS.

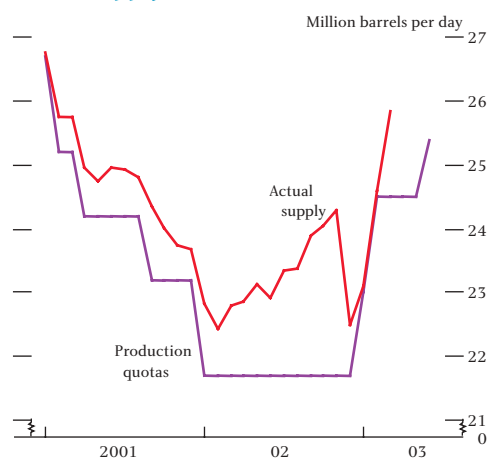
- (a) Unit labour costs are calculated by dividing the average earnings index adjusted for employers' effective tax rate by productivity.
 (b) Productivity is calculated by dividing GDP at factor cost by the LFS measure of total employment.

Chart 4.5
Brent oil prices



Source: Thomson Financial Datastream.

Chart 4.6
OPEC crude oil production quotas and actual supply^(a)



Source: International Energy Agency.

- (a) OPEC excluding Iraq.

are bargaining for higher earnings to compensate for the recent increase in National Insurance contributions. This has been reflected in the Committee's current assessment of prospective earnings pressure.

The adult rate of the NMW is to be increased from £4.20 to £4.50 in October 2003, a rise of 7.1%. Research by the Low Pay Commission suggests that the macroeconomic impact of the minimum wage has so far been relatively small. The Commission estimates that the forthcoming increase may lead to a rise in the total wage bill of just over 0.1%. The MPC agrees that the overall impact is likely to be small.

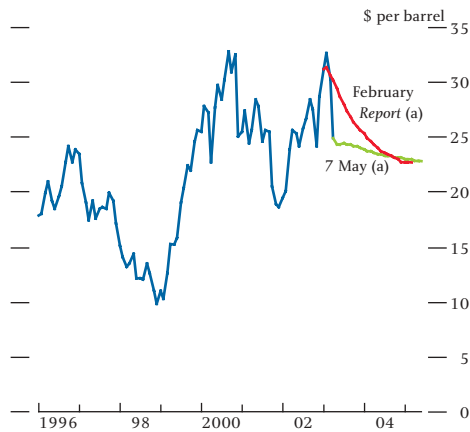
Twelve-month earnings growth is likely to edge up during the next year as the recent lower bonuses drop out of the comparison and given the modest upward pressure from retail price developments. But cost pressures from the labour market depend on productivity as well as earnings. Annual growth in whole-economy productivity, based on LFS estimates of employment, was little changed at 1.0% in 2002 Q4 (see Chart 4.4). Annual growth in unit labour costs fell further in Q4 to below 3%. It is expected to slow during the next year, as an anticipated pick-up in productivity growth outweighs the expected modest rise in earnings growth. Consequently, overall cost pressures from the labour market are likely to remain relatively muted.

4.2 Commodity prices

Oil prices have fallen substantially since the February *Report*, associated with the ebbing of concerns over the situation in Iraq (see Chart 4.5). The lower prices probably also reflect the end to supply disruptions in Venezuela and the spurt in OPEC supply—in excess of its newly agreed higher production quotas—to its highest level for two years (see Chart 4.6). In the 15 working days to 7 May, the price of Brent crude averaged \$24 per barrel, around \$5 lower than expected at the time of the February *Report*.

The lower level of oil prices is expected to persist. The futures curve points to gentle declines in prices during the next two years to close to the levels implied at the time of the February *Report* (see Chart 4.7). This profile suggests that annual oil price inflation is past its peak, and therefore that the upward impetus from retail petrol prices to annual RPIX inflation is likely to begin to subside in the coming months (see Section 4.6). It also implies that the incremental impact since February on the outlook for RPIX inflation from the oil market—predominantly via its effect on retail petrol prices—is likely to be negative in the first year of the projection, positive during the second, but negligible at the forecast horizon.

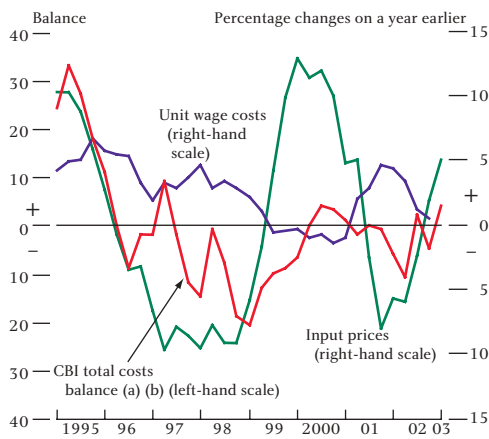
Chart 4.7
Brent oil futures



Sources: Bank of England and Thomson Financial Datastream.

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

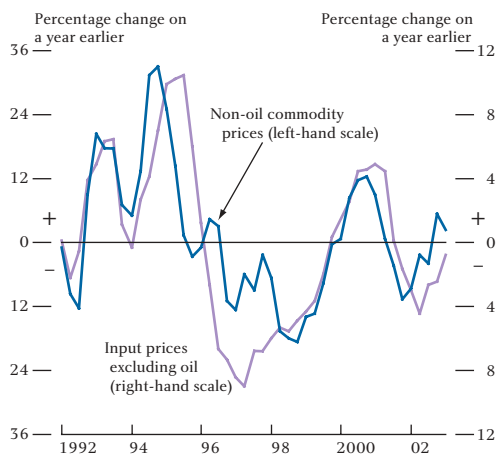
Chart 4.8
Manufacturers' costs



Sources: CBI and ONS.

(a) Balance of respondents to the question: 'What has been the trend in your average costs per unit of output over the past four months?'
(b) The April 2005 *Quarterly Industrial Trends Survey*, which was conducted between 20 March 2003 and 9 April 2003, has been allocated to 2003 Q1. Earlier surveys have been allocated to their respective quarters accordingly.

Chart 4.9
Sterling non-oil commodity prices^(a) and input prices excluding oil



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

(a) *The Economist* dollar non-oil commodity price index divided by the dollar/sterling exchange rate.

By contrast, *The Economist* dollar non-oil commodity price index rose by 2.5% in Q1, broadly as expected in February, to stand 14.1% higher than a year earlier. However, prospects remain subdued with the outlook of gently declining prices similar to three months ago.

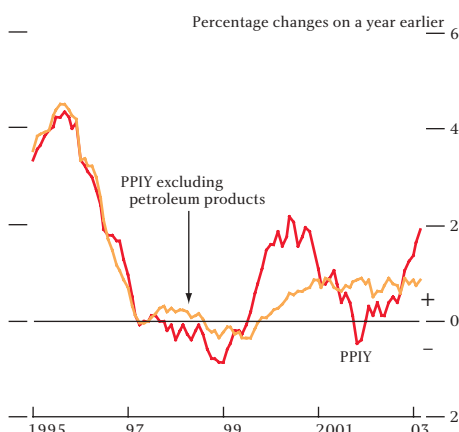
4.3 Import prices

Sterling import prices fell by 1.3% in 2002 Q4, broadly as expected in the *February Report*, and were 1.1% lower than a year earlier. However, the outlook for import prices is substantially stronger than in February, owing to the much lower-than-expected level of the sterling effective exchange rate. The higher expected profile for import prices is one of the factors that has helped to raise the near-term outlook for retail price inflation since the *February Report* (see Section 4.6 and the box on page 36). Consistent with the expected further gradual recovery in global activity, the Committee's central projection is that world export price inflation picks up moderately over the forecast period, amplifying the expected upward impetus to import price inflation from the exchange rate.

4.4 Costs and prices in manufacturing

Despite divergent trends in the major components of manufacturers' costs, overall upward pressure appears relatively muted and broadly similar to a year earlier. Annual growth in unit wage costs (which constitute around half of manufacturers' costs) fell further to 0.5% in 2002 Q4 from its most recent peak of 4.6% in 2001 Q4 (see Chart 4.8). This slowing was more than accounted for by stronger productivity growth, as manufacturers have cut back employment in the face of falling or stagnant output. In contrast to easing labour cost developments, annual inflation of input prices (which make up around a quarter of manufacturers' costs) rose from a trough of -8.1% in 2001 Q4 to 1.9% in 2002 Q4 and has increased further to 4.4% in March 2003. Although the vast bulk of this turnaround reflected the jump in oil price inflation during this period, the annual inflation rate of the rest of the basket turned positive in March for the first time since mid-2001. This, in part, resulted from the increases in non-oil commodity prices during the past 18 months (see Chart 4.9 and Section 4.2). However, these contrasting movements in the growth of unit wage costs and input price inflation appear to have been largely offsetting. The *CBI Quarterly Industrial Trends Survey* balance for reported total costs was little changed from a year earlier in 2002 Q4 (see Chart 4.8). The balance has remained close to zero so far in 2003, suggesting that manufacturers' overall cost pressures are still relatively subdued.

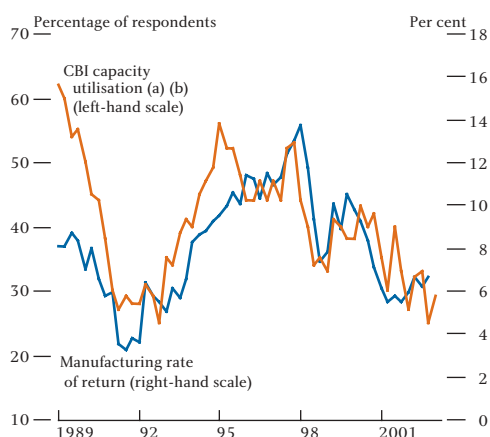
Chart 4.10
Manufacturers' output prices excluding excise duties (PPIY)



Sources: Bank of England and ONS.

Manufacturers' output price inflation has picked up further since the February *Report* to its highest rate for over two years (see Chart 4.10), principally accounted for by movements in the prices of oil-related products. Excluding petroleum products, output price inflation has remained stable at just under 1% for over two years. Downward pressure on manufacturers' prices and profitability remains strong owing to substantial spare capacity (see Chart 4.11), associated with continued under-strength global demand for manufactured products and increased competition from abroad. Nevertheless, as with input prices, the recent depreciation of sterling is likely to give some stimulus to output prices over the coming months, although this will be attenuated as the recent falls in oil prices begin to feed through (see Section 4.2).

Chart 4.11
Manufacturing rate of return and capacity utilisation



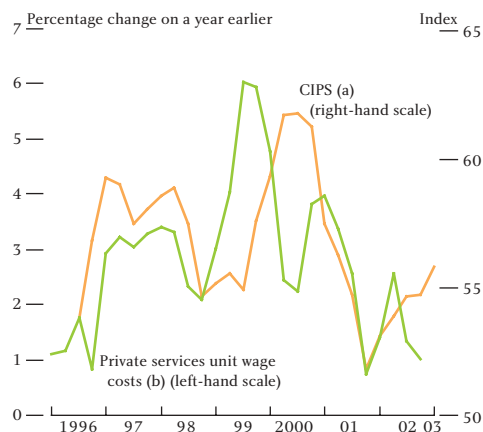
Sources: CBI and ONS.

- (a) Percentage of respondents answering 'no' to the following question: 'Is your present level of output below capacity?'
- (b) The April 2003 *Quarterly Industrial Trends Survey*, which was conducted between 20 March 2003 and 9 April 2003, has been allocated to 2003 Q1. Earlier surveys have been allocated to their respective quarters accordingly.

4.5 Costs and prices in the service sector

Cost pressures in the service sector were relatively muted in the second half of 2002, although there are signs that they may have edged up in 2003. Annual growth in private services unit wage costs, which make up the majority of service sector firms' costs, slowed further, to 1.0% in 2002 Q4 (see Chart 4.12). However, the CIPS services survey points to increasing cost pressures during 2002 and in the first few months of this year albeit from relatively low levels. Evidence from the BCC survey and reports from the Bank's regional Agents suggests that this may primarily reflect higher overhead costs. The BCC balance of respondents citing overheads as a pressure to raise their prices has risen to its highest level since the question was first asked in mid-1997, with a number of firms identifying higher insurance costs as the chief reason for this.

Chart 4.12
Service sector costs



Sources: CIPS and ONS.

- (a) A reading above/below 50 suggests rising/falling costs. The CIPS survey is monthly, and the quarterly values shown in the chart are averages over the relevant months.
- (b) Private service sector unit wage cost growth is proxied using private sector earnings growth and productivity growth in the service sector excluding public administration, education and health and social work.

The available indicators of business services output prices continue to offer conflicting signals. According to the ONS's experimental corporate services price index (CSPI), annual business services price inflation fell, albeit modestly, for the seventh successive quarter, to 2.0% in Q4, the lowest rate since 1996 Q3 (see Chart 4.13). However, the CSPI currently covers only 50% of its targeted sample, and the easing in its annual inflation rate during the past year is at odds with more comprehensive, though qualitative, evidence from surveys and with the strengthening of retail services price inflation during this period. Both the BCC and CIPS business services output price indicators have risen markedly from their troughs in late 2001, although they both did fall back slightly in 2003 Q1 (see Chart 4.13). Thus, it is difficult to be certain about developments in service sector output price inflation, although it is probable that recent movements in the CSPI have understated price trends during the past year, perhaps, in part, because it does not currently include insurance premia.

The exchange rate and inflation

The sterling effective exchange rate index (ERI) has depreciated substantially since the February *Report* (see Chart 1.1 in Section 1). It is an important development that has had a major influence on the outlook for inflation and activity since February. This scale of movement is comparatively large by recent standards and it is significant that sterling has fallen below the relatively narrow range within which it has fluctuated during the past three years, to its lowest levels since early 1997. Section 1 of the *Report* discusses some of the possible reasons for the recent depreciation of sterling. This box sets out how movements in the exchange rate may affect retail price inflation and to what extent the impact may have changed over time.

It is possible to distinguish between first and second-round effects of movements in the exchange rate on retail prices. The depreciation of sterling will lead to a rise in import costs and hence, other things being equal, will have a direct or first-round effect on the level of retail prices, and therefore a temporary effect on annual retail price inflation. But there are also likely to be second-round or indirect effects on retail prices, for example via the impact on inflation expectations, wages and demand.

In markets with rapid price adjustment, such as commodity markets, the depreciation of sterling is likely to be reflected immediately in higher import prices. In other markets, prices may take longer to adjust. There is some evidence that UK import prices were relatively slow to fall following the appreciation of sterling from 1996. There are several potential explanations for this. First, if foreign exporters to the United Kingdom did not expect the appreciation of sterling to persist, then they might at first have varied their profit margins rather than changed their sterling prices. Second, if foreign exporters to the United Kingdom had set their prices in sterling terms (local currency pricing), perhaps owing to contractual arrangements, then the sterling price of their imports would have been initially unchanged following the appreciation of the sterling exchange rate. A third possible reason for the sluggish pass-through of the appreciation in sterling is that some foreign exporters to the United Kingdom priced to market, that is set their prices according to prevailing conditions in the UK market. The term 'pricing to market' describes the behaviour of exporters who set their own price taking into account the prices charged by suppliers of similar, but distinct, goods in the foreign country. When the foreign currency appreciates, exporters will often find that they can make a higher profit if they do not allow the full effect to pass through into a lower foreign

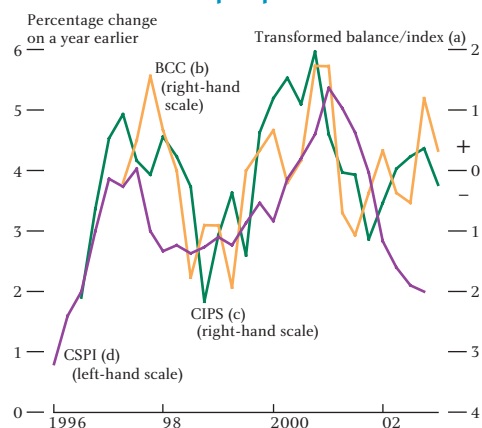
currency price for their product. So the foreign currency price will tend to fall, but not by the full extent of the appreciation. The exporting firm will then sell fewer units, but make more on each unit sold, than in the case of full exchange rate pass-through. The ability of an exporting firm to avoid fully reducing the foreign currency price, and to earn an increased profit margin, will depend on the extent to which its product is perceived to be distinct, and on the size of any set-up costs and any other restrictions that prevent rival firms entering the market to bid down prices given the improvement in profitability. Given that import prices were slow to adjust after the appreciation of sterling from 1996, the Committee continues to assume that there will be more sluggish adjustment of prices than in the past following the recent depreciation.

In terms of second-round effects, there are a number of channels through which a depreciation in the exchange rate may affect retail prices. First, the temporary rise in retail price inflation as firms pass on their higher import costs may lead to an increase in the inflation expectations of wage bargainers and price-setters. Second, the increase in retail prices following the pass-through of higher import prices lowers the amount of goods and services employees can purchase with their take-home pay. This reduction in real income lowers consumption. Third, a depreciation of the sterling exchange rate lowers the price of UK products relative to those of foreign firms. This improvement in the competitiveness of UK goods and services would be expected to lead to an increase in the demand for UK exports and a reduction in that for UK imports. This stimulus to UK net trade would put upward pressure on the supply capacity of the economy and thereby tend to raise domestic inflationary pressure.

Recent international evidence suggests that the total impact of movements in the exchange rate on retail price inflation may have lessened in recent years.⁽¹⁾ One possible explanation for this might be a change in the composition of imports from commodity-based products, like energy, with relatively rapid pass-through of movements in the exchange rates, towards more processed and differentiated goods and services with less complete pass-through. However, there is little support for this explanation in the United Kingdom. A more likely explanation for the reduced impact in the United Kingdom is that monetary policy has acted to offset the second-round effects of movements in the exchange rate that threaten to drive inflation persistently away from the target, and that inflation expectations have become more firmly anchored around the inflation target.

(1) See for example, Campa, J M and Goldberg, L S (2002), 'Exchange rate pass-through into import prices: a macro or micro phenomenon?', *National Bureau of Economic Research Working Paper*, No. 8934; and Gagnon, J E and Ihrig, J (2001), 'Monetary policy and exchange rate pass-through', *Federal Reserve International Finance Discussion Paper*, No. 704.

Chart 4.13
Service sector output price indicators



Sources: BCC, CIPS and ONS.

- (a) Balance/index minus series average, divided by the series standard deviation. This linear transformation has been made in order to show the BCC balance and the CIPS index on the same axis. The averages and standard deviations have been calculated over the total sample period of each survey—that is: 1996 Q5 to 2005 Q1 for the BCC balance and 1997 Q2 to 2005 Q1 for the CIPS index.
- (b) Transformed 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?'
- (c) Transformed index of responses to the following question: 'Compare the average prices charged by your company with the situation one month ago.'
- (d) ONS's corporate services price index (experimental index, including rent).

Chart 4.14
Retail price inflation

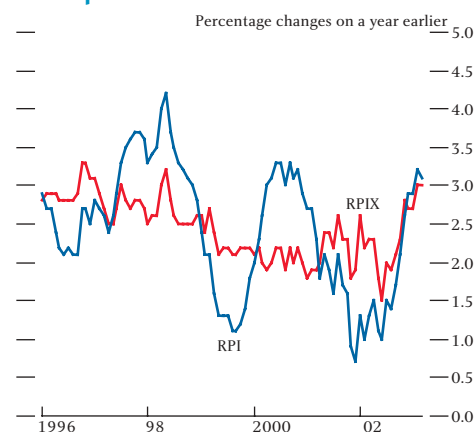
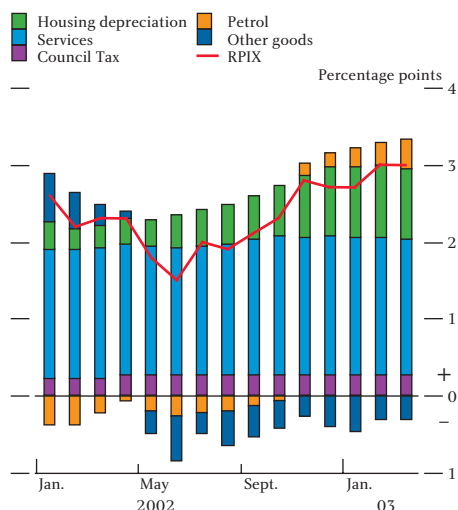


Chart 4.15
Contributions to annual RPIX inflation



Sources: Bank of England and ONS.

4.6 Retail prices

With overall cost pressures from the labour market muted, levels of capacity utilisation below normal and import prices still lower than a year earlier, underlying inflationary pressures remained subdued in the second half of 2002. Nonetheless, annual RPIX inflation rose by a further 0.3 percentage points above the target to 2.9% in 2003 Q1. This is the highest rate in any quarter for almost five years, and a little above the Committee's expectations in the *February Report*. On a monthly basis, it rose to 3.0% in March up from 2.7% in December (see Chart 4.14). The pick-up in the annual inflation rate of the RPI during the past year has been even more pronounced than that of RPIX, as the downward effects of the reductions in mortgage interest payments during 2001 have dropped out of the annual comparison. In contrast, the annual inflation rate of the harmonised index of consumer prices (HICP) has fallen slightly since December to 1.6% in March. The box on pages 38–39 discusses the main differences between the HICP and RPIX.

As with the substantial rise in the second half of 2002, most of the increase in annual RPIX inflation in the first quarter of this year reflected higher contributions from petrol prices and housing depreciation (see Chart 4.15), directly associated with the earlier surges in oil and house price inflation. Together, petrol prices and housing depreciation contributed 1.3 percentage points to annual RPIX inflation in March. This is the largest combined contribution from these two components since housing depreciation was introduced into the RPI in 1995, and compares with 0.1 percentage points a year earlier. But with annual oil and house price inflation likely to be past their peaks (see Section 4.2 and Section 1, respectively), and given the Committee's expectation of falling oil prices and sharply slowing house price inflation, their contribution to annual RPIX inflation is expected to diminish substantially over the next year or so.

Notwithstanding the anticipated waning influence from these two components, two other developments will put upward pressure on retail prices over the next few months so that the hump in inflation, foreshadowed in the November and *February Report* projections, is likely to be a little more pronounced than expected three months ago.

First, information from the Chartered Institute of Public Finance and Accountancy (CIPFA) suggests that average Council Tax bills rose by around 12% in April. This unusually large increase is significantly greater than last year (see Chart 4.16) and is also much higher than the Committee assumed in February.

RPIX and HICP

Currently, the inflation target set by the Government for the Monetary Policy Committee is 2.5%, as measured by the rate of change of the retail prices index excluding mortgage interest payments (RPIX). In his Budget speech of 9 April 2003 the Chancellor of the Exchequer recognised the advantages of RPIX as a target, saying that ‘...it is known, well understood, and has served us well.’ But he also said: ‘...there is a case in principle for adopting for Britain [the harmonised] index of consumer prices and the Treasury will continue to examine the detailed implications of such a change.’ The harmonised index of consumer prices (HICP) is a measure of average prices produced by all EU countries according to a common methodology and is the index monitored by the European Central Bank when setting euro-area interest rates. This box explains the main differences between the two indices.

RPIX and HICP both provide a measure of changes in the cost of purchasing a representative basket of consumer goods and services. They each use broadly the same raw price information, but differences in composition and coverage, as well as in the way the raw prices are aggregated, produce a divergence between them. Charts A and B show that RPIX inflation has generally been higher than HICP inflation. The exception in the early 1990s was caused by changes in local authority taxation, which temporarily lowered RPIX, but not HICP, inflation.

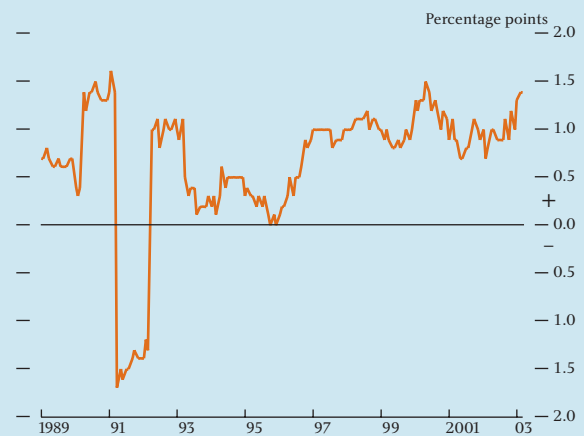
Composition and coverage

Differences arise between the two indices because the prices of some goods and services are included in one index but not in the other, or because they are treated differently in the two indices. The most significant compositional difference is the inclusion of various measures of owner-occupied housing costs in RPIX. These are proxied in part by a measure of housing depreciation that is related to house price inflation; and buildings insurance is captured directly. Council Tax is also included in RPIX and not in HICP. Together, these indicators of housing costs represent just under 9% of the total RPIX basket. Though no estimate of the costs of owner-occupied housing is presently included in HICP, they may be incorporated in the future, though not necessarily in the same form as in RPIX.

Chart A
Annual RPIX and HICP inflation



Chart B
Difference between RPIX and HICP inflation



There are also some goods and services that appear in both indices, but whose prices are measured in different ways. For instance, cars appear in both indices, but HICP utilises the price of both new and old cars whereas RPIX employs only used car prices. Likewise, the two indices employ different approaches for adjusting the prices of personal computers to allow for quality improvements.

The indices also diverge as a result of differences in coverage. In order to make the chosen basket of goods and services closer to that of an ‘average’ UK household, RPIX excludes expenditure by the highest 4% of earners, pensioners largely dependent on benefits and residents of institutions. But to conform to EU standards, the representative basket of goods and services in HICP is derived from the expenditure of all private households, and includes residents of institutions and foreign visitors to the United Kingdom. As a consequence the expenditure

shares that are used to weight the individual prices together may not be the same. It also means that some items, such as foreign students' tuition fees, appear in HICP but not in RPIX.

Aggregation

Another source of the discrepancy between the indices originates in the method used to aggregate individual prices together. For around 40% of component indices within HICP and RPIX, raw price quotes are weighted together according to the expenditure patterns of households. But for the other 60% of goods and services, expenditure weights are not available at a sufficiently low level of disaggregation to do this. So the raw price data have to be combined in some way until they are broadly comparable with the categories of expenditure for which weights are available. Thus, for example, each month the price of a large sliced-white loaf is collected from no fewer than 145 locations spread around the country. But though there is information about the share of household expenditure on sliced-white bread in total, nothing is known about how much is spent on sliced-white bread in each of these 145 locations. So the individual prices need to be combined somehow in order to obtain an estimate of the price of 'sliced-white bread'. HICP and RPIX do this differently.

As an example, suppose the prices of just two sorts of sliced-white bread were collected—a supermarket own-label brand and a brand name, say. One approach to calculating the inflation rate of 'sliced-white bread' over a particular period⁽¹⁾ would be just to average the inflation rates of the two sorts of loaf. But another approach would be to calculate the average price of the two loaves first, and then calculate the inflation rate for the average. In RPIX both methods are used across a broad range of goods and services, in roughly equal measure.

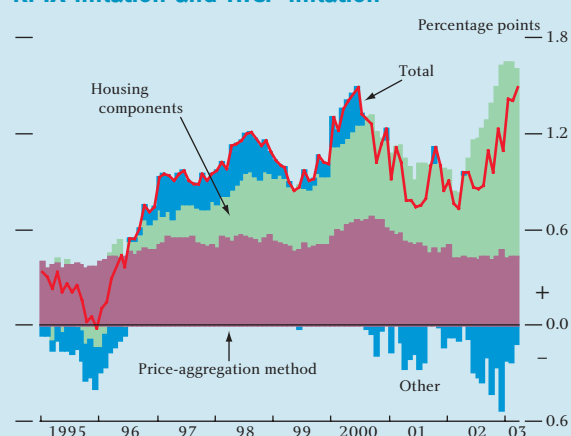
HICP, by contrast, employs 'geometric' averages⁽²⁾ to combine the raw prices together, rather than the simple averages used in RPIX. A geometric average can never exceed a simple average. As a consequence HICP necessarily tends to show lower inflation rates for those product categories that are aggregated in RPIX by averaging the rates of change of the raw prices. These

differences in aggregation methodology have accounted for an average divergence of around $\frac{1}{2}$ percentage point between annual RPIX inflation and its HICP equivalent over the past five years, mostly concentrated in clothing and footwear and household goods.

Recent history and prospects

Chart C shows the main sources of the differences between annual RPIX and HICP inflation in the recent past. The component arising from the different methods of combining basic price data has been fairly constant over recent years, but the other factors have been more variable. The contribution of housing costs has been particularly large recently and is the principal reason behind the widening of the difference over the past year. The contribution of other compositional and coverage effects can be large and has been quite volatile, but averages close to zero. The recent erratic contribution from this source has been mainly due to the impact of airfares on HICP.

Chart C
Contributions to the difference between annual RPIX inflation and HICP inflation

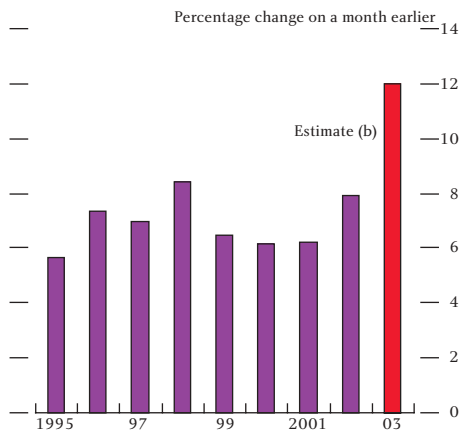


Looking ahead, the gap between RPIX and HICP inflation is likely to diminish as house price inflation subsides. In the Committee's central projection, house prices are broadly stable by the second year of the forecast, so that the contribution from housing depreciation is negligible. Consequently, at the two-year forecast horizon, any difference between RPIX and HICP inflation is likely to be primarily associated with the different aggregation methodologies.

(1) In both RPIX and HICP the relevant inflation rates are calculated by comparing the price in the particular month with the price in January of the same year.

(2) The geometric average of two numbers is the square root of their product. Thus the geometric average of 4 and 9 is 6, while a simple average of the two is 6.5.

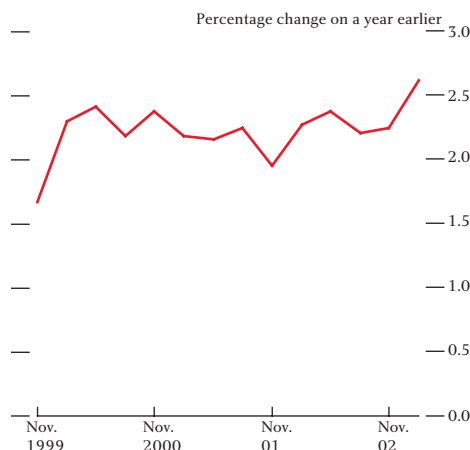
Chart 4.16
Council Tax^(a)



Sources: CIPFA and ONS.

- (a) Increase in the Council Tax component of the RPI in April of each year.
- (b) Estimate for 2003 based on information from CIPFA.

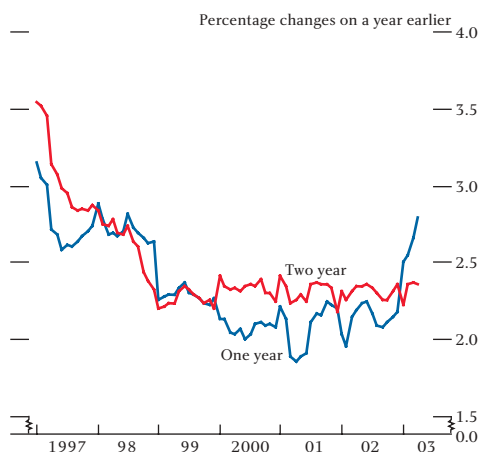
Chart 4.17
Inflation expectations of the general public for the next twelve months^(a)



Sources: Bank of England and NOP.

- (a) Mean of the general public's expected inflation rate. Respondents are asked: 'How much would you expect prices in the shops generally to change over the next twelve months?'

Chart 4.18
Consensus one and two-year forecasts of annual RPIX inflation



Source: Consensus Economics.

Second, the depreciation of sterling will put upward pressure on retail price inflation in the coming months through a number of channels (see the box on page 36). In the first instance, it will raise the level of retail prices, and temporarily the rate of inflation, directly via its impact on import prices. The depreciation of sterling may also have an indirect effect on retail price inflation, principally through the boost to demand via UK net trade and any impact on inflation expectations.

Taken together, these developments suggest that annual RPIX inflation may well exceed 3% for the next few months before falling back markedly in the second half of the year. The extent to which this deviation above the target affects inflation over the medium term—the focal point of monetary policy—depends, in particular, on whether it leads to higher medium-term inflation expectations among wage bargainers and price-setters.

Charts 4.17 and 4.18 suggest that there has been an increase in both the public's and professional forecasters' inflation expectations for the next year, which probably largely reflects the recent higher inflation outturns themselves. However, Chart 4.18 also shows that professional forecasters' inflation expectations further ahead are little changed, suggesting that they believe that the observed and expected further increase in inflation is likely to be temporary and that inflation expectations beyond the short run remain stable. And although measures of inflation expectations derived from index-linked gilts imply that there has been a modest increase in inflation expectations at longer horizons (see Section 1), they have risen from being below to being around the target. In any case, to the extent that much of the recent and expected pick-up in RPIX inflation reflects higher contributions from housing depreciation and Council Tax, which are not prices charged by businesses, the hump in inflation is likely to have only a limited impact on the inflation expectations of price-setters. As such, the Committee judges that the current deviation of inflation above the target and the modest pick-up in near-term inflation expectations is unlikely to affect materially the medium-term outlook for inflation.

These observations are consistent with the recent behaviour of inflation, where the effects of shocks affecting inflation tend not to persist. The *Pagan Report*⁽¹⁾ showed that RPIX inflation has become noticeably less persistent in recent years. This has been associated with a fall in the variability of inflation expectations following the change in monetary regime in 1997 and the subsequent build-up of credibility in the conduct of

(1) Pagan, A (2003), 'Report on modelling and forecasting at the Bank of England', *Bank of England Quarterly Bulletin*, Spring, pages 60–88.

UK monetary policy. Businesses and individuals now expect that monetary policy will react to offset developments that threaten to drive actual inflation persistently away from target, so that, other things being equal, the impact of shocks on inflation, like the recent depreciation of sterling, might be expected to be less and to die out more quickly than in earlier periods.

5 Monetary policy since the February Report

This section summarises the monetary policy decisions taken by the MPC since the February Report.⁽¹⁾ The Bank's repo rate was maintained at 3.75% in March, April and May.

The MPC's central projection in the February Report was for RPIX inflation to rise further above the 2.5% target in the near term before falling back to the target by the two-year horizon. Four-quarter GDP growth was expected to remain around trend during the first year of the forecast and ease back slightly thereafter. While widening the range of possible outcomes for its projections, the Committee judged that the risks, relative to the central projection, were weighted marginally to the downside for growth and slightly on the upside for inflation.

At its meeting on 5–6 March, the Committee agreed that the world outlook was broadly unchanged since the February Report. Evidence was accumulating that UK household consumption was beginning to slow and the housing market continuing to cool. The immediate prospect was for growth to be a little below trend and, because of higher oil prices, higher Council Tax increases and sterling's recent depreciation, for inflation to be further above target in the short run than had been projected in February.

The Committee considered the case for a reduction in official interest rates. Demand prospects were weaker than had been expected and the recent falls in consumer and business confidence in many countries might persist. The factors driving inflation higher in the near term did not necessarily imply higher inflation further out, whereas pay pressures remained muted.

Arguments for raising interest rates were also identified. Temporary rises in inflation in the short run could push inflation expectations above the target. Sterling's depreciation, were it to persist, might affect the price level and net export demand, depending on what had caused it.

For most members of the Committee, however, the arguments for maintaining the repo rate at 3.75% were persuasive.

⁽¹⁾ The minutes of the February, March and April meetings (which set out the full discussion) are reproduced under a separate cover, published alongside this Report.

Though the upside risks to inflation had increased, the evidence was not sufficient to change the medium-term outlook for inflation significantly from that in February. The exchange rate depreciation might not persist and the degree and speed of pass-through to higher retail prices were uncertain. The case for a reduction in the repo rate, when RPIX inflation was likely to rise temporarily further above the target, was also not convincing for most members, as a reduction might dislodge inflation expectations from the 2½% target.

Eight members of the Committee voted to maintain the repo rate at 3.75% and one member voted in favour of a reduction of 0.25 percentage points.

At the 9–10 April meeting, the Committee agreed that the global outlook seemed somewhat weaker than at the time of the February *Report*. In the near term, UK inflation was likely to remain above target, as a result of temporary factors, and growth might be below trend. A major uncertainty was the overall size and duration of the impact of sterling's depreciation on retail prices. Among other factors, this depended on the effect of the depreciation on inflation expectations and net export demand.

There were several possible reasons for a reduction in the repo rate. First, the world economy had been weaker than expected and the immediate outlook seemed to have deteriorated. Second, in the first quarter UK output looked likely to have been lower than expected and the signs were that demand growth for UK goods and services was slowing. Third, the contribution of house and oil prices to measured inflation was likely to fall significantly over the next year. Fourth, the relative stability of pay settlements implied lower increases in real wages. Fifth, the risks to inflation from maintaining an interest rate that was too tight were greater than the risks from reducing rates, given the degree of spare capacity in the economy.

For most Committee members, the arguments for maintaining the current repo rate were more convincing. First, the news about output and demand was ambiguous. Second, the decline in the sterling exchange rate had persisted and would tend to raise prices. Third, the expected increase in inflation in the short run might affect expectations of inflation further ahead. If reductions in the repo rate were to trigger rises in inflation expectations and in the yield curve further out, policy easing would have only limited effects on the economy. Fourth, some issues would benefit from further analysis in the forecast round leading up to the May *Report*. It was not clear what the Committee would conclude about them, and

hence what the consequences would be for the inflation projection.

Seven members of the Committee voted to maintain the repo rate at 3.75%. Two members voted against, preferring a reduction of 0.25 percentage points.

At its 7–8 May meeting, the Committee voted to maintain the Bank's repo rate at 3.75%.

The Committee's latest projections for output growth and inflation are described below. UK GDP growth slowed in early 2003 as a result of subdued global demand and a deceleration in household spending. The slowdown in overall output growth is likely to prove temporary. Macroeconomic policy continues to support economic recovery at home and abroad. The end of the conflict in Iraq has reduced uncertainty and led to some rebound in measures of confidence. And the fall in sterling in recent months should stimulate net exports. Based on unchanged official interest rates at 3.75%, the central projection is for UK GDP growth to average around trend over the next two years, as robust growth in public spending, a gradual upswing in the world economy, and a moderate upturn in investment spending, counterbalance a period of below-trend household consumption growth.

RPIX inflation rose further above target in 2003 Q1, as the exceptional contributions from housing depreciation and petrol prices continued to dominate the short-term profile. Higher-than-expected increases in Council Tax and the boost to import prices from the recent exchange rate depreciation could push inflation a little higher in the near term. However, the central projection for RPIX inflation falls back in the second half of 2003, dipping marginally below target by early 2004. The transient factors currently adding to inflation should unwind quickly given the recent steep drop in oil prices and the projected sharp slowdown in house price inflation. Moreover, pay pressures remain muted and recent weak output growth will moderate domestic inflationary pressure in the short term. But as activity recovers, and as the stimulus from the weaker exchange rate continues to work through, inflation may edge higher during the second year of the projection and beyond. RPIX inflation is likely to be close to target at the two-year forecast horizon.

Uncertainty surrounding the projections for output growth and RPIX inflation remains considerable. The major risks to the outlook are judged to be broadly balanced in the medium term.

6.1 The inflation projection assumptions

The recovery in the world economy remains sluggish. Consumer confidence and business surveys fell sharply in the major economies in advance of the military conflict in Iraq. Equity prices also declined markedly. Global demand in early 2003 is thus likely to have fallen short of previous expectations. Nevertheless, there have been some more positive signs in recent weeks. As the conflict unfolded and hostilities ended, oil prices dropped steeply, equity prices rebounded and there have been indications of a limited recovery in household and business sentiment, particularly in the United States.

Economic activity in the euro area remains subdued. GDP rose only 0.1% in 2002 Q4, and more recent indicators

provide little sign of an imminent acceleration. Rising unemployment is weighing on consumer confidence and holding back household spending growth, while private investment remains depressed given sluggish demand growth and limited pressure on capacity. In addition, the marked appreciation of the euro in recent quarters—up some 13% over the past year in trade-weighted terms—has dampened the outlook for net external demand. Given the weakening in prospective inflationary pressure, the ECB lowered interest rates by a further 25 basis points to 2.5% in early March, following the 50 basis point cut in December. The Committee continues to expect that output growth in the euro area will gradually recover to around trend rates by the second year of the forecast period, as low market interest rates bolster domestic demand and as global demand picks up. But the near-term outlook is a little weaker than assumed in February.

The upturn in the United States faltered towards the end of 2002, prompting a further reduction in interest rates in November and encouraging proposals for a substantial relaxation of fiscal policy. Output growth has remained quite weak in early 2003, with GDP rising by 0.4% in 2003 Q1, according to the advance estimate. Consumer spending growth has eased over the past six months, perhaps reflecting a worsening in labour market conditions as well as the sharp decline in financial wealth in recent years. The near-term outlook continues to depend on whether this slowdown in household spending proves temporary, and whether other components of demand promote faster growth. Although the immediate prospects for output growth remain relatively muted, there are a number of favourable signs looking further ahead. Consumer confidence has rebounded following the war in Iraq. The decline in uncertainty should also provide a spur to the incipient recovery in private investment. The sharp fall in oil prices should raise real disposable incomes and reduce business costs. Moreover, low levels of market interest rates and the easing of fiscal policy should support a quickening in domestic demand growth. And the fall in the dollar exchange rate over the past year should stimulate net exports. On the central projection, GDP growth is likely to strengthen to around trend rates over the next year or so.

Although Japanese GDP growth has been a little stronger than expected in recent quarters, major structural impediments to sustained recovery remain. Measures to address the balance sheet problems in the corporate and banking sector are likely to restrain the projected cyclical recovery over the forecast period, although resolution of these problems should foster a stronger upturn in the longer term. Growth elsewhere in Asia held up well in 2002, underpinned by robust growth in domestic demand. The projected recovery in demand in the

major economies should help to support continued buoyant growth over the next two years, although the economic effects of the SARS epidemic are likely to curb output growth in the short run.

Drawing the regional picture together, global GDP and world trade in early 2003 appear weaker than assumed three months ago, mainly reflecting developments in the euro area. UK-weighted world trade is expected to rise by around 4¹/₂% in 2003 on the central projection, a slight downward revision from the February *Report*. The Committee continues to expect that global demand growth will recover to around trend rates by the second year of the forecast period.

Oil prices have fallen sharply in recent weeks. The run-up in oil prices during February and early March proved ephemeral as OPEC raised production and as the prospect of a speedy resolution of the Iraq conflict increased. In the 15 working days to 7 May, the Brent price averaged around \$24 per barrel, some \$5 below the level expected in the February *Report*. However, there has been little change to the medium-term outlook. The futures curve, which continues to guide the Committee's central projection, consequently incorporates a much shallower decline over the next two years than in February, reflecting the current much lower starting point. By contrast, there has been little change to the average futures price for non-oil commodities since the February *Report*: following the recovery over the past year, the outlook remains subdued. Reflecting the slightly softer outlook for global demand and the recent drop in oil prices, prospects for world export price inflation have weakened since February. Prices may edge lower through this year, followed by a gentle rise in inflation over the remainder of the forecast period.

The outlook for sterling import prices also depends on exchange rates. Sterling has depreciated significantly over the past three months. The sterling effective exchange rate (ERI) averaged 99.4 in the 15 working days to 7 May, corresponding to bilateral rates of \$1.59 and 69 pence against the euro, and some 4% below the central projection for May assumed in the February *Report*. The ERI fell during the 15-day window, such that by the close of business on 7 May the index stood some 2% below the 15-day average. Such a large quarterly movement has an important bearing on the projections for GDP growth and inflation outlined in Section 6.2 below, although there remains considerable uncertainty surrounding the prospective impact. On the central projection, the ERI is assumed to depreciate gently from the current 15-day average, reaching 98.0 by 2005 Q2.

Global equity prices fell markedly during February and early March, but then rallied strongly as expectations of a short

military conflict in Iraq increased and were subsequently realised. UK equity prices followed this pattern. In the 15 working days to 7 May, the FTSE All-Share index averaged 1886, some 4% above the central projection in the February *Report*. In addition to the sharp rise in equity prices over the past three months, upward revisions to past ONS data have increased the estimated level of household net financial wealth in 2002 Q4 by around 10% since February. Following the usual convention, household net equity wealth is assumed to rise in line with nominal GDP over the forecast period.

House price inflation has eased more rapidly than expected three months ago. Activity indicators and surveys of price expectations point to a further moderation. The Committee judges that the prospective deceleration in house prices is likely to be rather sharper than assumed in February, with annual house price inflation slowing to a halt over the next year or so. Uncertainty surrounding the outlook for house prices remains considerable.

The Committee has updated the UK fiscal policy assumptions following the April 2003 Budget. As in recent *Inflation Report* projections, nominal public spending is expected to rise robustly in line with government plans, while average effective tax rates on key income and expenditure aggregates are taken from HM Treasury Budget forecasts. There was little change to the fiscal stance in the Budget. However, the average increase in Council Tax which took effect in April was rather higher than assumed three months ago. That adds to the projected level of retail prices and lowers households' real disposable income.

6.2 The output and inflation projections

The upswing in UK economic activity has lost some impetus in recent months, in common with experience in the major overseas economies. According to the ONS preliminary estimate, GDP increased by 0.2% in 2003 Q1, well below the central expectation in the February *Report*. A drop in energy output reflecting unusually warm weather accounted for part of the slowdown. But growth in the service sector also slowed, and surveys and reports from the Bank's regional Agents confirm the weaker picture. Manufacturing output fell slightly in Q1, and order books remain depressed. The dip in surveys of business and consumer sentiment in the first quarter coincided with the rise in uncertainty ahead of the military conflict in Iraq. Companies and households may have delayed orders and deferred expenditure as a result, with knock-on effects on economic activity more generally. It is very difficult to gauge the extent of such an effect and to assess how quickly it might unwind, both domestically and internationally. The

most recent CIPS and GfK surveys suggest there has been some limited recovery in confidence in recent weeks.

Consumer spending decelerated sharply in early 2003. In particular, retail sales volumes rose by only 0.1% in 2003 Q1, the weakest outturn for over four years. Even though other elements of spending, such as new car registrations, may have held up rather better, it seems likely that household expenditure growth slowed to below its long-run average trend, breaking the pattern of robust, above-trend, growth which had been sustained since 1995. In the February *Report*, the Committee projected a marked slowdown in consumer spending growth over the course of 2003. In the event, the deceleration seems to have occurred rather sooner than expected.

The near-term outlook for consumer spending appears relatively subdued. Real disposable income growth has slowed given softer nominal earnings growth, higher price inflation, and the recent increase in National Insurance contributions. Indeed, the slowdown appears rather sharper than assumed three months ago given the larger-than-expected rise in Council Tax and unexpectedly slow growth in nominal earnings. Moreover, successive sharp falls in equity prices in recent years may also be restraining spending as households rebuild long-term savings. And although household borrowing remains strong and continues to support spending, slowing house price inflation may be associated with some weakening in mortgage equity withdrawal.

Looking further ahead, consumer spending growth may recover somewhat during the second year of the projection. The expected improvement in global demand should support domestic activity and employment growth. Low real interest rates should also foster higher spending. Moreover, real income growth should strengthen next year given the expected fall in tax and price inflation. Furthermore, the impact of past declines in equity prices should gradually diminish. Reflecting the recent slowdown in spending and the sharper deceleration in the housing market, consumer expenditure growth over the next twelve to eighteen months is likely to be weaker than assumed in the February *Report*. But spending growth may then recover more strongly, returning to around trend by the forecast horizon.

Government consumption will continue to rise rapidly over the forecast period, although planned spending growth slows somewhat in the second year of the projection.

There are signs that, following the steep decline in 2001 and early 2002, investment spending has now levelled off. Taking

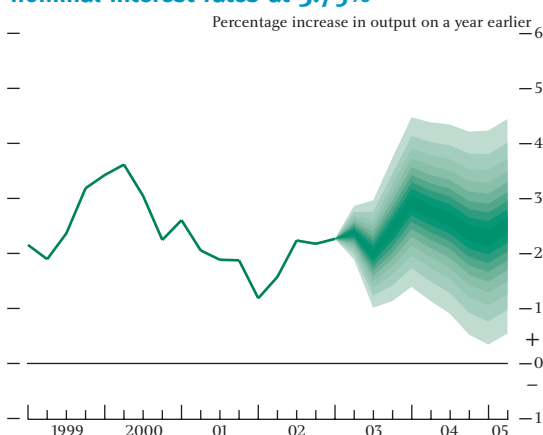
account of upward data revisions, the level of business investment—around three quarters of total capital spending—now appears to have been broadly stable during the final three quarters of 2002, with the level of spending in 2002 Q4 around 3¹/₂% above the February central projection. The Committee continues to project only a moderate recovery in business investment. Capacity utilisation is below normal, particularly in manufacturing. Profitability remains relatively subdued outside the oil sector. Moreover, although private non-financial companies continue to run a financial surplus and are thus gradually improving their financial position, corporate balance sheets remain under some pressure given high levels of capital gearing and shortfalls in pension funds. In addition, reports from the Bank's regional Agents and recent investment intentions surveys suggest that companies may be postponing investment decisions until uncertainty regarding demand prospects diminishes. Although the resolution of the conflict in Iraq may thus provide a fillip, and low levels of market interest rates should promote capital spending, business investment is likely to increase only slowly over the forecast period. Given the higher starting point, the level of business investment may be a little stronger than in the February projection. Rapid growth in government capital spending will continue to support whole-economy investment, although planned capital expenditure was revised down slightly in the April 2003 Budget.

As outlined in the previous *Report*, it is hard to reconcile the steepness of the drop in official estimates of goods exports volumes in 2002 Q4 with information from other sources such as business surveys, output and trends in stock holdings. The Committee continues to judge that the estimated fall in goods export volumes is exaggerated. Notwithstanding this assessment, recent monthly trade data suggest that underlying export growth in early 2003 was rather weaker than expected three months ago—perhaps in part reflecting more subdued global demand. Much of this weakness should prove temporary; the substantial depreciation of the sterling exchange rate in recent months, combined with the projected strengthening in the world economy, should help kindle a recovery in export growth in the coming quarters.

The recent decline in sterling will also moderate the projected rise in import growth. Nevertheless, given recent trends, net trade is expected to continue to detract from GDP growth over the next year or so. But, given the brightening in UK trade prospects, export volume growth should gradually outpace that of imports, leading to a small positive contribution to output growth in the second year of the projection.

Excluding the substantial statistical 'alignment adjustment', underlying inventories were broadly stable in 2002 Q4.

Chart 6.1
Current GDP projection based on constant nominal interest rates at 3.75%



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.

Stockbuilding may provide a slight positive contribution to GDP growth through this year in response to the gradual rise in aggregate demand: the Committee has maintained the judgment that the whole-economy stock-output ratio is broadly constant in the medium term.

The Committee's latest projection for the four-quarter growth of GDP is shown in Chart 6.1.⁽¹⁾ The projection is based on the assumption that official interest rates are maintained at 3.75%.⁽²⁾ Notwithstanding the recent moderation in quarterly growth, the four-quarter increase in GDP edged up to 2.3% in 2003 Q1, only a little below the average annual growth rate over the past 40 years of 2¹/₂%. Quarterly output growth over the next two years is likely to be relatively close to the long-run trend. The four-quarter growth in GDP may, however, follow a relatively jagged profile, largely reflecting the unwinding of the uneven pattern of quarterly growth in 2002 associated with the Jubilee holiday. Over the next year or so, weak consumer spending growth is largely counterbalanced by a combination of strong public spending, a moderate rise in business investment and inventories, and an easing of the restraint from net trade. By the second year of the projection, net trade is adding to GDP growth and is likely to be supported by a further improvement in business investment and by a steady recovery in consumer spending growth. Public spending may, however, provide less impetus. GDP growth is likely to remain around trend.

Relative to the February projection, four-quarter GDP growth is likely to be rather weaker in the near term, reflecting the deceleration in consumer spending and more subdued international demand. The subsequent recovery is likely to be stronger, however, primarily reflecting the boost to net trade from the fall in the exchange rate. The projected level of GDP in two years' time is a little above expectations three months ago.

The outlook for inflation depends upon the prospective pressure of demand on supply capacity. Although subject to considerable uncertainty, the Committee has maintained the assumption that potential supply is likely to rise over the forecast period at around the long-run average rate of GDP growth. Pressures on aggregate capacity have eased over the past two years and may have dipped a little below normal levels as output growth has fallen short of this trend. But there are marked differences across sectors, mirroring the uneven pattern of growth. Business surveys and reports from the Bank's regional Agents point to widespread underutilisation of capacity in the manufacturing sector. Conditions in the

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

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

service and construction sectors remain much tighter, however, reflecting the rapid growth in these sectors in recent years.

RPIX inflation has risen further above target. In 2003 Q1, RPIX inflation averaged 2.9%, marginally above the central projection three months ago. As highlighted in previous *Reports*, the sharp rise in inflation over the past six to nine months reflects the unusual movement in just two components: housing depreciation, as house price inflation surged last year; and petrol prices, as oil prices in late 2002 and early 2003 rose to well above levels a year earlier. Abstracting from these special factors, inflationary pressures remained subdued.

Although there are interlinkages between them, the forces affecting the projection for inflation over the next two years can be grouped under three broad headings: external pressures, linked to prospects for world prices and the sterling exchange rate and their impact on trade; domestic cost and price pressures, principally arising from labour cost developments and influences on profit margins; and the influence of one-off or special factors.

External influences are likely to add to RPIX inflation over the forecast period. The projected recovery in world demand may be associated with a slight rise in global inflationary pressures. But the most significant external factor is the substantial depreciation of the sterling exchange rate. The fall in the exchange rate will add directly to import prices in the relatively short run. The depreciation may also have a more persistent impact on inflation, chiefly through the stimulus to net trade, but also reflecting the possible indirect impact of higher import prices on inflation expectations and domestic prices and wages.⁽¹⁾ Recent evidence, both domestically and internationally, suggests that these indirect effects are likely to be less than on average in the past, perhaps reflecting the improved anchoring of inflation expectations around target and the declining importance of collective wage bargaining arrangements. The Committee has taken this evidence into account when judging the likely impact of higher import prices on inflation expectations and prospective earnings in the current projection. Nonetheless, the recent depreciation raises the outlook for inflation relative to the February projection.

Pay pressures remain benign. Although earnings growth in the public sector has increased, the latest data signal a subdued underlying trend in private sector pay. Despite the sharp rise

(1) See the box on page 36 for a more detailed discussion of the impact of a fall in the exchange rate.

in tax and price inflation over the past year or so, whole-economy pay settlements have continued to average around 3% per annum. Recent pay trends have been weaker than expected three months ago. There is little sign as yet that employees are bargaining for higher earnings to compensate for the April rise in National Insurance contributions. This has been reflected in the Committee's current assessment of prospective earnings pressure. There nevertheless remains a risk that the rise in National Insurance could exert more upward pressure on near-term inflation prospects than built into the central projection, albeit with little effect on the balance of risks at the two-year horizon.

The outlook for nominal pay growth depends on inflation expectations and prospective pressures on real earnings. Surveys of inflation expectations for the next two years have moved up marginally in recent months but remain well anchored to the target. Longer-term expectations embodied in financial market contracts have also risen slightly, but are now around the target rather than a touch below.

Real earnings prospects hinge in turn on the demand for labour in relation to available supply. Numbers employed have continued to rise, broadly in line with the increase in the working-age population. In numerical terms, higher employment in the public sector and parts of private services has balanced the decline in manufacturing employment and rise in the working population. So the LFS unemployment rate has remained low at just above 5%. However, average hours worked per person have fallen—by 0.9% in the three months to February compared with a year ago. In part, the fall in average hours worked may be cyclical as firms have reduced overtime and supported shorter working hours given slack aggregate demand conditions. But the fall in average hours worked may also reflect structural factors, such as changes in the composition of labour demand towards lower average hours jobs, and the impact of the Working Time Directive. Ascribing weight to both arguments, there has probably been a slight easing in labour market pressures over the past year.

Labour market pressures may ease a little further over the next year or so given the recent spell of below-trend output growth. Real earnings growth is thus likely to remain relatively muted. But the labour market is still relatively tight, and real earnings may rise broadly in line with productivity in the second year of the projection as activity growth picks up.

Nominal earnings growth is likely to edge higher over the forecast period. The recent pick-up in price inflation and inflation expectations is likely to exert some upward pressure on earnings, although the limited response to date suggests

that the impact may be less than judged likely in February. Moreover, the fall in the sterling exchange rate may provide a further stimulus, although the impulse is expected to be rather weaker than average historical experience. Although higher employer National Insurance contributions added to labour costs in April, the projected cyclical rebound in productivity will temper the upward pressure from higher earnings in the first year of the projection. But domestic cost growth may then increase as productivity growth falls back to trend, and as earnings growth continues to drift up. Domestic labour cost pressures are likely to be weaker than expected in February over the next twelve to eighteen months. But cost pressures may be a little stronger by the forecast horizon given the higher level of domestic output.

The Committee considered the outlook for four factors that may have significant, temporary, effects on the inflation outlook: housing depreciation; petrol prices; Council Tax; and excise duties. The current abnormal stimulus from these factors is likely to unwind over the next year or so. House price inflation has passed its peak, and given the assumption of a sharp deceleration in prices, the contribution of the housing depreciation component should erode rapidly. Moreover, according to the futures curve, oil prices will fall below levels a year earlier during the second half of 2003, and so the contribution of petrol prices to annual RPIX inflation is likely to turn negative at that point. In the opposite direction, the rise of around 12% in average Council Tax rates in April 2003 was well above the increase a year ago and substantially above expectations in February. Furthermore, the contribution of excise duties is also likely to be higher over the next year than in the recent past, although the Chancellor delayed the indexation in fuel duties until October 2003 in the recent Budget. The influence of these factors may be a little stronger in 2003 Q2 than projected in February, reflecting higher Council Tax. But the impact may decline more quickly thereafter, reflecting the recent plunge in oil prices and weaker house price inflation. Given recent labour market evidence, these unusual influences are also judged to impart less pressure on earnings than previously estimated, helping to reduce the persistence of their impact.

The Committee's current projection for the twelve-month RPIX inflation rate is presented in Chart 6.2.⁽¹⁾ The projection assumes that official interest rates are maintained at 3.75%.⁽²⁾ It is shown alongside the corresponding projection from the *February Report* which was also based on official interest rates at 3.75%.

(1) Also shown as Chart 2 in the Overview.

(2) An alternative projection conditioned on market interest rate expectations is presented in Chart 6.4 below.

Chart 6.2
Current RPIX inflation projection based on constant nominal interest rates at 3.75%

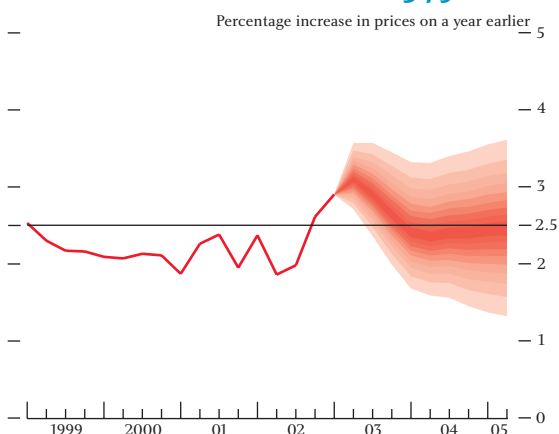
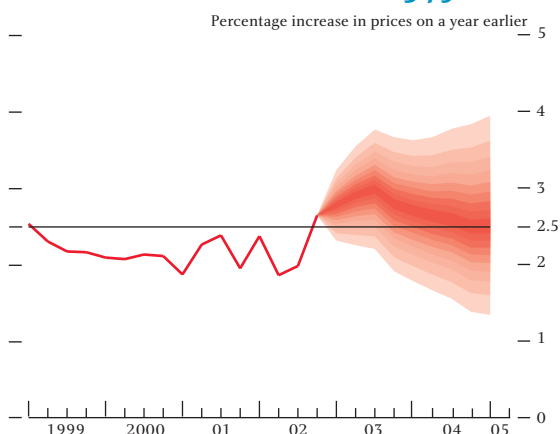


Chart 6.3
RPIX inflation projection in February based on constant nominal interest rates at 3.75%



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.

Inflation is likely to rise above 3% in the near term as the temporary influence of special factors peaks and as sterling import prices rise in response to the exchange rate depreciation. On the central projection, inflation falls back during the second half of 2003, as the contribution from housing depreciation rapidly shrinks and as petrol prices begin to detract from the aggregate. Inflation is expected to dip a little below target in the first half of 2004 but may then rise slightly to around target by the two-year horizon. Abstracting from the unusual factors which dominate the short-term outlook, underlying inflation may edge up to around the target as external influences are rather stronger than in the recent past. Domestic inflationary pressures are likely to remain relatively weak in the near term, but may then gradually increase.

The near-term peak in inflation is likely to be a little higher than projected in the February *Report*. RPIX inflation is expected to fall back more quickly than assumed three months ago, slipping below the February central projection as weaker short-term labour cost pressure and a more acute correction of the various special influences outweigh the initial boost from the lower exchange rate. However, as output growth recovers and as the stimulus from the exchange rate depreciation continues to feed through, the central projection edges higher during the second year and beyond, in contrast to the picture of broadly stable inflation in February.

Financial market participants lowered their assumptions of the likely near-term path of UK official interest rates following the

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

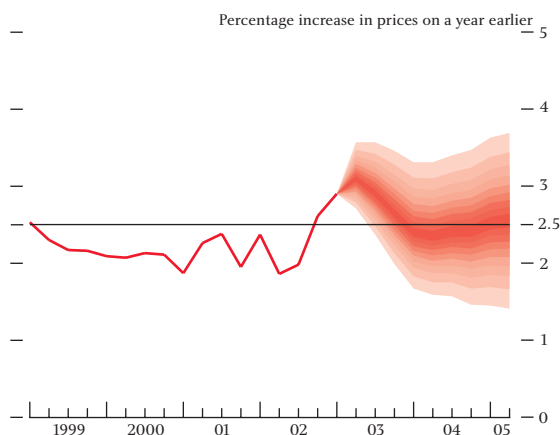


Chart 6.5
Current GDP projection based on market interest rate expectations

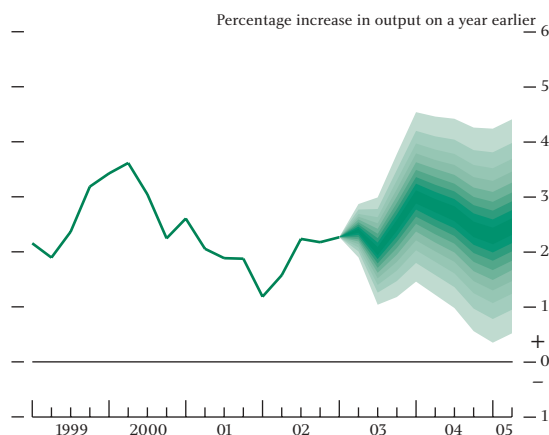


Table 6.A
Market expectations of the Bank's official interest rate^(a)

Per cent

2003			2004				2005	
Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
3.7	3.4	3.4	3.5	3.7	3.8	3.9	4.1	4.2

(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 7 May 2005.

cut in rates in February, although there has been some reversal subsequently. Drawing on a similar approach to previous *Reports*, market expectations are consistent with a further cut in interest rates of some 25–50 basis points over the next six months, with rates subsequently rising gently through 2004 and early 2005 to a little above 4% (see Table 6.A). The Committee's latest projections based on market interest rates are shown in Chart 6.4 and 6.5. Reflecting the lower interest rate initially, the outlook for inflation is a little higher than in the constant-rate projection.

As usual there are many uncertainties and risks to the outlook. These are encapsulated in the fan charts presented above. Although a major source of uncertainty has been removed following the Iraq war, it remains difficult to interpret recent economic data and trends in business and consumer surveys in the immediate aftermath. As a consequence, the Committee considers that uncertainty surrounding the outlook has diminished since February, but that economic prospects remain less certain than judged six months ago.

There are a number of major risks to the outlook represented in the central projection. These relate principally to: the prospects for the world economy and UK exports; exchange rate developments and their implications for activity and inflation; and the outlook for consumer spending and the housing market.

There remain substantial risks to the central projection of a gradual upturn in the world economy. In particular, the projected recovery in the euro area could be delayed given the sharp exchange rate appreciation and limited momentum in domestic demand. Moreover, high levels of household debt could precipitate additional retrenchment in consumer

spending in the United States. The timing and strength of the prospective global investment recovery remains highly uncertain. And it is difficult to gauge whether the widespread drop in business confidence in February and March reflects a temporary response to heightened uncertainty that might rapidly reverse, or whether it might foreshadow a more protracted slowdown in global demand growth. As well as risks to the outlook for world demand, there is also considerable uncertainty about the likely UK export supply response. There is a risk that the recent sharp fall in ONS export estimates could indicate a weakening in UK export supply capacity, as the persistent strength of sterling in recent years has encouraged the relocation of supply overseas. The prospective recovery in exports could be weaker than in the central projection.

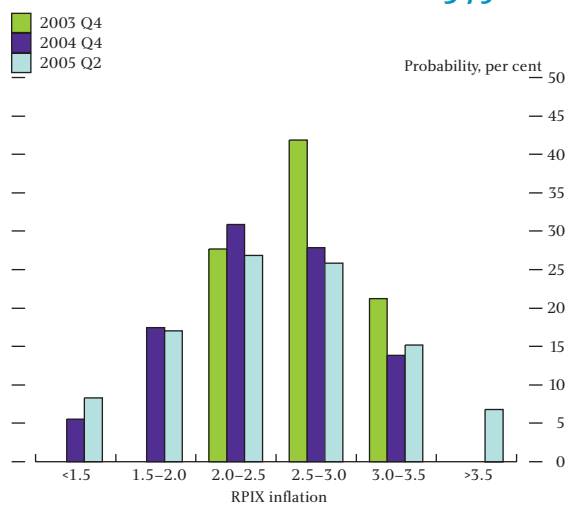
Committee members hold a range of opinions on the risks to the judgments on the impact of the recent depreciation. Some members consider that there is a possibility that the pass-through of the recent depreciation to the outlook for inflation could be larger than currently envisaged and more in line with average historical experience. Other members believe that recent evidence points to a smaller inflationary impact from the recent fall in sterling than incorporated in the central projection.

There remains considerable uncertainty surrounding the outlook for UK consumer spending and the housing market. Members noted risks in both directions. The recent deceleration in spending could herald a more pronounced correction than currently envisaged, should high levels of debt weigh on household sentiment. Moreover, although a number of factors point to an increase in the sustainable ratio of house prices to earnings in recent years,⁽¹⁾ the magnitude of such an increase is uncertain, and there is a risk of a sharp adjustment at some point that could exacerbate the slowdown in consumer spending. On the other hand, income gearing levels remain historically low and it is possible that the slowdown in expenditure growth in early 2003 might have reflected a temporary drop in confidence in advance of the Iraq war. That might quickly unwind. Furthermore, given high levels of housing wealth, and little weakening in employment prospects, it is possible that consumers will continue to borrow strongly against housing collateral. That would enable them to sustain spending growth when faced with the temporary slowdown in real income growth this year.

The best collective judgment of the Committee is that the risks around the most likely outcome for GDP growth and RPIX inflation are reasonably balanced in the medium term.

(1) See the box on pages 8–9 in the August 2002 *Report*.

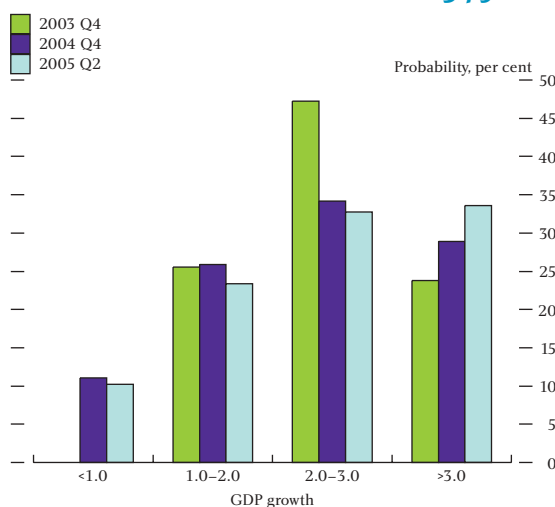
Chart 6.6
The MPC's expectations for RPIX inflation based on constant nominal interest rates at 3.75%^(a)



Source: Bank of England.

(a) These figures are derived from the same distribution as Chart 6.2. They represent the probabilities that 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 3.75%^(a)



Source: Bank of England.

(a) These figures are derived from the same distribution as Chart 6.1. They represent the probabilities that 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.

That judgment is incorporated in the fan charts. The probabilities of various outcomes for RPIX inflation and GDP growth are shown in Charts 6.6 and 6.7. The overall balance of risks to the outlook for inflation at the two-year horizon is shown in Chart 6.8, alongside the corresponding balance in February (see Chart 6.9). Given the considerable uncertainties, individual Committee members maintain a range of views on the overall balance of risks, although the range of opinion remains narrow.

The Committee reviewed the latest economic news and current projections at the policy meeting on 7–8 May. The central projection, holding interest rates unchanged, was for inflation to dip a little below target in early 2004 and then to edge up to around target by the two-year horizon. The major uncertainties and risks to the outlook appeared broadly balanced. Given prospective inflationary pressures continuing to rise into the medium term, and against a weaker background for the sterling exchange rate, the Committee voted to maintain interest rates at 3.75%.

Chart 6.8
Current projection for the percentage increase
in RPIX in the year to 2005 Q2^(a)

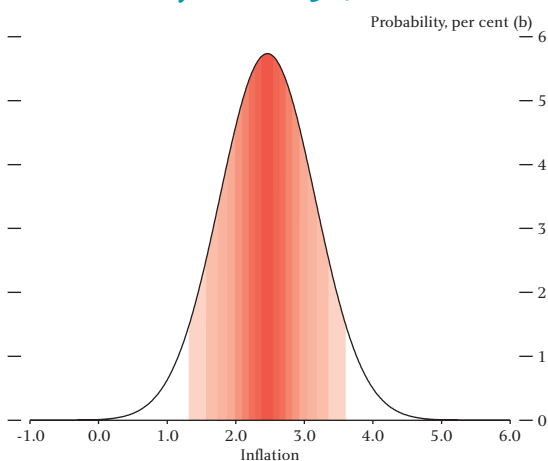
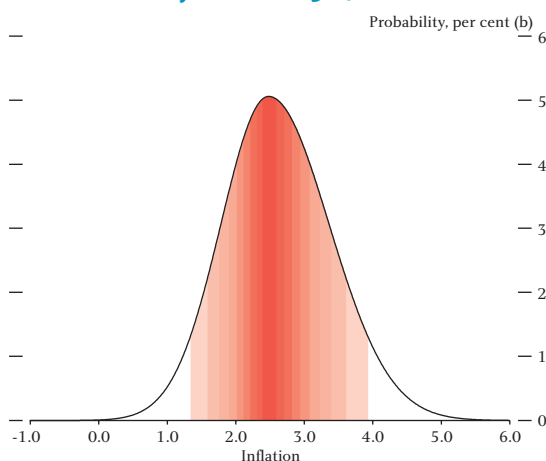


Chart 6.9
February projection for the percentage increase
in RPIX in the year to 2005 Q1^(a)



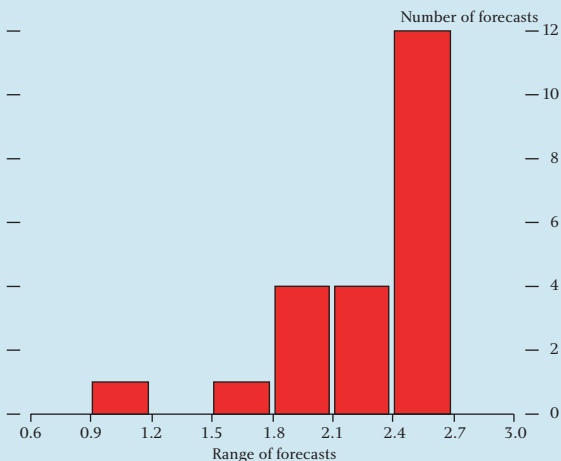
Source: Bank of England.

- (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 ± 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 a little below 6%.

Other forecasters' expectations of RPIX inflation and GDP growth

In April, 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 2003 Q4, based on the results of this survey, is 2.6% (with a range of 2.0% to 3.4%) falling slightly to 2.2% in 2005 Q2 (with a range of 1.0% to 2.6%). Compared with the survey results in the February Report, the average forecast for inflation at the two-year horizon is slightly lower. The distribution of the central projections (see Chart A) is less symmetrical than in February with a greater number of forecasters expecting inflation to be in the range 2.4% to 2.7% at the two-year horizon. And unusually, there were no central projections for inflation to be above this range. On average, the external forecasters see a 60% probability of inflation being at or below 2.5% in 2005 Q2 (see the table below).

Chart A
Distribution of RPIX inflation forecasts for 2005 Q2

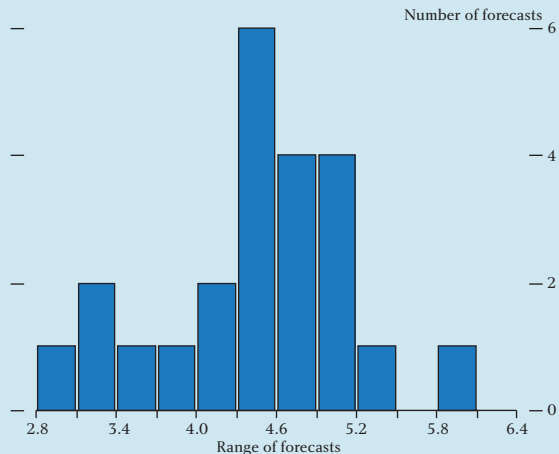


Source: Central projections of 22 outside forecasters as of 28 April 2003.

The forecasters' average projection for four-quarter GDP growth in 2003 Q4 is 1.9% (with a range of 0.9% to 2.9%), a downward revision from the 2.4% average expected in February. The average projection for GDP growth in 2005 Q2 is 2.6% (with a range of 1.7% to 3.3%), slightly higher than at the two-year horizon in the February Report.

The average forecast for the official interest rate in 2003 Q4 is 3.6% (ranging from 3.0% to 4.2%), rising to 4.4% by 2005 Q2 (with a range of 3.0% to 6.0%). The average forecast for interest rates at the two-year horizon is lower than that in the February Report. On average, forecasters expect the sterling ERI will be 99.8 in 2003 Q4 (ranging from 96.4 to 103), falling to 97.9 by 2005 Q2 (ranging from 92 to 105)—noticeably below the projections reported in February.

Chart B
Distribution of repo rate forecasts for 2005 Q2



Source: Forecasts of 23 outside forecasters as of 28 April 2003.

Other forecasters' expectations of RPIX inflation and GDP growth^(a)

RPIX inflation

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%
2003 Q4	3	10	28	34	17	8
2004 Q4	7	17	33	25	13	5
2005 Q2 (b)	10	18	32	24	11	6

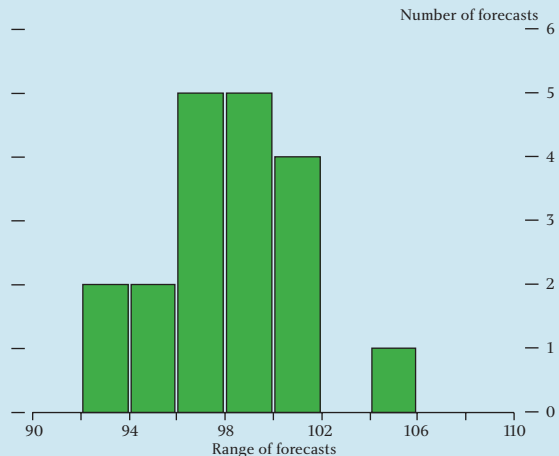
GDP growth

Probability, per cent	Range:			
	Less than 1%	1% to 2%	2% to 3%	More than 3%
2003 Q4	12	38	41	8
2004 Q4	11	26	41	22
2005 Q2 (b)	12	24	43	22

(a) 26 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 7% to inflation turning out to be less than 1.5% in 2004 Q4. Figures may not sum to 100 due to rounding.

(b) 23 forecasters.

Chart C
Distribution of sterling ERI forecasts for 2005 Q2



Source: Forecasts of 19 outside forecasters as of 28 April 2003.

Bank of England

Agents' summary of business conditions

May 2003

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-January and mid-April. 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.

- The approach of war in Iraq and weaker domestic consumer demand adversely affected manufacturing orders and output. Migration of production overseas continued and excess capacity in certain sectors caused further plant closures and mergers.
- Orders for commercial construction were subdued and some office and leisure projects were postponed or cancelled. However, construction output remained at relatively high levels, buoyed by public sector and infrastructure projects as well as ongoing work on existing contracts for the private sector. House price inflation eased in most regions.
- Output in the business service sector was driven by the need for clients to cut costs. Outsourced services grew while more discretionary expenditure, such as training and advertising, was cut. Overseas travel services were affected by war and SARS. Consumer demand weakened for housing-related services, other than remortgaging and equity withdrawal.
- Retail sales growth appeared to have slowed as a result of weaker consumer confidence. Demand for new cars in the important March registration month was weaker than a year earlier.
- Export orders from the United States picked up, but the German and French markets remained depressed. Import penetration continued to rise for services as well as goods.
- Investment decisions were characterised by hesitancy and deferral as confidence about future levels of demand declined. Capital spending in manufacturing was largely to comply with legislative or insurance requirements, or to reduce labour costs through greater automation. Investment budgets were also used to relocate overseas.
- Further increases in overhead costs were recorded and material prices reflected the earlier rise in the price of oil. Manufacturers continued to report downward price pressure, while weakening demand dampened business service output price inflation.
- Retail goods prices were mostly static or falling, with slightly greater discounting around Easter. Holiday and new car prices were also cut to stimulate demand.
- The labour market eased further. Agencies reported redundancies across a wider range of sectors and lower voluntary turnover among staff. However, public sector recruitment remained strong. Skills shortages were less prevalent than a year ago, but recruitment difficulties persisted for particular specialisms and for some lower-paid jobs.
- Pay pressures remained relatively subdued. Settlements were generally in the 2% to 4% range, although labour costs have risen faster as a result of the increase in National Insurance contributions. Pensions contributions have also risen in some companies.

(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 contacts reported modest increases in output and prices. Favourable spring weather facilitated planting and spraying and helped with lambing. Competition from overseas in the domestic market for produce and poultry continued to increase, driving down prices and causing some growers to reduce the acreage sown for this year's crops. A major uncertainty for farmers is the effect of the impending reform of the Common Agricultural Policy, whose terms are still to be finalised.

Manufacturing

The approach of military action in Iraq reduced confidence and orders, particularly for capital goods producers. Demand for air travel remained weak, and uncertainty resulting from the war and more recently from fears about SARS were cited as reasons to cancel aircraft orders. Output of defence-related aerospace and security products, however, was boosted by the war and the perceived increase in the risk of terrorism.

Areas of continued strength were food processing, especially chilled prepared meals, construction products and output for the public sector. Prominent in the latter category are specialist pharmaceutical goods and healthcare equipment.

Contacts producing industrial goods continued to report that a significant number of their customers were relocating overseas or going into receivership. Some multinational companies reported increasingly volatile output volumes as head offices redistributed orders between plants.

Weaker demand in the domestic market, and little sign of pick-up in continental markets, led some car manufacturers to take production breaks during the period. Stocks of cars built up in the supply chain.

In consumer goods more generally, lower order levels reflected retailers' concerns about the future strength of consumer spending.

Construction and housing

Although construction output for the private sector remained at high levels, this was largely on the basis of projects agreed up to two years ago. The pipeline of new orders has slowed and contacts reported cancellation or postponement of some developments. Demand for office space weakened, therefore few new office developments

were begun, unless they were pre-let. New luxury hotel projects continued to be put on hold as the war in Iraq deterred international tourism. And weakening growth in domestic consumer spending led to greater caution with regard to retail and leisure projects, including restaurants and pubs.

Public sector and infrastructure projects continued to keep many construction companies working at or near capacity. These included work for utilities and transport companies as well as building and refurbishment of schools, universities, hospitals and public sector housing.

Private housebuilding remained robust where land was available. However, site visitor numbers declined and potential purchasers have become more cautious. Similarly, in the secondary housing market, the supply of properties increased. Contacts suggested that house prices were rising more slowly or had stabilised in all but the northern regions of the country.

Services

Business service providers continued to feel the effects of cost cutting by their private sector clients. Advertising, information technology services, training and hotels were particularly affected. Those serving a traditional manufacturing client base also reported a decline in business as a result of plant closures and downsizing. However, corporate recovery and receiverships boosted activity for the professional services. Demand remained buoyant for litigation work and consultancy related to tax, pension scheme restructuring and employment law. But there was a continued dearth of large corporate finance deals.

Outsourced service providers reported increased business as companies sought to control overheads by ceasing in-house provision of security, catering, cleaning, reception management and human resources functions. Public sector outsourcing of non-core services to private sector providers also continued to rise.

Business travel weakened further as some companies postponed travel during the war in Iraq. And company travel bans to the Far East were imposed due to SARS. Consumer tourism to overseas destinations declined for the same reasons. UK tourist services with a mostly overseas visitor clientele also reported lower turnover during the period.

Services such as nursing homes and private healthcare continued to see growth in consumer demand. Remortgaging activity also remained robust, but lending

for house purchase and demand for conveyancing slowed.

DEMAND

Consumption

Retail contacts suggested that consumer confidence had weakened. This was attributed to high levels of personal debt, nervousness about house prices and job insecurity. Annual growth in retail sales was slower through most of the period than in the previous three months, but some recovery was evident in the immediate lead-up to Easter.

Spending in city centre pubs and restaurants weakened, but demand for short breaks to domestic destinations remained buoyant.

The new vehicle registration plate in March provided less of an uplift to car sales than last year and manufacturers' discounts and incentives were required to support demand. Footfall in car showrooms declined sharply on the outbreak of war.

Exports and imports

Export orders from the United States appeared to be strengthening. This was the case both for consumer and capital goods. Sales to the Far East remained buoyant, but there was little or no sign of recovery in German and French markets. Some suppliers to Middle-East markets reported cancellation or deferral of orders following the outbreak of war in Iraq, and others had experienced logistical problems in fulfilling orders.

Again, a growing proportion of manufacturing and consumer demand was met by imports as more UK production sites closed. Overseas producers targeted the UK market while demand in other economies was weak. Demand from UK companies was growing for services from companies in India. Examples included handling of tax accountancy work, call centre services, IT software writing and work on contracts by local staff trained in English law.

Investment

Agencies reported deferral or cancellation of investment projects as business confidence fell, in part because of uncertainties surrounding the war in Iraq. In some cases, increasing pension fund contributions had reduced cash available for capital expenditure. Hurdle rates of return had increased and required pay-back periods had shortened compared with a year earlier.

Much manufacturing investment that went ahead was directed at reducing labour costs, either through greater

automation or through relocation of production overseas. Additionally, some contacts had invested to comply with insurers' requirements or legislation relating to health and safety or the environment.

The continued weakness in international tourism, exacerbated by hostilities in Iraq, led to some cancellations of hotel refurbishment programmes and airline investments. Investment in rail and road transportation continued at high levels, however. Retailers continued to invest in refurbishment and expansion of selling space.

COSTS AND PRICES

Input prices

There were more signs of upward pressure on prices of material inputs. Earlier oil price rises fed through to rising material and transport costs. Contacts reported significant price increases for some forms of steel, building materials, wool, industrial gases, glass and sugar. Prices for electricity, advertising, IT services, newsprint and manufactured components, however, fell. And many contacts were able to contain costs through increased use of e-auctions or sourcing from abroad.

The greatest inflationary pressure on companies continued to come from overhead costs, specifically those of security, liability insurance cover and of complying with increased regulation.

Output prices

Manufacturers' prices remained under downward pressure, with increases often only possible from smaller customers or for niche products. Many businesses were, however, able to rebuild sterling export margins somewhat by leaving prices unchanged in euros following exchange rate movements.

Increases in professional service fees were generally modest in response to slower demand and increased competition. Indeed, some firms were reducing fees or offering a higher level of service for the same fee. Hotels came under further pressure to reduce room rates for business travellers. Freight transport companies pushed through increased charges to cover the rise in the price of diesel and some imposed surcharges for deliveries in and out of London's congestion charging zone.

Retail prices

Prices of retail goods were mostly flat or declining. There was widespread discounting of books and DVDs in response to slowing sales. Discounting around Easter

was slightly deeper than in 2002, particularly for household goods. Food prices were fairly stable overall, with some supermarket discounting taking the form of multi-buy offers rather than price cuts.

New car prices were heavily discounted and more extras were included in the price to support sales following the introduction of the new registration plate.

Retail service price inflation moderated during the period. Airfares and package holidays were widely discounted to stimulate demand, although capacity cut-backs are expected to cause prices to rise later in the year. However, cinema ticket prices and entrance fees for leisure attractions increased by more than RPIX inflation.

Pay

Pay pressures remained relatively muted as job losses dampened expectations, particularly in the financial sector. Most settlements fell within the 2% to 4% band and there was no sign of any increase in the rate in the peak review month of April. However, employees' take-home pay would have been affected by the increased National Insurance contributions (NICs) as well as reduced overtime payments and lower bonuses.

Moreover, employers' labour costs have risen as a result of the increased employers' NICs. In some cases, contributions to pension schemes also increased. Looking forward, some employers expressed concern that

wage demands will be driven upwards to reflect the forthcoming increase in the National Minimum Wage.

EMPLOYMENT

The labour market softened further and there was little evidence of recruitment freezes being lifted. Redundancies were reported across a wider range of services including, in the latest month, air travel, tourism and estate agents. Agencies reported further cuts in jobs and hours in manufacturing and financial services due to weak demand and increases in National Insurance and pension costs.

Contacts reported markedly lower voluntary labour turnover, partly due to fewer opportunities elsewhere and partly because staff did not wish to leave final salary pension schemes. Job advertisements were dominated by the public sector, but employment in retail and construction also continued to expand, albeit at a slower rate. Companies that advertised vacancies reported a significantly higher number of applications per post than a year ago.

Skill shortages have lessened compared with a year ago. Accountants and computer technical staff were easier to recruit as large firms have downsized. Shortages of HGV drivers and specialist construction workers persisted. Furthermore, many contacts were increasingly using immigrant labour to fill vacancies in agriculture, medicine, contract cleaning and the hospitality sector.

Text of Bank of England press notice of 6 March 2003

Bank of England maintains interest rates at 3.75%

The Bank of England's Monetary Policy Committee today voted to maintain the Bank's repo rate at 3.75%.

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

Text of Bank of England press notice of 10 April 2003

Bank of England maintains interest rates at 3.75%

The Bank of England's Monetary Policy Committee today voted to maintain the Bank's repo rate at 3.75%.

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

Text of Bank of England press notice of 8 May 2003

Bank of England maintains interest rates at 3.75%

The Bank of England's Monetary Policy Committee today voted to maintain the Bank's repo rate at 3.75%.

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

The minutes of the meeting will be published at 9.30 am on Wednesday 21 May.

Glossary and other information

Glossary of selected data

AEI: average earnings index.

CPI: consumer price index.

CSPI: corporate services price index.

ERI: exchange rate index.

GDP: gross domestic product.

HICP: harmonised index of consumer prices.

LFS: Labour Force Survey.

MEW: mortgage equity withdrawal.

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.

PPIY: manufacturing output price index excluding excise duties.

RPI inflation: inflation measured by the retail prices index.

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

TFP: total factor productivity.

Abbreviations

BCC: British Chambers of Commerce.

CBI: Confederation of British Industry.

CD: certificate of deposit.

CIPFA: Chartered Institute of Public Finance and Accountancy.

CIPS: Chartered Institute of Purchasing and Supply.

ECB: European Central Bank.

FTSE: Financial Times Stock Exchange.

GAD: Government Actuary's Department.

GC: general collateral.

GfK: Gesellschaft für Konsumforschung, Great Britain Ltd.

HBF: House Builders Federation.

HGV: heavy-goods vehicle.

IMF: International Monetary Fund.

INSEE: Institut National de la Statistique et des Etudes Economiques.

IT: information technology.

MPC: Monetary Policy Committee.

NICs: National Insurance contributions.

NMW: National Minimum Wage.

ODPM: Office of the Deputy Prime Minister.

OFCs: other financial corporations.

ONS: Office for National Statistics.

OPEC: Organization of the Petroleum Exporting Countries.

PBR: Pre-Budget Report.

PNFCs: private non-financial corporations.

REC: Recruitment and Employment Confederation.

RICS: Royal Institute of Chartered Surveyors.

S&P: Standard and Poor's.

SARS: severe acute respiratory syndrome.

SMMT: Society of Motor Manufacturers and Traders.

WTD: Working Time Directive.

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.