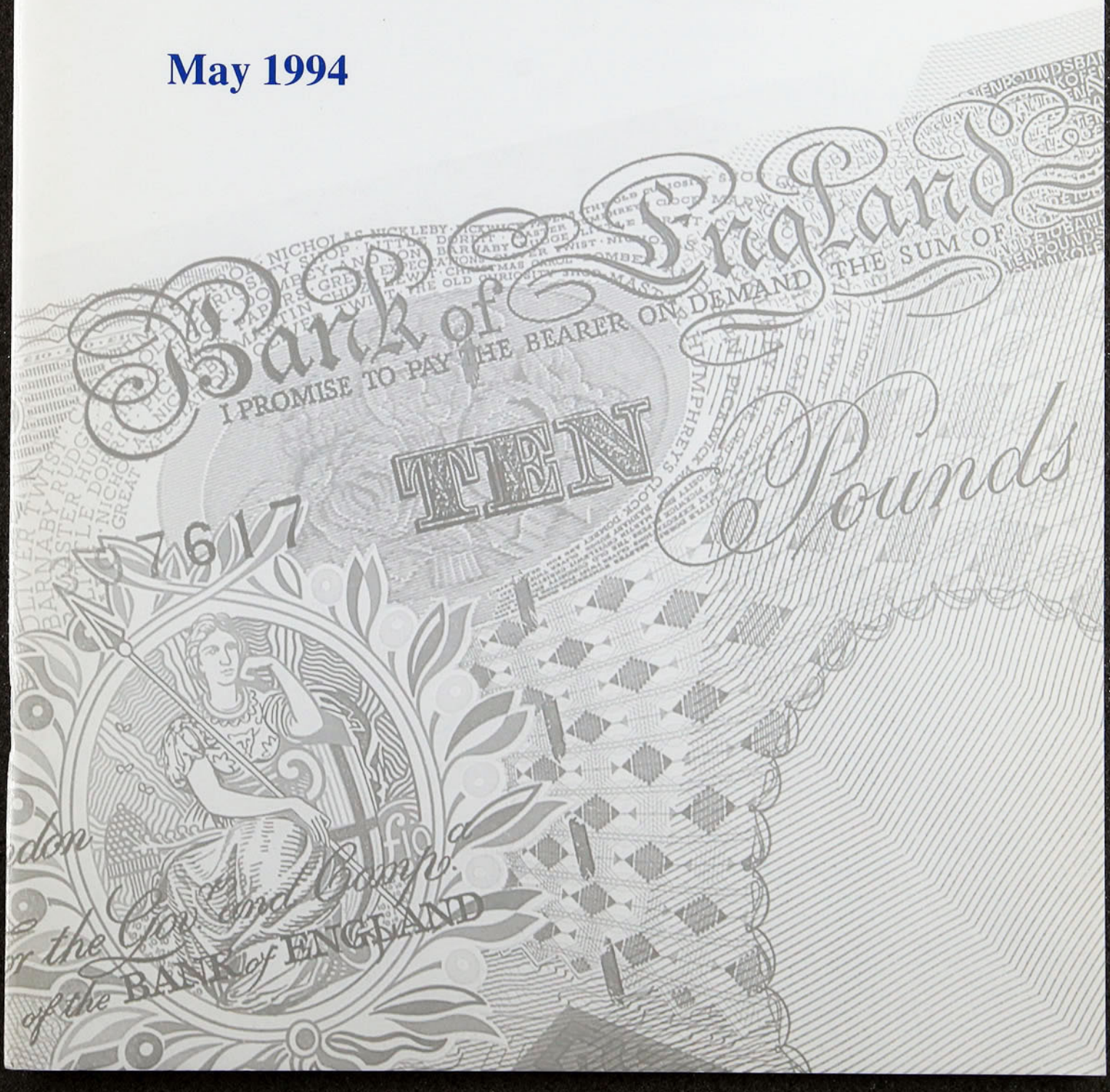
Bank of England

Inflation Report

May 1994



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Summary

The Government's target measure for inflation—the 12-month change in the retail price index excluding mortgage interest payments (RPIX)—has again fallen over the past three months, from a rate of 2.7% in December to 2.4% in March. The rate of RPIY inflation has fallen below the RPIX rate, to a level of 1.9% in March. Annual M0 growth remained well above its 0%–4% monitoring range at 6.2% in April and M4's annual growth rate was near the centre of its 3%–9% monitoring range at 5.9% in March. But, for the moment at least, this is not a cause for inflationary concern. Since early February, financial markets have seen substantial movements worldwide. The United Kingdom has been particularly affected. The expected inflation term structure has risen quite sharply and suggests inflation above 4% for the period from 1996 to early 2007. The growth rate of output has probably risen slightly above trend. Over the short term, consumption growth is likely to weaken, as consumers respond to the latest tax increases; but investment may strengthen as the persistence of recovery becomes clearer to firms. Nominal earnings are rising more rapidly than last year. It will be necessary to monitor labour market developments extremely carefully over the next few months. Profitability has continued to increase. Cost increases remain subdued.

Since changes in monetary policy take time to affect output, employment and inflation, it is necessary to form a judgment about the direction in which inflation is headed over the next two years or so. On the assumption of unchanged interest rates, the most likely outcome for RPIX inflation two years hence is 3%–3.5%, and for RPIY inflation just under 3%. There are, of course, large margins of error in any such projection. The main risks to the inflation outlook are threefold. First, rates of monetary growth have continued to increase. Second, inflation expectations have risen and are no longer coming down into line with the inflation target. Third is the rise in the growth of underlying average earnings.

Recent developments in inflation 1

1.1 Retail prices

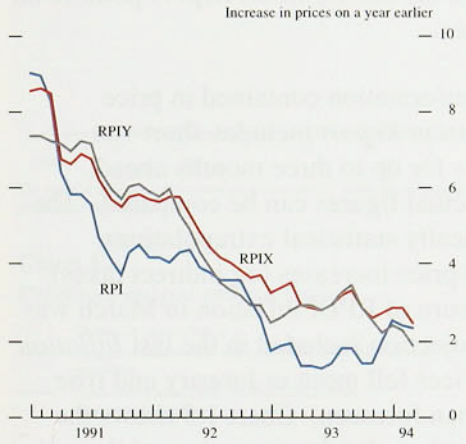
The Government's target measure for inflation—the 12-month change in the retail price index excluding mortgage interest payments (RPIX)—has again fallen over the past three months, from a rate of 2.7% in December to 2.4% in March, the lowest figure since the index was first compiled in 1975 (see Chart 1.1).

The RPIX measure includes increases in indirect taxation. The Bank's RPIY measure excludes both local authority and indirect taxes, as well as mortgage interest payments.(1)(2) Since November, the rate of RPIY inflation has fallen below the RPIX rate, to a level of 1.9% in March.

Headline RPI inflation includes the effects of changes in mortgage interest rates, so it can diverge from RPIX inflation for a considerable time; it has been lower than RPIX since early 1991. It reached a low point of 1.2% in June 1993. Since then, large cuts in mortgage interest rates in 1992 and 1993 have dropped out of the 12-month comparison, so RPI inflation rose to 2.5% in January. It fell back to 2.3% in March. From April, the reduction in the rate for mortgage interest tax relief from 25% to 20% will raise the headline rate of inflation further, pushing it above RPIX inflation.

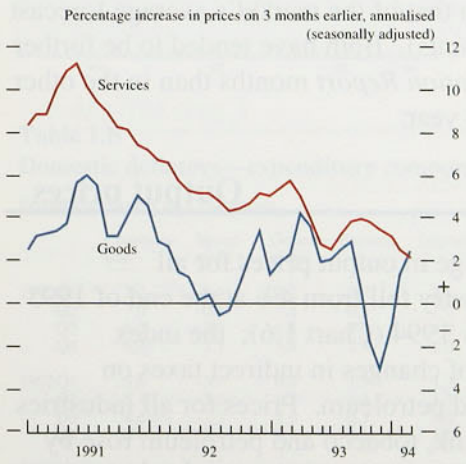
Over the last couple of years, increases in goods prices have been more variable than the prices of services. Goods price inflation fell sharply towards the end of last year as competition between retail outlets—especially supermarkets—intensified, but it is now back to broadly the same level as in early 1993 (Chart 1.2). Services inflation has continued to fall. Sales and special promotions cause prices to fluctuate, giving peaks and troughs in inflation associated with seasonal sales. Chart 1.3 shows that household goods prices fell more this January than in the previous three years, but rose in February and March by broadly the same

Chart 1.1
Inflation



RPIY=RPIX excluding VAT, local authority taxes and excise duties (Bank calculations).

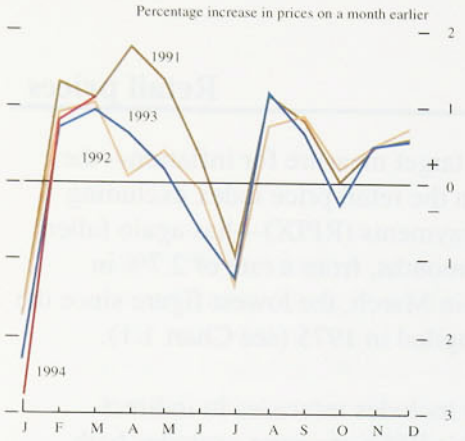
Chart 1.2
Goods and services inflation



(1) The calculation of RPIY has been revised in this *Report* to incorporate more disaggregated data on taxes and duties.

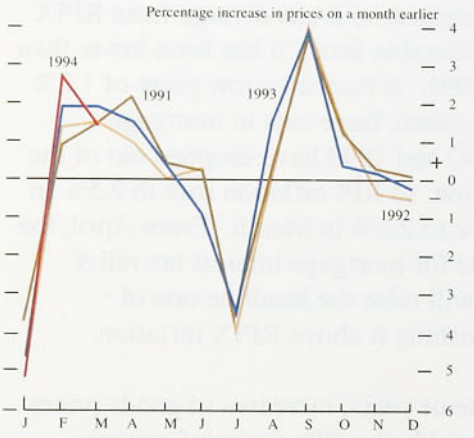
(2) RPIY inflation may change at a different rate from RPIX even when tax changes contribute nothing to RPIX inflation. This is because the weights attached to individual prices are different. For instance, excluding the effects of tax on tobacco and alcohol gives those prices a lower weight in RPIY than in RPIX. If the goods' relative prices change, RPIY will move differently from RPIX, even if taxes remain constant.

Chart 1.3
Seasonal movements in prices of household goods



Source: Retail prices index.

Chart 1.4
Seasonal movements in prices of clothing and footwear



Source: Retail prices index.

Table 1.A
Short-run measures of inflation

Percentage changes (a)

	RPI	RPIX	RPIY	Goods	Services
Feb. 1993	-0.7	2.9	3.0	1.9	5.4
Mar. 1993	0.9	3.8	3.7	2.3	5.7
June 1993	1.2	1.0	2.1	2.0	2.8
Sept. 1993	3.9	4.1	3.5	2.9	3.9
Dec. 1993	1.7	1.7	-0.4	-3.1	3.5
Jan. 1994	2.7	2.8	0.7	-0.9	3.1
Feb. 1994	3.2	3.8	1.8	1.3	2.6
Mar. 1994	2.4	3.0	2.1	2.4	2.2

(a) The change between latest month and three months earlier, seasonally adjusted and annualised.

The natural logarithms of the price series were seasonally adjusted using a Kalman filter to decompose the series into trend, cyclical, irregular and seasonal components.

amount. By contrast, clothing and footwear prices rose much more strongly in February this year than in the previous three years (Chart 1.4), though this higher increase was unwound in March.

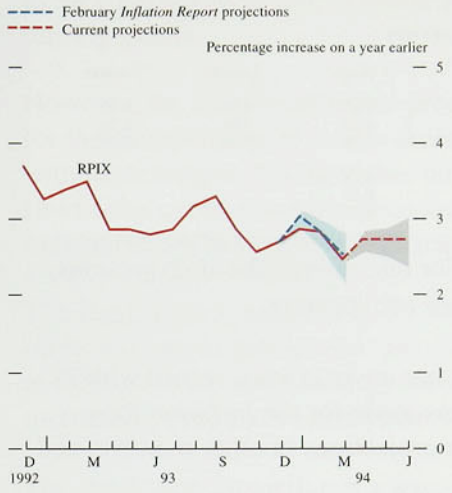
Table 1.A shows how short-run measures of inflation (annualised changes in prices over three months) have varied over the past year. Short-run inflation measures can give an early indication of changes in inflationary trends, although they are sensitive to changes in seasonal patterns and to temporary disturbances. The figures for RPIY inflation since the last *Inflation Report* point to an acceleration of prices.

To isolate the new information contained in price statistics, each *Inflation Report* includes short-run inflation projections for up to three months ahead, against which the actual figures can be compared. The projections are basically statistical extrapolations, adjusted for known price increases (eg indirect taxes). The 12-month measure of RPIX inflation in March was very close to the projection included in the last *Inflation Report*, although prices fell more in January and rose more in February than foreseen. Chart 1.5 shows the new short-run projection. It takes into account the imposition of VAT on domestic fuel and power from April, and the dropping-out from the 12-month comparison of last year's switch to the Council Tax and last April's increases in duties. The box on pages 8–9 examines the track record of the short-term projections of the Bank since the first *Inflation Report* in February 1993. The mean absolute error of the Bank's one-month-ahead projection, at 0.18 percentage points, has been lower than that of the market's average forecast (0.23 percentage points). Both have tended to be further off the mark in *Inflation Report* months than in the other eight months of the year.

1.2 Output prices

The 12-month change in output prices for all manufacturing industry fell from 4% at the end of 1993 to 3.4% in February 1994 (Chart 1.6); the index includes the effect of changes in indirect taxes on tobacco, alcohol and petroleum. Prices for all industries apart from food, drink, tobacco and petroleum rose by 2.5% in the year to February, compared with an increase of 2.9% in the year to December 1993. Between July 1993 and February 1994, the index excluding food, drink, tobacco and petroleum rose by 1.3%, the same amount as between July 1992 and February 1993. The 'hump' in producer price inflation in 1993 has subsided.

Chart 1.5
RPIX inflation projections and outturns



The range is defined as the central projection plus or minus the average error on such projections in the past.

Chart 1.6
Producer output price inflation

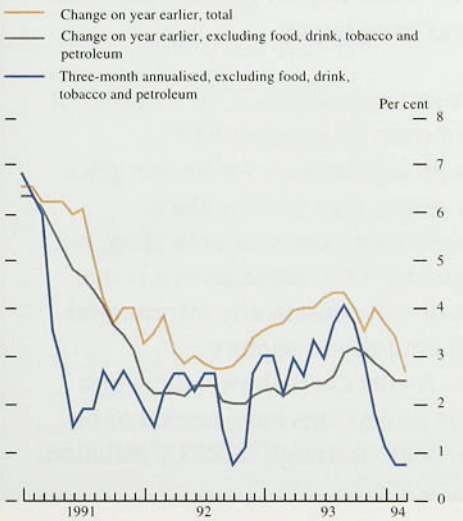


Table 1.B
Domestic deflators—expenditure components

Percentage changes on a year earlier

	Consumption	Investment	Government	Exports	Imports	GDP
1991 Q1	7.2	2.4	9.2	0.9	-2.8	8.1
Q2	7.0	-0.1	7.4	-0.3	-1.7	6.4
Q3	6.7	-2.3	6.3	1.9	4.2	3.8
Q4	6.3	-2.3	5.4	1.8	2.0	5.1
1992 Q1	5.8	-3.7	6.7	1.5	1.3	4.0
Q2	5.4	-3.6	6.1	1.3	-1.3	5.4
Q3	4.6	-2.7	5.9	-0.7	-4.0	5.1
Q4	3.9	-2.4	6.4	3.4	3.7	3.4
1993 Q1	4.5	-0.8	5.7	10.0	8.7	4.1
Q2	3.9	-0.1	4.0	8.6	10.0	2.7
Q3	3.6	0.7	2.6	11.5	10.2	3.1
Q4	3.7	0.3	3.1	8.7	1.8	4.8
Seasonally adjusted quarterly growth rates—1993						
Q3 on Q2	0.2	0.1	-0.2	1.9	-0.1	1.0
Q4 on Q3	1.6	—	1.8	1.1	-1.8	1.7

The muted rise in producer prices is also reflected in CBI surveys. The April quarterly survey found 1% more firms expecting to lower domestic prices than to increase them over the next four months, compared with a balance of 10% expecting to increase them a year ago. Manufacturers' price expectations have remained fairly flat since June last year.

1.3 Domestic deflators

The consumption deflator at factor cost provides an alternative measure of inflation faced by consumers; the measure was stable at around 3½% to 4% for the final three quarters of 1993. Table 1.B shows the evolution of the component deflators of GDP (expressed at factor cost). The consumption deflator rose by 3.7% in the year to 1993 Q4, compared with 3.9% in the same quarter a year earlier. It rose about one percentage point further than RPIX in the year to 1993 Q4. It is unusual to have a sustained gap between the two measures, though there was a large difference in the early 1990s when the Community Charge (included in RPIX but not in the consumers' expenditure deflator), replaced local authority rates (which had been included in both).

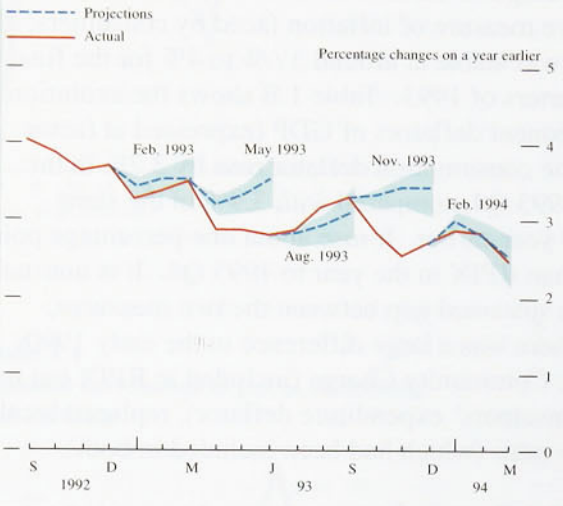
The GDP deflator is the most comprehensive indicator of domestic inflationary pressure. It is, however, published with a lag, can show sharp quarterly changes and is sometimes subject to large revisions. It rose by 4.8% in the year to 1993 Q4, up from 3.1% in the year to 1993 Q3. The rise of 1.7% in the GDP deflator in the fourth quarter mainly reflected faster increases in the deflator for consumption, but also partly reflected the arithmetic effect of the fall in import prices during the quarter. It takes time to pass higher import prices into final prices, so that in the short run the rate of change of the GDP deflator will be inversely related to changes in import prices.

In the year to 1993 Q3, deflators for exports and imports both rose much more quickly than the GDP deflator as a whole, reflecting the effects of the depreciation at the end of 1992. In 1993 Q4, however, the rise in import prices between the third and fourth quarters of 1992 dropped out of the annual change, so that import price inflation declined to 1.8%. The deflator for government consumption rose by 3.1% in the year to 1993 Q4—half a percentage point higher than in the previous quarter but half the rate of a year earlier, reflecting constraints on public sector pay. The deflator for investment has recently registered small increases following almost two years of falls.

Short-term inflation projections: the track record

Short-term projections of RPIX (up to three months ahead) are published each quarter in the *Inflation Report*. After the February *Report*, a number of commentators focused on the Bank's overprediction of inflation. The chart shows the picture most used to illustrate the point.

RPIX inflation projections and outturns



Inflation Report forecast made in month as shown. Shaded area shows range based on average absolute error.

Table 2 opposite records the sequence of three-month projections made since January last year, together with the Money Market Services median (market) projections for one month ahead. To summarise this, Table 1 reports the average absolute error of the Bank and market projections. For one-month-ahead projections, two conclusions are apparent:

Table 1
Mean absolute errors

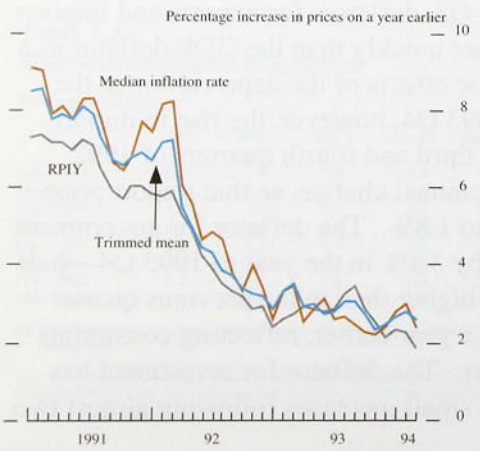
	1 month	2 month	3 month
Bank non-IR forecasts	0.14	0.21	0.40
IR forecasts	0.26	0.34	0.34
All forecasts	0.18	0.26	0.38
Market non-IR months	0.18		
IR months	0.34		
All forecasts	0.23		

- the Bank has a worse track record with its projections made for the *Inflation Report* than with projections in other months; and
- the market forecasts on average had a greater margin of error than those produced within the Bank, and their difference between *Inflation Report* months and other months was even larger.

The Bank's projections are made by a statistical extrapolation of over 20 separate RPI components, with adjustments for known price changes. As a result, they tend to place substantial weight on recent economic data, not economic judgment. One consequence is that the projections do not contain any information which allows them fully to capture turning-points. As the chart shows, the worst *Inflation Report* projections have tended to be made at a local peak or trough in RPIX inflation.

1.4 Core inflation

Chart 1.7
Alternative measures of 'core' inflation



Over short periods, shocks affecting particular prices can cause measured inflation to deviate from the underlying rate. In judging the latter, it is useful to look at measures of 'core' inflation which exclude one-off changes to the price level.

There are several such core inflation measures: two are shown in Chart 1.7, which shows also the RPIY increase. The first uses the component RPI price indices to compute a median 12-month change for each period, thus giving no weight to extreme movements in relative prices (see the May 1993 *Report*). The second excludes from the calculation the largest relative price changes and calculates the average change of all the remaining

For three-month projections, the distinction between IR and non-IR projections disappears, as they have both tended to encompass turning-points.

However, the Bank's statistical procedures allow for the extrapolation to reflect recent patterns with more weight. So the rather unusual short-term cycles that have been seen will start to be reflected in future projections.

The Bank's track record with its short-term projection might prompt the question: why try to forecast two years ahead, given the problems forecasting even one month in advance?

The short-term projection is a statistical construction that embodies no economic theory—the noise in monthly data makes it more difficult to recognise the fundamentals. It is perfectly consistent to have more faith in the longer-term quarterly projections.

Why then produce a short-term projection? As a statistical device, the three-month projection is a useful reference path against which to judge the news in actual inflation data. Since October, inflation has most often been below forecast. On further investigation, this has proved to be due in part to significant downward pressure on inflation from increased competition among supermarkets. The projection error was a useful device for spotting new developments in the inflation environment. To focus on the errors is to miss the point—which is how best to extract the news from the numbers.

Table 2
RPIX forecasts and actuals

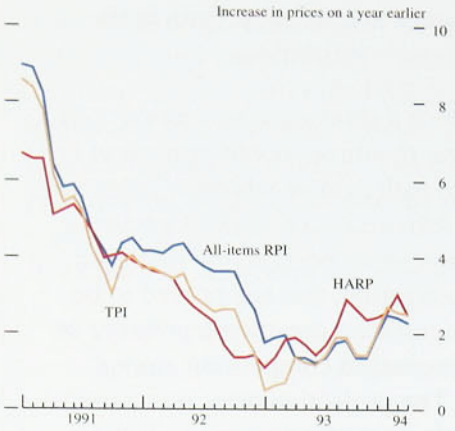
		Actuals	Bank IR Jan.	Feb.	Mar.	IR Apr.	May	June	IR July	Aug.	Sept.	IR Oct.	Nov.	Dec.	IR Jan.	Feb.	Mar.	Market 1 month ahead
1993	Jan.	3.2	3.4															3.9
	Feb.	3.4	3.5	3.4														3.2
	Mar.	3.5	3.5	3.4	3.3													3.3
	Apr.	2.9		3.0	3.3	3.2												3.2
	May	2.8			3.4	3.3	3.0											2.9
	June	2.8				3.5	3.2	3.0										3.0
	July	2.9					3.3	3.1	2.8									3.0
	Aug.	3.1						3.3	2.9	3.0								2.9
	Sept.	3.3							3.1	3.3	3.3							3.1
	Oct.	2.8								3.2	3.3	3.3						3.2
	Nov.	2.5									3.4	3.4	2.8					2.8
	Dec.	2.7										3.4	2.9	2.8				2.7
1994	Jan.	2.8											3.2	2.9	3.0			3.0
	Feb.	2.8												2.6	2.8	2.6		2.6
	Mar.	2.4													2.5	2.4	2.5	2.6

Each of the Bank's forecasts was produced in the middle of the month, ie when the actual for the previous month had just been published. Consequently, the forecasts produced in December were the first to include the duty changes announced in the November Budget. Previously, index linking and 'best guesses' had been used. The market forecasts were produced approximately three weeks later, ie a week before the next publication of RPIX figures.

components—a 'trimmed mean'. During 1991 and 1992, both the median and the trimmed mean inflation rates were well above RPIY inflation. By mid-1993, RPIY inflation was above the measures of core inflation, but towards the end of the year the three came more closely into line.

RPIY and RPIX measures both exclude mortgage interest payments to avoid distortions caused by changes in interest rates. This has the effect of totally excluding housing services consumed by owner-occupiers from these price indices. The price of these services may well change if, for example, house prices rise. The housing-adjusted RPI (HARP index) replaces the mortgage interest component of the headline rate with an estimate of the user-cost of housing (see the

Chart 1.8
RPI, TPI and HARP inflation rates



February 1993 *Report*). The Halifax house price index employed in the user-cost measure began to rise in the middle of 1993. In March this year, it was 2.6% higher than a year earlier, whereas mortgage interest payments were less than 1% higher. At the end of 1993, the HARP index showed inflation at 2.4%; this picked up to 3.0% in February 1994 but fell to 2.5% in March (see Chart 1.8). The Tax and Prices index (TPI) adjusts the RPI to compensate for changes in direct taxation. This index tracked the RPI very closely during the second half of 1993 but is likely to rise above it in April, because of increases in income tax and national insurance contributions.

1.5 Summary

Twelve-month RPIX inflation has come down from around 2¾% at the start of this year to below 2½% in March. Other measures of inflation—RPIY, the retail sales deflator, the median and trimmed-mean versions of the RPI—suggest the same story: inflation has continued to fall. But the consumer expenditure deflator and the HARP and TPI indices have registered an increase, as has RPIY when measured over three months instead of 12. The Bank's short-run projection is of a small increase in RPIX inflation as a result of tax effects. The squeeze in retail margins seen at the end of last year is not expected to be repeated.

Monetary policy 2

2.1 Money and credit aggregates

The growth rates of both narrow and broad money have continued to rise since the last *Report*. Annual M0 growth remained well above its 0%–4% monitoring range at 6.2% in April and M4's annual growth rate was near the centre of its 3%–9% monitoring range at 5.9% in March. Lending, on the other hand, remains subdued. Since early February, there has been turbulence in world financial markets, particularly in bond markets. Market interest rates at all maturities have risen markedly.

Since monetary policy accommodates shocks in the demand for money in the short run, movements in the monetary aggregates often provide timely indications of trends in demand and activity. Sometimes the aggregates will reflect also developments in the financial markets or portfolio re-allocations. Both real and financial factors appear to have influenced the monetary aggregates over the first quarter.

M0's provisional 12-month growth rate in April was 6.2%. Moreover, its three and six-month annualised growth rates in April—at 13.1% and 9.1% respectively—suggest that further increases in the annual growth of M0 are possible (but it should be noted that the precise numbers are sensitive to the method of seasonal adjustment used). Monthly changes in M0 continue to be rather erratic—its 12-month growth rate fell from 5.9% in December to 5.1% in January, rose in February to 5.4% and in March to 5.6% and then rose strongly in April to 6.2%. Some of these fluctuations can be attributed to movements in bankers' balances at the Bank of England. The monthly growth rate for notes and coin, a better indicator of underlying narrow money, averaged around 0.5% between November and March. On an annual basis, notes and coin growth increased from 5.7% in December to 6.5% in April.

Although month-to-month variations in narrow money growth tend to obscure its underlying implications for inflation, the Bank's current view is that the recent growth in M0 has limited inflationary consequences. This is because the *level* of M0 was probably below its equilibrium in the recent past, so recent M0 growth may

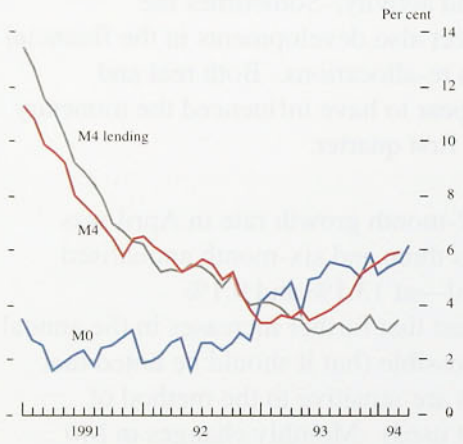
reflect an adjustment of cash balances towards a new equilibrium determined by interest rates and real output.

The fall in nominal interest rates over recent years has reduced the opportunity cost, and hence raised the desired level, of cash balances. It has also lowered the equilibrium growth rate of narrow money velocity. Bank research suggests that the trend growth rate of narrow money velocity is approximately proportional to the average level of interest rates. So if, for example, average interest rates in future were half their average over the past 25 years, M0 velocity growth could also be expected to be around half as large—at say 2% a year—compared with a trend rate of around 4% between 1970 and 1990. The present increase in M0 growth can therefore be explained, at least in part, as an adjustment to a new lower equilibrium velocity growth rate.

In addition, although the economy has grown for almost two years, the *level* of real output remains below trend. As a result, average output growth should be expected to be *above* its trend at some stage; so should narrower measures of spending, such as retail sales. Since the level of M0 is related to the level of retail sales, above-trend retail sales growth should be reflected in above-trend M0 growth—as currently observed.

Clearly, both these effects will unwind as narrow money adjusts to its new higher-trend velocity and the output gap is closed. Thus, in the absence of further shocks, the longer M0 grows at well above the top of its monitoring range, the greater the concern about the implications for future inflation.

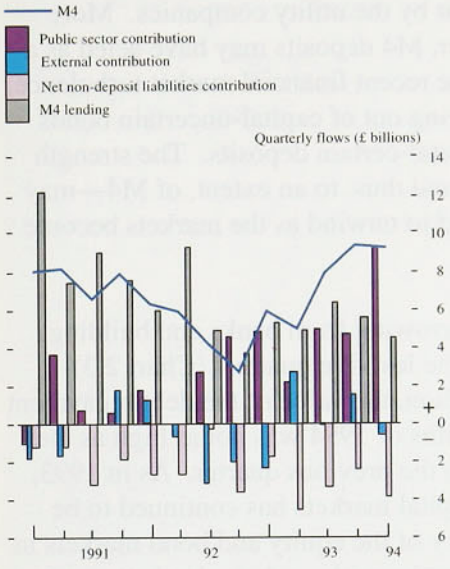
Chart 2.1
12-month growth rates of M0, M4 and M4 lending



After reaching a trough of 3.4% in 1993 Q2, the annual growth rate of M4 has increased for three consecutive quarters and stood at 5.9% in March, the highest since March 1992 (Chart 2.1). On the other hand, lending by banks and building societies remained rather subdued in the first quarter. Its annual growth rate fell from 3.6% in December to 3.4% in March, and its annualised three and six-month growth rates then stood at 2.9% and 3.2% respectively.

One of the main difficulties in interpreting broad money figures is the diversity of motives for holding M4. Broad money is both spent and saved so that, in principle, a given level of M4 is consistent with a large number of consumption and saving combinations. Furthermore, changes in demand for broad money are affected more by differences between alternative rates of

Chart 2.2
Counterparts to M4 growth



return than by the absolute rate of interest. It is therefore helpful in considering M4 growth to look at its counterparts and its sectoral components. Counterpart analysis can help distinguish what is driving the balance-sheet expansion of banks and building societies. Likewise, sectoral analysis helps to distinguish between different types of agent with different saving and spending propensities.

Within the counterparts, the public sector made a significant contribution to M4 growth in the first three months of 1994 (Chart 2.2). The public sector contribution (PSBR net of gilt sales to the M4 private sector) totalled £9.2 billion in the first quarter compared with £4.7 billion in the previous quarter. To a large extent, this reflected net disposals of gilts by the M4 private sector in the face of recent bond market turbulence. Total external and foreign currency flows made a small negative contribution (£0.8 billion) to M4 growth in the first quarter, following a positive contribution over the previous quarter.

M4 growth in the first three months of 1994 was largely contained in its wholesale component, in contrast to the second half of 1993 when the growth in M4 was fairly evenly divided between retail and wholesale deposits. In the first quarter of 1994, the 12-month growth rate of wholesale deposits increased to 6.4% in March from 5.9% in December, whereas the rate for retail deposits was 5.4% in March compared with 5.1% in December.

Personal sector holdings of M4 rose by 1.0% in the first quarter. Within this, there was a large build-up of bank and building society deposits by unincorporated businesses—£1.2 billion compared with £0.3 billion in the previous quarter. The increase in deposits held by individuals, at £1.8 billion, was the smallest rise since 1981 Q4. This was not completely unexpected, given the competition during the quarter from other investment vehicles—for example retail unit trusts—and the prepayment of fuel bills (estimated to have totalled in the region of £1 billion). In addition, individuals may have run down their bank and building society deposits to finance expenditure, which remained robust during the quarter.

Both industrial and commercial companies (ICCs) and other financial institutions (OFIs) are active and sophisticated investors, allocating funds across a portfolio of assets in which M4 deposits are only one component. This makes it difficult to deduce the

Chart 2.3
Estimated total quarterly sterling borrowing by ICCs

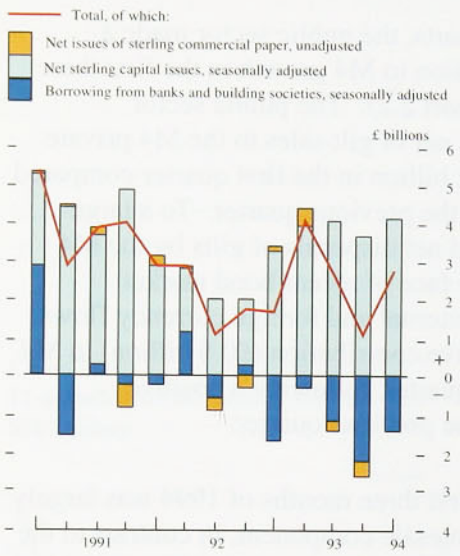
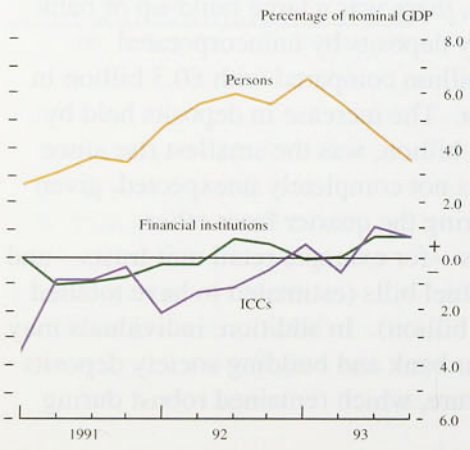


Chart 2.4
Components of private sector financial balance



implications of changes in corporate M4 for real activity, since they may also reflect portfolio substitutions. ICCs increased their M4 deposits for the third successive quarter, by £3.5 billion, a strong rise of 4.4%. Some of this increase is explained by the prepayment of fuel bills being held on deposit by the utility companies. More importantly, however, M4 deposits may have acted as a safe haven during the recent financial market turbulence, with corporates moving out of capital-uncertain bonds and equities into capital-certain deposits. The strength of ICCs' deposits—and thus, to an extent, of M4—may therefore be expected to unwind as the markets become calmer.

ICCs have repaid borrowing from banks and building societies in each of the last five quarters (Chart 2.3). However, at £1.4 billion, the value of the debt repayment in the first three months of 1994 was not as high as the record £2.2 billion in the previous quarter. As in 1993, ICCs' recourse to capital markets has continued to be strong. The buoyancy of the equity and bond markets in 1993 provided companies with a relatively cheap source of external funds. More surprisingly, the sharp decline in UK equity and bond prices appears not to have diminished ICCs' willingness to fund from these sources; net sterling capital issues in the first quarter of 1994 were £0.5 billion higher than in the final quarter of last year. ICCs' total sterling borrowing (including capital issues and commercial paper) increased by £2.7 billion in the first quarter of 1994, compared with £1.1 billion in the previous quarter.

The steady improvement in ICCs' financial balance since 1991 continued through 1993 (Chart 2.4). In the year as a whole, their financial deficit was eliminated for the first time since 1987. This process of balance-sheet repair (increased assets, reduced liabilities) appears to have continued into 1994. But although ICCs' income gearing has fallen considerably as interest rates have been reduced, their capital gearing remains at unprecedented levels. As long as this is the case, income gearing will remain more sensitive to upward interest rate movements than it has been hitherto (though sensitivity falls as debt is repaid). Thus interest rate uncertainty may be serving as a brake on investment-led recovery.

OFIs repaid £1.0 billion of debt to banks and building societies in the quarter, their first net repayment since the first quarter of 1992 and the largest since the series began. This repayment appears consistent with financial market uncertainties during the period, with OFIs having

used the proceeds from bond and equity sales to repay bank borrowing.

Credit from banks and building societies constitutes a much larger proportion of the total liabilities of small firms and households than of companies, because these agents are, typically, less able to draw on the capital markets for funds. In principle, therefore, credit should provide information on the personal sector's actual and potential spending.

Bank and building society lending to the personal sector increased by 1.4% in the first quarter, compared with 1.2% in the previous quarter (which would have been stronger had it not been for several securitisations that had the effect of removing some existing loans to the personal sector from M4 lending). The gently rising trend in lending for house purchase seen during 1993 continued in the first quarter of this year—the 12-month growth rate for house purchase lending increased to 6.3%. Bank and building society new commitments totalled £13.6 billion in the first three months of 1994, compared with a quarterly average of £12.6 billion during 1993, suggesting that the modest housing market recovery will continue.

After adjusting for the effect of securitisations in previous quarters, lending for consumption remained broadly unchanged in the first quarter. Borrowing by unincorporated businesses rose £0.2 billion in the first quarter, following a net repayment of £0.5 billion in 1993. If sustained, this rise in borrowing might indicate that the scaling-back of these businesses' liabilities may be completed. Future income may be used for spending (including investment), rather than to repay existing debt.

The Bank's Divisia index rose by 2.1% in the first quarter of 1994, compared with 1.4% in the previous quarter. Its growth rate (on a four-quarter basis) increased for the fourth consecutive quarter from its trough of 2.1% in the first quarter of 1993, and currently stands at 5.9% (see box on pages 16–17). Growth came from both the personal and corporate sectors, with particularly strong growth in corporate Divisia for the second quarter in succession.

Divisia one year on

In May last year, the Bank published an article[1] which assessed Divisia measures of money, including the theoretical arguments for a Divisia index. The article also described the construction of a Divisia index for the United Kingdom and investigated the indicator properties of such an index.

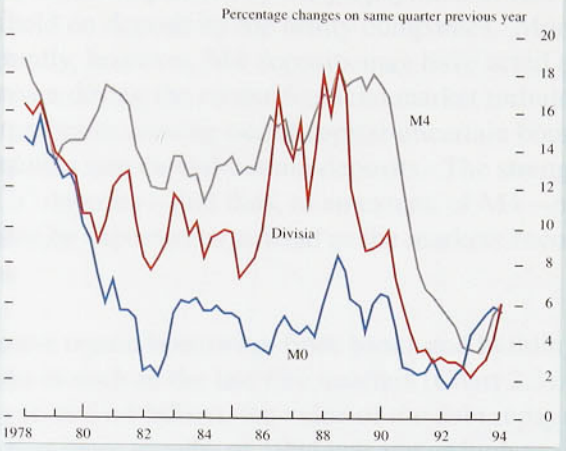
The Divisia measure of money attempts to allow for the varying transactions properties of the different monetary assets within M4 by weighting these according to their transactions characteristics. The weight of each component depends on its size relative to other components of M4 and on its 'user cost', which is the difference between the rate of interest the component asset offers and the return on a benchmark asset that is assumed to offer no transactions services.

If these weights reflect differences in the transactions services provided by the various monetary assets, then the resulting Divisia index will provide a better measure of the total quantity of money held in the economy for transactions services than M4, much of which is thought to be held for savings purposes. In principle, therefore, such an index should be more closely related than conventional simple-sum monetary aggregates to expenditure in the economy. This box looks at developments in Divisia over the past year.

Chart A shows the annual growth rates for M0, M4 and (aggregate) Divisia, which now incorporates an improved method of break adjustment. After reaching a trough of 2.1% in 1993 Q1 (compared with lows in 1992 Q2 and 1993 Q2 for M0 and M4 respectively), the annual growth of Divisia has since increased for four consecutive quarters and currently stands at 5.9%. The quarter-on-quarter growth in 1994 Q1, at 2.1%, was the highest rate since 1989 Q4.

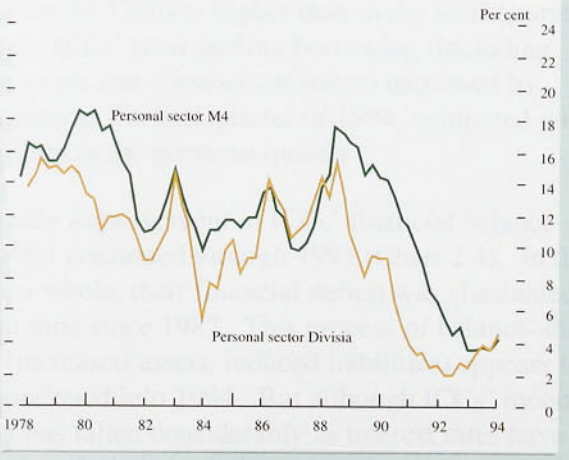
Growth in aggregate Divisia during 1993 was largely explained by the personal sector. The annual growth rate of personal sector Divisia reached its low point in 1992 Q3 (earlier than the aggregate index) and has since exhibited an upward trend—the annual growth rate of personal sector Divisia was

Chart A
Growth rates of Divisia, M0 and M4



4.5% in 1994 Q1 (see Chart B). The recent behaviour of personal sector Divisia appears to be closely associated with the growth in consumer expenditure.

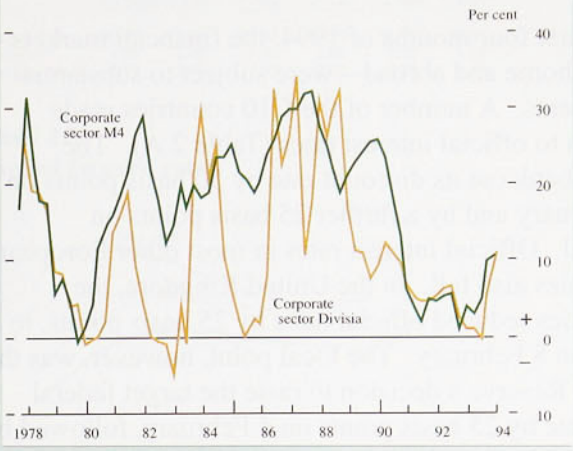
Chart B
Annual growth rates of personal sector Divisia and personal sector M4



The growth in corporate sector Divisia, on the other hand, did not reach its recent low until 1993 Q3, when it recorded a negative annual growth rate. In the final quarter of 1993 and the first quarter of 1994, however, corporate Divisia rebounded sharply—its quarterly growth rates were 4.0% and 4.1% in Q4 and Q1 respectively, producing an annual rate of 10.9% (see Chart C). National accounts data show that companies have been slow to increase investment during the recovery. The

(1) 'Divisia indices for money: an appraisal of theory and practice', Fisher, P, Hudson, S and Pradhan, M, *Bank of England Quarterly Bulletin*, pages 240–55, May 1993.

Chart C
Annual growth rates of corporate sector Divisia and corporate sector M4



sharp growth in corporate Divisia in 1993Q4 is consistent with the upward revision to investment in the latest fourth quarter data.

Comparing annual growth rates for disaggregated Divisia with the sectoral components of M4 shows that the relationship between personal sector Divisia and personal sector M4 is fairly close. The difference between the two series is related to the savings element of M4, which is excluded by Divisia. Personal sector M4 reached its low point in 1993 Q2, three quarters later than personal sector Divisia, and has subsequently increased much less rapidly. This is, perhaps, consistent with bank and building society time deposits held by the personal sector for savings purposes being adversely affected by the fall in the personal sector saving ratio and increased competition from other savings vehicles outside M4—for example retail unit trusts. The growth in personal sector Divisia, on the other hand, probably reflects the growth in notes and coin, and an increase in the demand for transactions deposits—both of which receive a high weight within Divisia—related to the upturn in retail sales.

Corporate sector M4 growth (proxied by a simple average of ICCs' and OFIs' growth rates) is erratic compared with personal sector M4 growth. This can be explained by both ICCs' and OFIs' relatively small and somewhat variable holdings of M4 deposits. Corporate Divisia exhibits an even more volatile growth path, which suggests that confining transactions balances to M4 components may not be plausible for the corporate sector. Assets which are generally regarded as illiquid by the personal sector—equities and government stock, for example—are more likely to be seen as liquid by the corporate sector.

The construction of Divisia allows money demand equations to be estimated based on well-established theories of the transactions demand for money. In the Bank's work last year, the trend component within Divisia was explained by prices, real activity and user costs, with an assumption that all changes in the price level eventually lead to equal percentage changes in Divisia. The dynamic adjustment to this trend was gradual, and was influenced by output growth and inflation. For aggregate and personal sector Divisia, this type of model was found to work well, but the corporate sector results were less convincing.

Recent Bank research suggests that the personal sector Divisia model continues to work well when extended over an extra year of data using the new break-adjustment method. The money demand equation is reasonably stable and passes standard mis-specification tests. But a stable relationship for the corporate sector is still elusive. This, in turn, creates problems when attempting to model aggregate Divisia. The long-run trend relationship is not precisely determined and the dynamic relationship fails some of the standard tests—the error term may be non-normal and the equation has a high standard error—raising concerns about the equation's stability and predictability. The corporate sector's increasing use of the capital markets throughout 1993 and the first quarter of 1994 provides a possible explanation for the deterioration in the corporate Divisia equation.

What are the implications of the recent growth in Divisia for inflation? The relatively stable growth of personal sector Divisia last year appears consistent with developments in the real economy during the period. Corporate sector Divisia is difficult to judge as a guide to potential inflation pressures as corporate portfolio allocation is not well understood. Up to 1993 Q4, the growth in aggregate Divisia was largely explained by the personal sector. The strong growth in aggregate Divisia in the last six months, on the other hand, was also related to corporate sector behaviour, which itself might simply represent an overadjustment to weak activity in previous quarters. So, in the absence of further data, recent Divisia growth should not give rise to inflationary fears.

2.2 Interest rates and exchange rates

Table 2.A
Official interest rates overseas

Per cent per annum

	1992	1993			1994	
	1 Sept.	1 Mar.	2 Aug.	27 Oct.	2 Feb.	4 May
United States:						
Prime (a)	6.00	6.00	6.00	6.00	6.00	6.75
Discount	3.00	3.00	3.00	3.00	3.00	3.00
Japan:						
Discount	3.25	2.50	2.50	1.75	1.75	1.75
Call (a)	4.10	3.20	3.30	2.50	2.25	2.19
Germany:						
Discount	8.75	8.00	6.75	5.75	5.75	5.00
Lombard	9.75	9.00	10.00 (b)	6.75	6.75	6.50
France:						
Intervention	9.60	9.10	6.75	6.45	6.20	5.70
5–10 day repo	10.50	12.00	7.75	7.25	7.00	6.75
Italy:						
Discount	13.25	11.50	9.00	8.00	8.00	7.50
Advances	14.75	12.50	10.00	9.00	9.00	8.50

(a) These are not official rates.
(b) 24 hour repo.

Table 2.B
Developments in financial markets of the G10 countries

Changes between 3 February and 4 May 1994

	Long-dated bond yields (a) (basis point change)	Equities (b) (percentage change)	Effective exchange rate (percentage change)
United Kingdom	187	-12.1	-2.9
United States	135	-6.8	-2.2
Germany	75	4.5	1.2
France	121	-7.8	0.1
Japan (c)	39	-3.0	4.2
Italy	80	17.6	2.1
Canada	187	-6.4	-5.2
Sweden	190	-4.9	-0.5
Switzerland	68	-11.5	-0.8
Belgium	95	1.3	1.5
Netherlands	108	-4.9	0.9

Sources: Financial Times & Bloomberg.
(a) Ten-year benchmark government bonds.
Bonds mature in 2004 except for German 6% 2003 and Japanese 4.5% 2003.
(b) Share indices used are FT-SE 100 (United Kingdom), Dow Jones Industrials (United States), DAX (Germany), CAC 40 (France), Nikkei 225 (Japan), MIB General (Italy), Composite (Canada), AffarsvardnGen (Sweden), SBC General (Switzerland), BEL20 (Belgium), CBS TtlRtnGen (Netherlands).
(c) Changes between 3 February and 2 May 1994.

Market developments

In the first four months of 1994, the financial markets—both at home and abroad—were subject to substantial movements. A number of the G10 countries made changes to official interest rates (Table 2.A). The Bundesbank cut its discount rate by 50 basis points on 17 February and by a further 25 basis points on 14 April. Official interest rates in most other European economies also fell. In the United Kingdom, the authorities reduced official rates by 25 basis points, to 5¼%, on 8 February. The focal point, however, was the Federal Reserve's decision to raise the target federal funds rate by 25 basis points on 4 February, followed by further 25 basis-point increases on 22 March and on 18 April. This tightening in US monetary policy had ramifications for bond, equity and foreign exchange markets around the world.

Table 2.B shows that bond prices in all G10 countries had, at 4 May, fallen significantly since the Federal Reserve's first move in early February. But it also shows that some countries have seen much larger falls than others. For example, the increases in ten-year yields in Germany and Japan between 3 February and 4 May were less than half the increases in Canada, the United Kingdom and Sweden. The recent increase in gilt yields may have a parallel in countries which—like the United Kingdom—have won increased credibility for their anti-inflationary monetary policies, matched by falls in nominal bond yields, in the past few years. The United Kingdom may therefore have suffered from an international rebound, triggered by the Federal Reserve's move to tighten policy, against those countries where monetary credibility had been established most recently. The credibility built up during 1993 has proved fragile. It is possible—perhaps likely—that the bond market had previously overshot in its response to the new monetary framework and has now corrected this.

At the time of the last *Inflation Report*, sterling futures prices showed that the market expected a small reduction in short-run interest rates to 5.2% by June, with little change through the rest of the year. By 4 May, expectations had been revised up—to 5.4% in June and 6.3% in December.

Implied forward rates as at 4 May also suggested that the market believed that interest rates had reached their

Table 2.C
Sterling exchange rates

	1992	1993			1994	
	15 Sept.	5 Feb.	2 Aug.	27 Oct.	2 Feb.	4 May
Sterling ERI	90.89	77.66	81.38	80.58	81.95	79.60
US dollar	1.89	1.45	1.48	1.48	1.50	1.50
Deutsche Mark	2.78	2.40	2.55	2.49	2.59	2.49

Chart 2.5
Implied forward rates

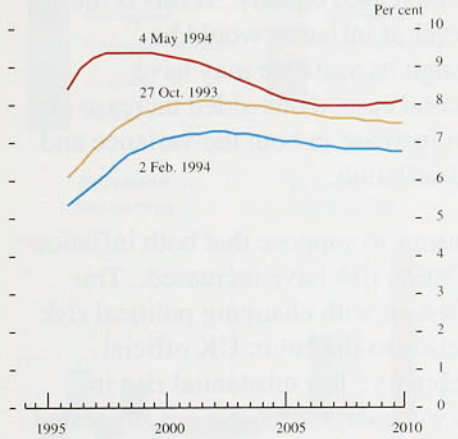


Chart 2.6
Real forward rates

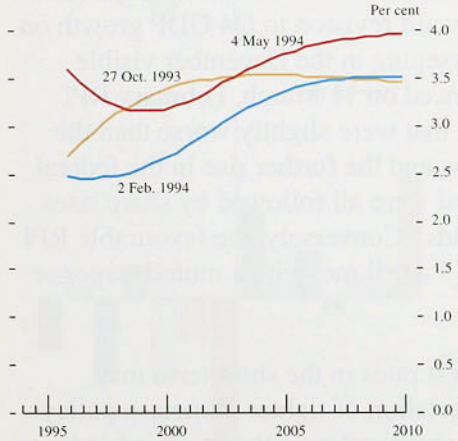
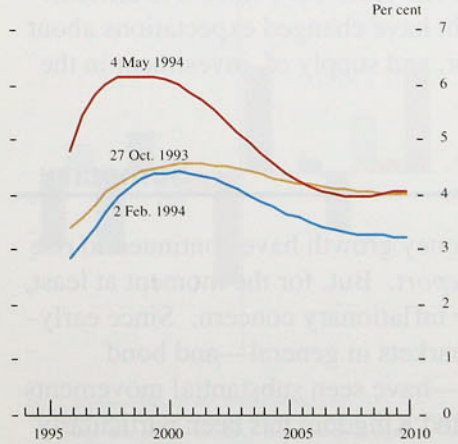


Chart 2.7
Inflation term structure



trough. The rise in expected rates since the last *Inflation Report* has been significant at all maturities, but is most pronounced at the short end—at three years out, the increase is over three percentage points. The effect of higher expected interest rates can also be seen in the equity market—by 4 May, the FT-SE 100 index was down 12.1% from its peak on 2 February. The exchange rate has also weakened some 2.9% in effective terms over the same period (Table 2.C).

Rationale

There are three possible explanations for a rise in nominal yields:

- a rise in inflation expectations;
- a rise in the real rate of interest; and
- a rise in the risk premium (reflecting increased uncertainty over real yields and/or future inflation).

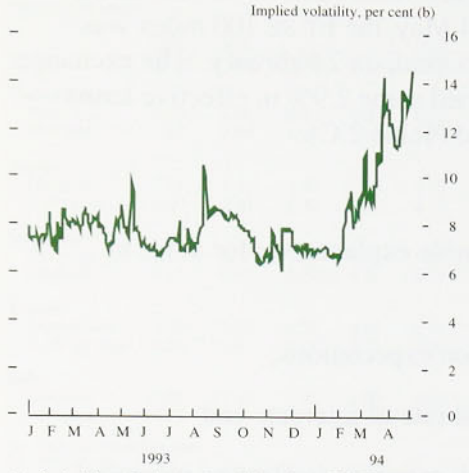
By comparing data on index-linked and conventional bonds, the rise in implied UK forward rates can be split into real and nominal components (see Charts 2.5, 2.6 and 2.7).

Over the period since 2 February, the inflation term structure has shifted up across the full maturity range and most sharply at the shorter end. By 4 May, inflation expectations were up well over two percentage points to over 6% four years out. Expected real interest rates also showed an across-the-board increase over the three months. Again, this was most pronounced at the shorter maturities—expected real rates two years out had risen by more than a full percentage point by 4 May. However, technical factors may complicate the interpretation of data derived from the short end of the yield curve.

Any increase in the inflation risk premium (reflecting greater uncertainty about future inflation) or the real interest rate risk premium (reflecting greater uncertainty about future real interest rates) will be embedded in movements in the inflation term structure and implied forward real interest rate curve respectively. However, one can gain some insight into likely developments in risk premia by looking at the market's expectation of future bond market volatility, as implied by the prices of options on long gilt futures.

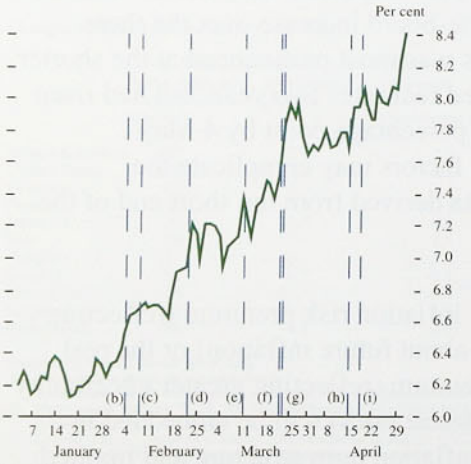
By 4 May, expected bond market volatility had reached a level that was nearly double that seen in the autumn and

Chart 2.8
UK implied bond market volatility[a]



(a) Derived from the closing price of the option on LIFFE long gilt future.
(b) The annualised standard deviation of continuously compounded expected returns.

Chart 2.9
UK ten-year government bond yield, 1994[a]



(a) Close of business observations.
(b), (f) and (i) 25 basis point increase in US federal funds rate.
(c) UK base rate cut.
(d) Release of revised Q4 GDP growth figure.
(e) Release of December overseas trade figures.
(g) Release of February RPI figures.
(h) Release of March RPI figures.

higher than at any time during 1993. This suggests that part of the rise in forward interest rates may indeed have been the result of greater uncertainty, though this cannot be split into its real and nominal components. But the observed increase in volatility could be the result of one of two types of change in the risk premium: a mean-preserving, or a non-mean-preserving, increase in uncertainty. In the former, the risks of either higher or lower inflation have increased equally. If this is the case, the expected level of inflation would be unchanged, even though its variance may have increased. In the second case, a one-sided increase in risk would lead to an increase in both the variance and the level of expected inflation.

There are several reasons to suppose that both inflation expectations and inflation risk have increased. This interpretation is consistent with changing political risk and with market reaction to the cut in UK official interest rates on 8 February: the substantial rise in nominal bond yields some days after this cut suggested revised perceptions of the authorities' commitment to monetary stability (see Chart 2.9). Subsequent news appeared to have an asymmetric effect on asset prices. For example, the upward revision to Q4 GDP growth on 22 February, the worsening in the December visible trade balance announced on 11 March, February RPI figures on 23 March that were slightly worse than the market's expectations and the further rise in the federal funds rate on 18 April were all followed by sharp rises in ten-year bond yields. Conversely, the favourable RPI figures released on 15 April met with a muted response in the bond market.

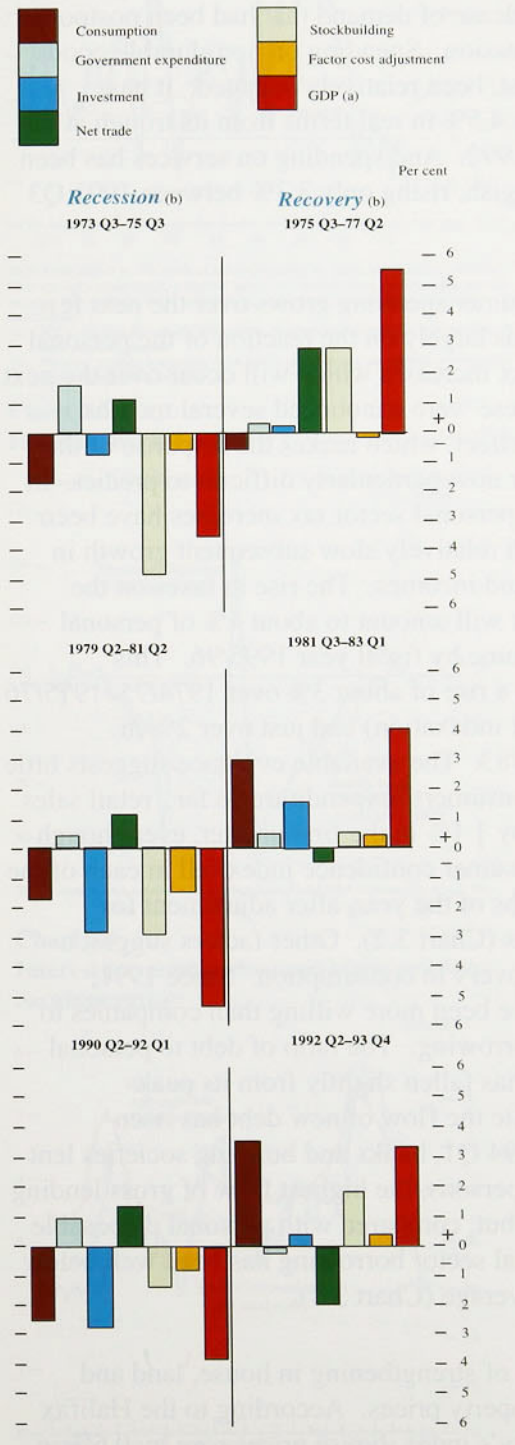
The rise in real interest rates in the short term may reflect a market expectation of tighter monetary policy in response to a perceived inflation threat. It is harder to explain the rise in long-term real rates (of around a half of a percentage point ten years out), since it is difficult to identify what might have changed expectations about the future demand for, and supply of, investment in the world capital market.

2.3 Summary

Broad and narrow money growth have continued to rise since the February *Report*. But, for the moment at least, this is not a cause for inflationary concern. Since early February, financial markets in general—and bond markets in particular—have seen substantial movements worldwide. The United Kingdom has been particularly affected.

Demand and output 3

Chart 3.1
GDP



(a) Components may not sum because of rounding.
(b) Recessions and recoveries are defined in terms of GDP at constant market prices. Change over recession is the percentage change from GDP peak to GDP trough. Change over recovery is the percentage change from GDP trough to seven quarters later.

3.1 Demand

Non-oil GDP rose by 0.6% in the first quarter of 1994 when it was 2% higher than a year earlier, according to the provisional data. The pace of recovery has been comparable with that in 1981–82, but less than in 1975–77. Non-oil GDP rose 3.3% in the first eight quarters of this recovery, a little less than in the first eight quarters of the 1981–82 recovery. But the recent recession was shallower than that in 1979–81 (see Chart 3.1). Total final expenditure in 1993 Q4 was 2.2% higher than a year earlier. On the expenditure side, the main contributions to growth over the year to 1993 Q4 came from consumption (up 2.3%), stockbuilding (up 1.4%) and investment (up 0.3%) (see Table 3.A). The contribution of net trade was negative (-1.2%), as the rate of growth of exports declined and that of imports rose—although the trade figures remain unreliable and are likely to be revised. This pattern of contributions to growth in the latest available quarter is broadly representative of the whole recovery to date (Chart 3.1). Compared with the two previous recoveries, consumption growth has been more important this time—it has contributed more than 100% of total growth, compared with about two thirds in the early 1980s and a negative contribution in the mid-1970s. This reflects the large fall in consumption during the recent recession.

The personal sector

Consumers' real expenditure rose by 1.1% in 1993 Q4, the seventh successive quarterly increase. As a result, consumption was 3.2% higher than a year earlier; real personal disposable income grew by only 0.6% over the same period. The saving ratio has now declined by 2.6 percentage points from its 1992 Q3 peak. Movements in the saving ratio have, however, been less pronounced during this cycle than in the recovery of the early 1980s. At the GDP trough in 1992 Q1, the saving ratio was 11.5%, and it has since declined to 10.2%. Over the same number of quarters in the previous recovery, the saving ratio fell from 14.1% (1981 Q1) to 10.1% (1982 Q4).

Table 3.A
Expenditure components of GDP in 1993, at constant market prices

Percentage changes

	Quarterly changes		Four-quarter changes	
	Q3	Q4	Q3	Q4
Consumers' expenditure	1.2	1.1	2.7	3.2
Public consumption	0.2	-0.4	0.8	-0.3
Investment	1.0	2.5	1.0	1.4
Domestic demand	0.5	1.9	1.5	3.3
Exports	2.5	-2.0	5.0	1.0
Total final demand	0.9	1.1	2.2	2.8
Imports	1.7	2.9	2.9	4.7
GDP at market prices	0.6	0.6	2.1	2.4

Chart 3.2
Consumer confidence and total retail sales volumes

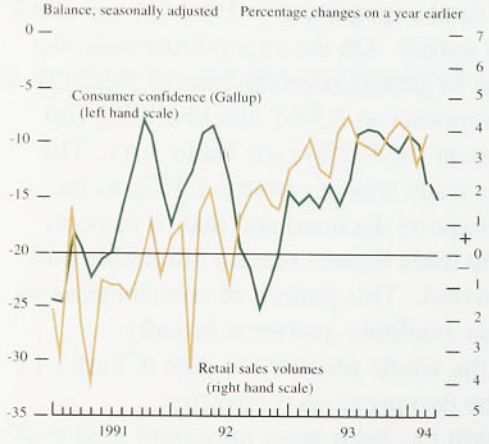
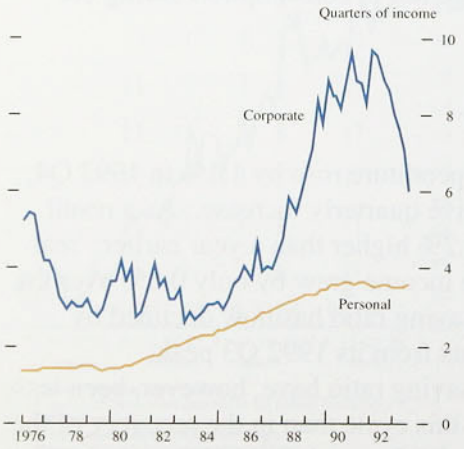


Chart 3.3
Ratio of debt to income: corporate[a] and personal[b] sectors



Debt is measured by the stock of sterling lending by banks and building societies. This excludes trade credit, company bonds and miscellaneous instruments, and for persons also excludes loans for house purchase from miscellaneous financial institutions.

(a) ICCs' stock of sterling borrowing from banks and building societies as a proportion of their post-tax income.

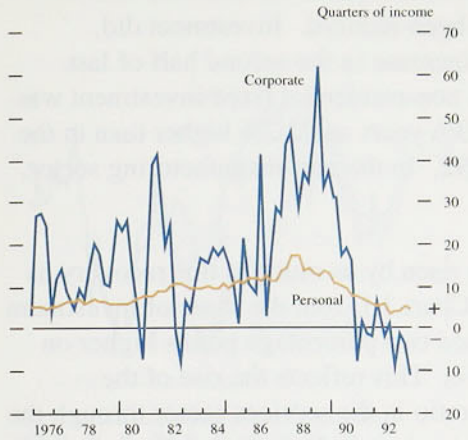
(b) Persons' stock of sterling borrowing from banks and building societies as a proportion of their disposable income.

The recovery in consumer spending has been associated with rapid growth in purchases of durable goods, which have increased by over 18% in real terms since the trough, almost reversing their decline during the recession. The strength of spending on durables might suggest that consumers are willing to make large purchases and are relatively unworried by the increases in taxes. But part of the increase in durables spending represents a release of demand that had been postponed during the recession. Spending on non-durable goods has, by contrast, been relatively subdued; it has increased only 4.5% in real terms from its trough at the beginning of 1992. And spending on services has been still more sluggish, rising only 3.3% between 1991 Q3 and 1993 Q4.

How fast consumer spending grows over the next few months depends largely on the reaction of the personal sector to the tax increases which will occur over the next two years. These were announced several months before taking effect, which makes the response of the personal sector now particularly difficult to predict. In the past, large personal sector tax increases have been associated with relatively slow subsequent growth in consumption and incomes. The rise in taxes on the personal sector will amount to about 4% of personal disposable income by fiscal year 1995/96. This compares with a rise of about 3% over 1974/75–1975/76 (unadjusted for indexation) and just over 2% in 1981/82–1982/83. The available evidence suggests little reduction in consumers' expenditure so far; retail sales volumes rose by 1.1% in the first quarter, even though the Gallup consumer confidence index fell in each of the first four months of the year, after adjustment for seasonal factors (Chart 3.2). Other factors suggest a continuing recovery in consumption. Since 1991, individuals have been more willing than companies to take on new borrowing. The ratio of debt to personal sector income has fallen slightly from its peak (Chart 3.3) while the flow of new debt has risen recently. In 1994 Q1, banks and building societies lent £5.9 billion to persons, the highest flow of gross lending for over a year but, compared with personal disposable income, personal sector borrowing has been well below the historical average (Chart 3.4).

There are signs of strengthening in house, land and commercial property prices. According to the Halifax Building Society's index, house prices rose by 0.6% in the first quarter (Chart 3.5), but only 0.1% in the year to April. The average house price in April was higher than

Chart 3.4
Ratio of the flow of debt to income: corporate[a] and personal[b] sectors



Debt is measured by the stock of sterling lending by banks and building societies. This excludes trade credit, company bonds and miscellaneous instruments, and for persons also excludes loans for house purchase from miscellaneous financial institutions.
(a) ICCs' sterling borrowing from banks and building societies as a proportion of their post-tax income.
(b) Persons' sterling borrowing from banks and building societies as a proportion of their disposable income.

Chart 3.5
Housing market activity

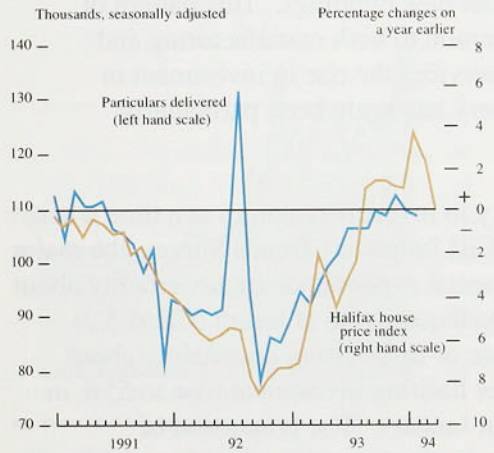
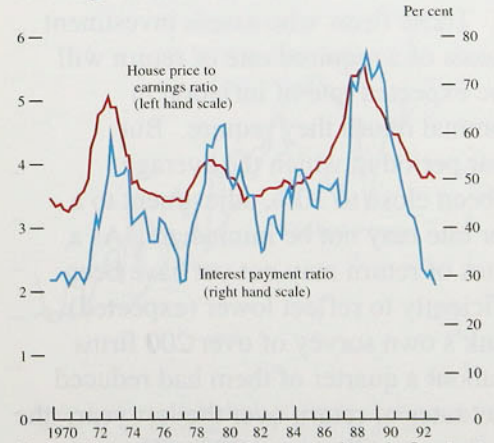


Chart 3.6
Interest payment ratio[a] and house price to earnings ratio[b]



(a) Ratio of average mortgage costs to average earnings, using Department of Environment house price index, Department of Employment whole economy actual average earnings index, and the average mortgage rate.
(b) Ratio of house prices to average earnings, using Halifax actual house prices, Department of Environment house price index and Department of Employment whole economy actual average earnings index.

at any time since August 1992 (but still 10% below its peak). The number of particulars delivered to land registries—108,000 in March—was, however, slightly lower than the previous month. Housing starts by the private sector rose by 7.8% between January and February 1994 to 16,500, 9.3% higher than in February 1993. Since the beginning of 1993, private sector housing starts have fluctuated quite widely around a mean of 15,400 per month, which is 1,900 higher than their average level between 1990 and 1993.

House prices are at relatively low levels by most measures. The house price to earnings ratio is at its lowest for over a decade. The regional variation in house price to earnings ratios has lessened. Chart 3.6 shows that at present it takes about 30% of average earnings to service the average mortgage in Great Britain. This measure was first available in 1967; measured by it, house prices in London and the South East are more affordable than ever, and—for the first time—than houses in the rest of the country. All regions have experienced a marked improvement in 'affordability' since 1988–90. This will be offset to some extent by the restriction of mortgage interest tax relief, first to 20% and then to 15% in April 1995. For the average household with a £46,000 mortgage, the first increase will raise housing expenses by £173 a year. In addition, negative equity remains a significant burden on the sector; the Bank's estimates suggest that in 1994 Q1 there were still 1.3 million households with negative equity totalling £7.6 billion.

There has been a strong recovery in land prices. According to the latest (valuation-based) data from Savills, UK land prices rose by 10.1% between July and December 1993, and by 18.2% in the year to December. Prices have risen particularly rapidly in the South East, where in December they were over 20% higher than six months earlier and nearly 30% above their level in December 1992. These increases in land prices result from the interaction of demand—driven partly by builders' need to re-stock—and a limited supply, particularly in south-eastern regions. Commercial property prices have continued to rise in 1994. According to chartered surveyors Richard Ellis, prices rose on average by 1.1% in April and by 21.4% in the 12 months to April.

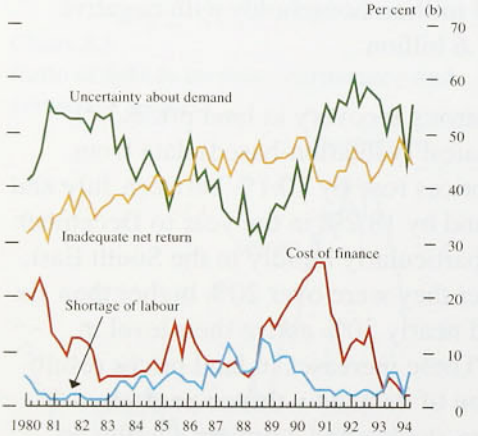
The corporate sector

Stronger investment has played a small part in the growth of GDP so far in this recovery (Chart 3.1 above).

Companies have been slow to increase their investment, as they continue to adjust to the high debt levels they took on in the late 1980s (Charts 3.3 and 3.4)—corporate debt has been reduced. Investment did, however, begin to increase in the second half of last year; by 1993 Q4, non-residential fixed investment was at its strongest for 3½ years and 2.2% higher than in the same quarter of 1992. In the non-manufacturing sector, it rose by 1.8%.

Investment has not risen by as much in this recovery as it did in 1982–84 (Chart 3.1), but the share of investment in GDP has remained two percentage points higher on average at over 20%. This reflects the rise of the investment-output ratio in the services sector through the 1980s. Investment in plant and machinery has increased most, suggesting a greater emphasis on increasing productive capacity. Investment in plant and machinery was 34.8% of fixed investment in 1993, compared with 30.7% in 1982; and in 1993 Q4, it was 3.7% higher than a year earlier, compared with a 1% fall in investment in dwellings and other new buildings. This pattern of investment is common to both manufacturing and services, but for services the rise in investment in plant and machinery has again been particularly marked.

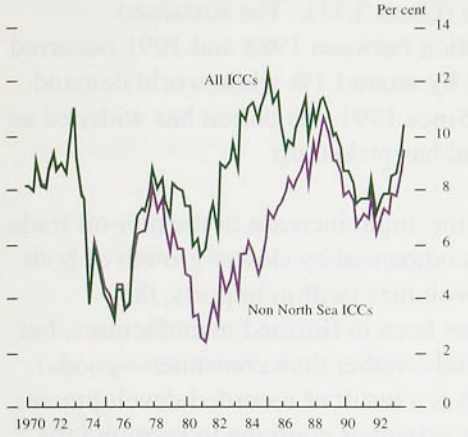
Chart 3.7
Factors limiting capital expenditure(a)



(a) Based on CBI Industrial Trends Survey.
(b) Percentage of firms reporting reasons limiting capital expenditure.

The slow recovery in investment comes at a time when, according to the CBI Industrial Trends Survey, the major factors limiting capital expenditure are uncertainty about demand and an inadequate rate of return (Chart 3.7). Indeed, the balance of firms citing uncertainty about demand as a factor limiting investment rose to 55% in April from 44% in January. The proportion of respondents citing inadequate returns has been higher in this recovery—currently 44%—and may reflect a transitional problem in the move to lower and less variable inflation. Those firms who assess investment decisions on the basis of a required rate of return will take account of the expected rate of inflation in calculating the nominal return they require. But following a 20-year period in which the average inflation rate has been close to 10%, adjustment to a significantly lower rate may not be immediate. As a result, required rates of return may not yet have been revised down sufficiently to reflect lower (expected) inflation. The Bank's own survey of over 200 firms showed that only about a quarter of them had reduced their nominal target rates of return over the last year; the average required rate was still around 20%. The survey also showed that a substantial minority of companies used pay-back periods, rather than a rate of return, as

Chart 3.8
Return on capital[a]

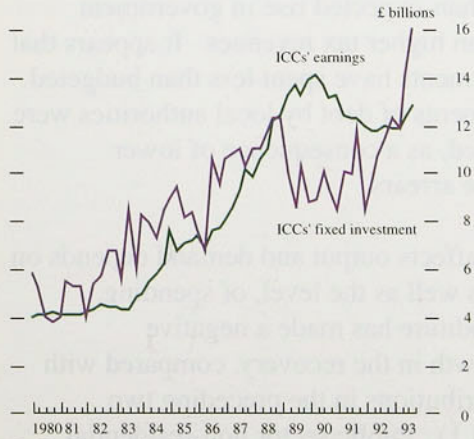


(a) Pre-tax rate of return on capital stock at replacement cost.

Chart 3.9
The valuation ratio[a]

(a) Ratio of ICCs' net financial liabilities to their capital base.

Chart 3.10
Retained earnings[a] **and investment**



(a) Total income minus dividend payments, tax payments and interest payments.

their main investment criterion; lower inflation could reduce investment levels using this criterion, since when inflation falls the period required for the nominal outlay to be returned will lengthen.

Firms' concerns about inadequate returns seem somewhat at odds with the latest data on profitability and the cost of capital. The average pre-tax net rate of return on capital for industrial and commercial companies (ICCs)—excluding those in North Sea oil and gas extraction—was 8.4% in 1993 (Chart 3.8).

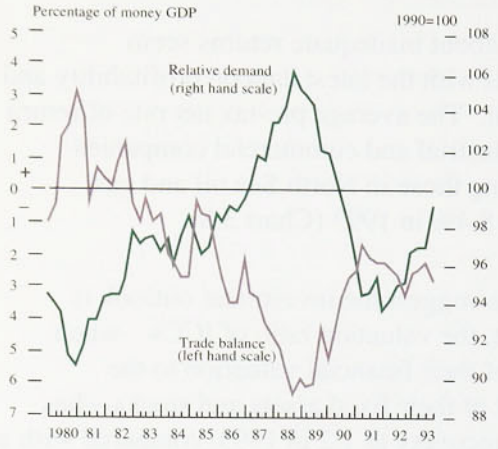
Two other factors suggest the investment outlook is favourable. First, the valuation ratio of ICCs—whch shows the ratio of their financial valuation to the replacement cost of their fixed assets and stocks—has risen during the recovery to 1.2 in 1993, compared with a value of one in 1992 (Chart 3.9). A ratio in excess of one provides an incentive to raise funds to invest in fixed assets. Second, the financial position of the corporate sector is strong—ICCs' retained earnings have grown by over a third in 1993 (Chart 3.10). They have continued to make net repayments to banks: ICCs repaid £11.9 billion in 1993, compared with £2.4 billion in 1992. And they have increasingly turned to the capital markets as a source of external finance—net capital issues totalled £14.9 billion in 1993, compared with £8.3 billion in 1992. These financial transactions have led ICCs to have a financial surplus of £3 billion in 1993, compared with a deficit of £7.2 billion in 1992.

Stocks in the manufacturing, wholesaling and retail sectors rose by £457 million in 1993 Q4. For the economy as a whole, they rose by £462 million in 1993, compared with a fall of £1.8 billion in 1992. Significant revisions to stockbuilding data suggest that the level of destocking in the recent recession was higher than previously estimated. Nevertheless, the recovery has led to an upward trend in stockbuilding and its contribution to GDP growth has been larger than in the last recovery.

Overseas trade

In 1993, the current account deficit widened to £10.7 billion from £10 billion a year earlier, reflecting a reduced surplus on invisibles. The visible trade deficit was £13.4 billion, unchanged on 1992; but excluding oil and erratic items, it increased from £16.1 billion to £17.6 billion. The visible deficit with the rest of the European Union widened, while that with other countries narrowed.

Chart 3.11
Relative domestic demand[a] and the UK trade balance

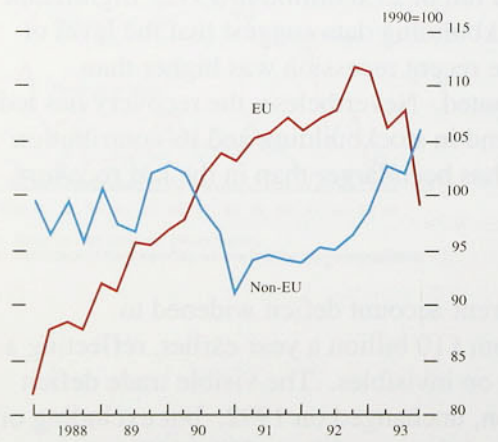


(a) Index of the ratio of domestic demand to world domestic demand.

Table 3.B
UK trade volumes in non-oil goods (excluding erratics)

	Exports			Imports		
	1993	1993 H1	1993 H2	1993	1993 H1	1993 H2
EU	-4.6	-1.0	-8.1	-1.1	-0.2	-2.1
Non-EU	10.4	9.0	11.8	11.3	11.8	10.8
World	1.8	3.3	0.4	4.3	5.1	3.7
Memo:						
Total goods and services	*3.1*	*3.3*	*2.9*	*3.5*	*3.1*	*3.8*

Chart 3.12
UK export volumes[a] relative to domestic demand in the EU/non-EU[b]



Excluding oil and erratics.
(a) Export volumes for EU and non-EU are totals.
(b) Domestic demand for EU includes France, Germany and Italy and for the non-EU includes Japan, the United States and Canada.

Much of the movement in the trade balance can be explained by the different rates of growth in demand here and elsewhere (Chart 3.11). The sustained reduction in the deficit between 1988 and 1991 occurred as UK demand fell by around 1% while world demand rose by over 8%. Since 1991, the deficit has widened as relative UK demand has picked up.

Over the last year, the slight increase in the non-oil trade deficit has been accompanied by slower growth of both export and import volumes (within imports, the strongest growth has been in finished manufactures, but particularly in capital—rather than consumer—goods). This slower growth is a result of recorded developments in EU trade, but uncertainties continue to surround the statistics. The growth of export volumes to the European Union has continued to fall since last January (Table 3.B), as have import volumes (though to a lesser extent). Chart 3.12 shows that recorded UK exports to the European Union have fallen substantially relative to demand in those countries, while for other countries the UK's performance has improved further.

These movements call into question the reliability of the recorded trade statistics. Trade volumes appear to be underestimated. The implication for the trade deficit depends on whether the lower volumes reflect problems with the price-volume split or with the lower recorded values. Import values are more likely than export values to have been understated. In May, the position should become clearer, as the data will incorporate the first results of the CSO's quality audit of the new system.

Fiscal developments

The outturn for the PSBR of £46 billion for 1993/94 reflected a lower-than-expected rise in government spending rather than higher tax revenues. It appears that government departments have spent less than budgeted. In addition, repayments of debt by local authorities were higher than expected, as a consequence of lower Community Charge arrears.

How fiscal policy affects output and demand depends on the composition, as well as the level, of spending. Government expenditure has made a negative contribution to growth in the recovery, compared with small positive contributions in the preceding two recoveries (Chart 3.1). Public sector non-residential investment has made a positive contribution overall, but provided no stimulus over the last year. If capital

spending increases the productive capacity of the economy, then raising the proportion of capital expenditure will also lead to a lower debt-to-GDP ratio over the medium term. In the November Budget, the Government announced that the public sector should borrow no more than required to finance its net capital spending when the economy is back on its long-run growth path. (Net capital spending is projected to be around 1½% of GDP in each year until 1998/99, compared with 2¼% in 1993/94.)

3.2 Supply

Non-oil GDP fell by 3.9% from peak to trough in the last recession and has since risen by 3.3%. This increase means that non-oil GDP is now growing at or slightly above its underlying trend. Total GDP rose by 0.7% in the first quarter of 1994 (to 2.6% above its level in 1993 Q1), as it did in the previous quarter (according to the output measure). The growth of oil and gas output remains particularly strong, and the construction sector weak (reflecting the greater cyclicality of this industry); apart from these, the recovery of output has been broadly based across industries (Table 3.C). Industrial production fell by 8.4% from peak to trough and has since risen by 6.9%.

Table 3.C
Output components of GDP at 1990 factor cost

Percentage changes

	Weights (a)	Quarterly changes		Four-quarter changes	
		Q3	Q4	Q3	Q4
Construction	72	-0.4	0.9	-1.9	0.1
Production	281	1.1	1.1	2.6	3.1
of which:					
Manufacturing (b)	*237*	*-0.1*	*0.2*	*1.4*	*1.6*
Mining and quarrying including oil and gas extraction	*22*	*8.6*	*7.6*	*12.2*	*15.4*
Services	629	0.7	0.5	2.4	2.5
of which:					
Financial and business	*186*	*0.5*	*-0.1*	*2.9*	*2.6*
Distribution, hotels, catering	*142*	*1.3*	*0.8*	*3.7*	*4.1*
Transport, storage, communication	*84*	*1.9*	*1.2*	*3.6*	*4.3*
GDP	1,000	0.8	0.7	2.1	2.4
Non-oil	983	0.6	0.5	1.8	2.1

(a) 1990 weights in GDP, out of 1,000.
(b) Revised definition.

Statistical measures of GDP growth may be biased downwards. Recent work at the CSO[1] found that initial estimates of GDP growth tend, on average, to be lower than the final estimates. Upward revisions to current-price GDP on the expenditure measure (between the first and the twelfth official quarterly estimates) averaged 0.9% between 1980 and 1989. The size of the revision was larger in recovery periods (1.1%) than in recessions (0.6%). The revisions were highest during the expansion of the late 1980s, and significant improvements appear to have been made in data collection since 1989; but current data might still understate the rate of growth. In addition, the recent statistical problems with the trade data mean that the use of export prices to construct the estimate of manufacturing output is likely to lead to its understatement by around 1%, biasing downwards any growth rates measured across January 1993.

Any estimate of the gap between actual and potential output is imprecise because of the difficulties of measuring potential. One simple approach is to define potential output as the output which could be produced if

(1) 'Testing for bias in intitial estimates of the components of GDP', Rizki, U M, *Economic Trends*, February 1994, pages 104–16.

all the available labour and capital inputs were efficiently utilised. This shows how much additional output could be produced if unemployment were at its natural long-run rate and capital were operated at the normal utilisation rate. Some assumption must also be made about the rate of technical progress.

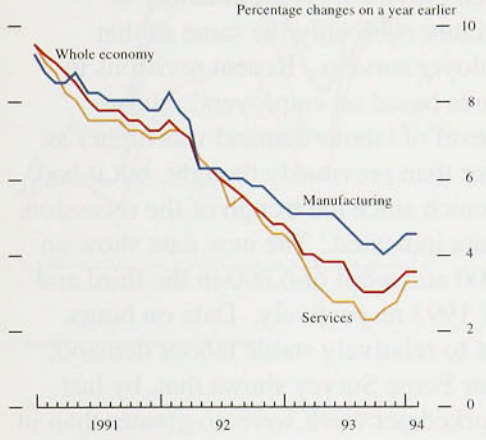
The average annual growth of GDP between 1957 and 1990—years at similar positions in the business cycle—was 2½%. Over the same period, the recorded gross capital stock grew by just over 3% a year and the labour force by ½% a year. Taking these figures at face value, and using a simple 'production function' approach, gives an annual rate of technical progress of about 1¼%. From 1990 to 1993, the labour force contracted by a little over ¾% a year and capital accumulation slowed to 2½% a year. Assuming unchanged technical progress, this suggests a growth rate of potential output of 1½% and consequently an output gap of around 6% now (if it was zero in mid-1990). But this ignores the tendency for capital-scrapping to be higher in recessions and for the skills of the unemployed to deteriorate. Hence the output gap is probably less than 6%. The OECD and IMF estimated the UK output gap to be 5%–5½% in 1993.

3.3 Summary

The growth rate of output has probably risen slightly above trend. Output growth is higher for both goods and services. Over the short term, consumption growth is likely to weaken, as consumers respond to the latest tax increases; but investment may strengthen as the persistence of recovery becomes clearer to firms. The output gap is narrowing, but limits in capacity are still some way from constraining producers. The net trade position remains clouded by statistical problems.

The labour market 4

Chart 4.1
'Underlying' earnings growth(a)



(a) Underlying earnings growth is calculated by the Department of Employment and makes allowances for irregular events that affect earnings, including strikes, overtime and bonus payments.

Table 4.A
Labour market indicators

United Kingdom, *seasonally adjusted*

	Units		Latest period	Half year ago	Year ago
Unemployment					
Change (mom) (a)	000's	Mar. 94	-30.3	-19.5	-25.3
Rate	%		9.7	10.3	10.4
Change (qoq) (b)	000's	1993 Q3	-45	-71	21
Employment					
Change (qoq) (c)	000's	1993 Q4	-6	-1	-63
Change (qoq) (d)	000's	1993 Q3	74	92	-227
Vacancies	000's	Mar. 94	139.8	127.3	123.1
Hours of overtime	mn	Feb. 94	8.94	9.15	9.09
Hours lost through short-time working	mn	Feb. 94	0.26	0.23	0.59
Wages (growth)					
Underlying, whole economy (GB)	%	Feb. 94	3½	3¼	4½
Manufacturing	%	Feb. 94	4½	4½	5
Services	%	Feb. 94	3¼	2¾	4¼
Settlements					
IRS (e)	%	Mar. 94	2.5	2.0	3.0
IDS (f)	%	Jan. 94	2–2.9	0.1–1.9	3–3.9
CBI-manufacturing (g)	%	Jan. 94	2.8	2.4	2.6
CBI-private services (g)	%	1994 Q1	2.1	2.5	2.8

(a) Total numbers claiming unemployment-related benefit.
(b) Total numbers out of work and seeking work—*Labour Force Survey*.
(c) Workforce in employment, seasonally adjusted, *Employment Department* survey of employers (count of jobs).
(d) Numbers in employment (aged 16 or over)—*Labour Force Survey*.
(e) IRS, whole economy, 3-month weighted median.
(f) Modal class. NB latest figure based on very small sample compared with other observations.
(g) CBI, average in the month/quarter.

4.1 Earnings

Nominal earnings are rising more rapidly than last year. The 12-month increase in underlying average earnings rose from 3% in November to 3¼% in December and 3½% in January and February (see Chart 4.1 and Table 4.A), with similar patterns in manufacturing and services. The underlying figures only gradually reflect any pick-up in actual earnings because they are calculated using a three-month moving average. The increase in actual earnings rose to 3.1% in December, 3.6% in January and 4.4% in February. But the current divergence between actual and underlying earnings is mainly the result of large bonus payments in banking, finance and insurance, which are excluded from the underlying series.

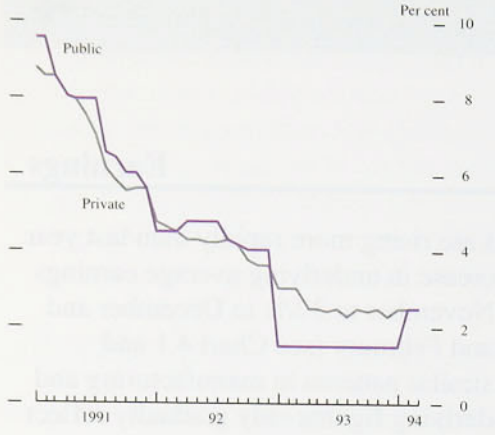
Wage settlements have also risen since the February *Report* (Chart 4.2 and Table 4.A). The median rate in the whole economy increased from 2.0% in December to 2.5% in each of the first three months of the year, according to Industrial Relations Services (IRS). In those months, there was a relatively low proportion of public sector settlements, which depressed the measure last year. IRS report that the median value of the few public sector settlements since February has been 2.5%, the same as in the private sector. The CBI reported that settlements in manufacturing rose from 2.0% in December to 2.8% in January. In the services sector, however, settlements fell from 2.7% in 1993 Q4 to 2.1% in 1994 Q1. As noted in previous *Reports*, increases in settlements do not necessarily precede earnings increases. Earnings may move first because of increases in overtime payments, for example, or in performance-related pay.

Why have nominal earnings accelerated, and will this continue? The most important factors are the demand for and supply of labour, productivity growth and the price expectations of those who set wages.

4.2 Demand for labour

One possible explanation for an acceleration in nominal earnings is that, for a given labour supply, labour demand has increased. There is some evidence this is

Chart 4.2
Private and public sector settlements



Source: Industrial Relations Services (unweighted mean).

Table 4.B
Changes in employment

Thousands

	Winter 1992	Spring 1993	Summer 1993	Autumn 1993
Employees				
Full-time	-78	-29	-59	-48
Part-time	32	61	9	88
Self-employed				
Full-time	-35	20	20	31
Part-time	-15	30	14	2
Men				
Full-time	-82	-26	-40	-9
Part-time	12	19	14	26
Women				
Full-time	5	-4	-18	-39
Part-time	21	41	-4	62
Total				
Full-time	-113	-9	-38	-17
Part-time	18	90	23	90
Total	**-143**	**92**	**-24**	**74**
Changes in workforce in employment	-63	-86	-1	111
Total hours worked per week (millions)	782	819	789	828

NB 1 Total in bold may differ because figures for full/part-time split do not include people on government training schemes or unpaid family workers.
2 Respondents are classed as 'part-time' or 'full-time' according to *self-assessment*.
3 Total hours worked are *not seasonally adjusted*; calculated by combining non-seasonally adjusted average hours worked with non-seasonally adjusted head counts for employees/self-employed separately.
4 The administrative employment figures are dated March, April, June and December. The LFS quarters are Dec., Jan., Feb. for Winter, etc.

Source: Employment Department and Labour Force Survey.

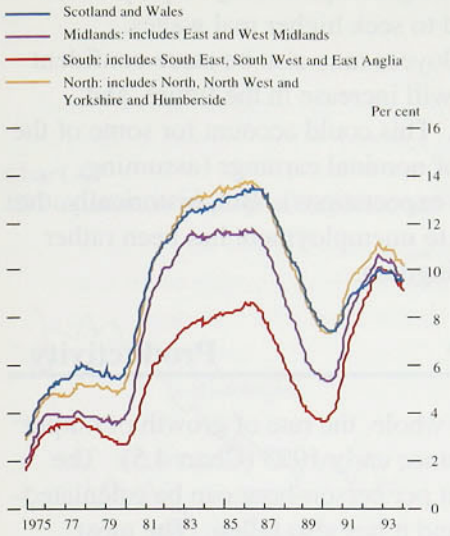
happening, but the increase is small. Seasonally-adjusted manufacturing employment increased by 8,000 (or about 0.2%) over the first two months of this year, but is still lower than a year ago. Data on employment in the economy as a whole are less timely. According to the Labour Force Survey, employment increased by 74,000 between the summer and autumn of 1993 (Table 4.B). Most of the increase was in part-time employment (predominantly of women). This picture is broadly the same as that suggested in employer surveys. Recent revisions to employment figures based on employers' returns suggest that the level of labour demand was higher at the end of last year than previously thought, but it had not increased as much since the trough of the recession as the previous data indicated. The new data show an increase of 111,000 and a fall of 6,000 in the third and fourth quarters of 1993 respectively. Data on hours worked also point to relatively stable labour demand. Indeed, the Labour Force Survey shows that, by last autumn, hours worked per week were no greater than in autumn 1992. The relationship between total hours worked and employment has changed; the importance of part-time work has increased, so that the total number of people employed was able to increase during 1993 without the demand for person-hours increasing significantly. This is consistent with the evidence that output has been growing at much the same rate as trend labour productivity growth.

Turning to indirect indicators of labour demand, vacancies in the economy as a whole rose to 139,800 in March—up 13.5% over the year—and hours lost through short-time working in manufacturing more than halved in the year to February (see Table 4.A). But most of these changes had taken place by the autumn of last year. Increases in labour demand alone are probably insufficient to explain the acceleration of nominal earnings.

4.3 Unemployment and the supply of labour

The most commonly used measure of the excess supply of labour is the number of people claiming unemployment benefit. The fall in claimant unemployment resumed in February, after a rise in January (an anomaly reflecting the timing of the counts in December and January); unemployment fell again in March to 9.7% of the workforce (2.72 million), compared with 10.4% a year earlier (2.93 million). Unemployment is falling across all regions

Chart 4.3
Regional unemployment rates in Great Britain[a]



(a) Weighted by workforce in each region.

Chart 4.4
Unemployment rate

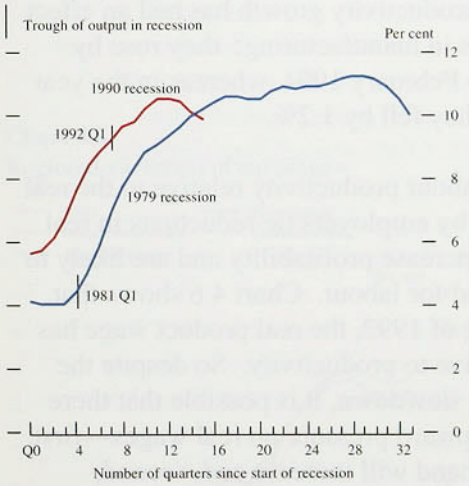


Table 4.C
Alternative measures of the change in unemployment

Changes in thousands, winter 1992–autumn 1993

	ILO unemployment			Claimant unemployment		
	Claimants	Other	Total	Total	Inactive	Employed
Men	-162	19	-100	-86	-9	—
Women	-12	27	-1	-20	-11	-8
Total	-174	46	-100	-106	-19	-8

NB: column totals are seasonally adjusted; others are not seasonally adjusted. All figures are for Great Britain.

(see Chart 4.3). Compared with the same stage of the 1982–84 recovery, it is now lower in all regions except the East Midlands and the South. Unemployment began to fall earlier in the recovery than in the early 1980s (see Chart 4.4). This was partly because firms shed workers sooner in the 1990s recession and took on new workers sooner when the recovery came.

Table 4.C shows that since the winter of 1992–93 there have been similar reductions in numbers seeking work (the LFS definition) and claimant unemployment (the more familiar count). At the same time, more people who do not claim unemployment benefit are seeking work and fewer people of working age are completely outside the labour force. Table 4.D shows that unemployment fell by 45,000 between summer and autumn last year. The percentage drop was highest in two groups: those aged 16–24 and men.

Looking at the overall imbalance between the demand for and supply of labour as a whole is insufficient to judge the downward pressure on earnings exerted by the unemployed. The regional match, for instance, between surplus workers (the unemployed) and surplus jobs (vacancies) is also relevant. When it is costly to move between regions to find work, having workers in one place and jobs in another generates more upward pressure on aggregate wages than otherwise, as firms in the regions with shortages bid up wages to fill vacancies, and many workers in regions with high unemployment enter long-term unemployment and lose their marketability. Regional mismatch is much less now than in the previous recovery. Thus any given level of aggregate unemployment should be associated with greater downward pressure on earnings than previously.

Taken together, the evidence on unemployment suggests that excess labour supply has fallen. This does not contradict the patchy data on labour demand. First, the number of unemployed can fall with no increase in labour demand if part-time work becomes more prevalent; it has. Second, the unemployment data are more timely than those on labour demand, and it is quite possible that employment has increased this year; it has in manufacturing. Third, in the medium term, falling labour force participation rates amongst 16–24 year-olds (as a result of increased participation in full-time education and training), and 55–64 year-olds (as a result of early retirement), will reduce the overall supply of labour.

Table 4.D
Changes in unemployment

Thousands

	Winter 1992	Spring 1993	Summer 1993	Autumn 1993
Men	65	-61	-6	-42
Women	27	-31	32	-3
16–19	-29	-12	108	-76
20–24	18	-13	34	-43
25–34	35	-39	-13	-1
35–49	60	-43	—	-5
A	37	-13	-30	15
B	-3	5	-10	7
Total	**92**	**-71**	**16**	**-45**
Changes in GB claimant unemployment	*92*	*-20*	*-25*	*-65*

NB 1 Age breakdowns are not seasonally adjusted.
2 A = 50–64 for men, 50–59 for women.
B = 65 + for men, 60+ for women.

Chart 4.5
Whole economy productivity and unit wage costs

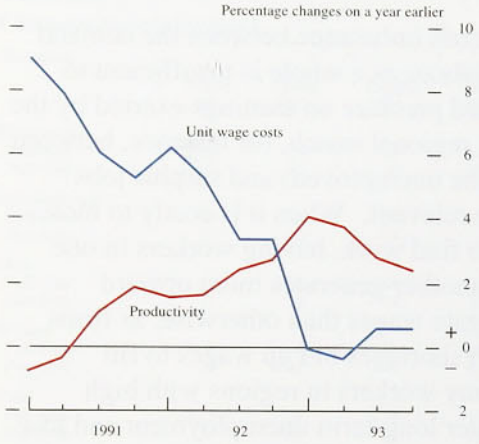
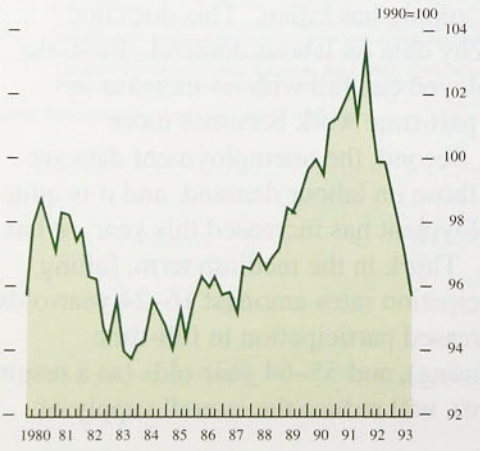


Chart 4.6
Whole economy real product wages in relation to productivity(a)



(a) Whole economy average earnings divided by the price deflator for GDP and divided by output per person employed.

It is likely that the drop in unemployment has changed the climate of wage bargaining, leading employees to feel more secure and to seek higher real wages. Employers and employees may also be more confident that labour demand will increase in the future, and bargain accordingly. This could account for some of the recent acceleration of nominal earnings (assuming unchanged inflation expectations). But, historically, the sensitivity of wages to unemployment has been rather low in the United Kingdom.

4.4 Productivity

In the economy as a whole, the rate of growth of output per head has fallen since early 1993 (Chart 4.5). The growth rate of output per person-hour can be calculated for manufacturing, and it has also fallen. The most likely explanation for the slower rate of productivity growth is that firms now synchronise their output and employment levels more closely, which means that the rates of growth in productivity associated with the recovery will not be as rapid this time.

The slowdown in productivity growth has had an effect on unit labour costs in manufacturing; they rose by 2.2% in the year to February 1994, whereas in the year to February 1993 they fell by 1.2%.

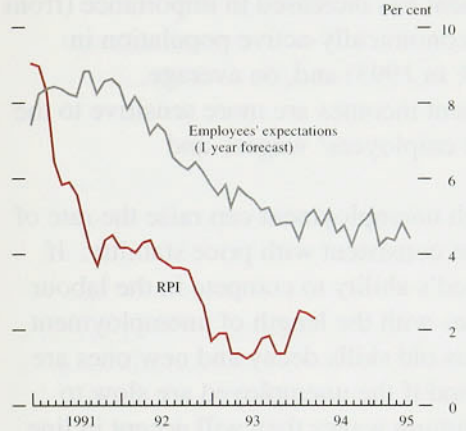
Improvements in labour productivity relative to the real product wage paid by employers (ie reductions in real unit labour costs) increase profitability and are likely to increase the demand for labour. Chart 4.6 shows that, since the beginning of 1992, the real product wage has fallen sharply relative to productivity. So despite the recent productivity slowdown, it is possible that there will be increased upward pressure on real wages—first, because labour demand will increase and, second, because the high levels of profitability allowed by the current level of real wages may strengthen employees' bargaining power.

4.5 Expectations

Price expectations are important in translating planned real wages into nominal terms. Monetary policy will not validate inflation outside the target range. If, nevertheless, higher inflation is assumed in pay negotiations, real wage levels will turn out to be too high, with the result that labour demand will be lower and unemployment higher than it need be. Gallup's survey of inflation expectations suggests that

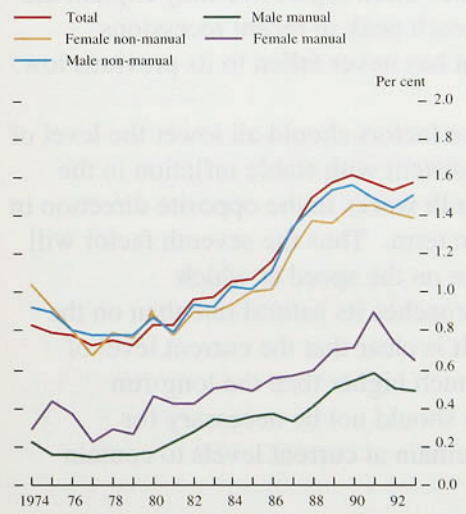
employees' expectations have been very slow to adjust to changes in inflation (see Chart 4.7), and remain above actual inflation. Other indicators of inflation expectations also suggest that there is scope for downward revision in expectations in response to past forecast errors. Such a revision would tend to reduce nominal earnings increases, so working in the opposite direction to the productivity effect discussed above. So far, however, employees' expectations of inflation have changed little in recent months.

Chart 4.7
RPI inflation vs employees' expectations



Based on Gallup Survey of Employees.

Chart 4.8
Regional variation of earnings[a]



Source: New Earnings Survey.

(a) Coefficients of variation.

4.6 The equilibrium level of unemployment

What levels of unemployment and real wages are consistent with stable inflation and monetary growth in the long run? Several factors are influential:

(i) the power of employees is important. Measures of employee power have declined in recent years; union membership has fallen from 13.2 million in 1979 to 9.6 million in 1991, with the proportion of employees who are members declining from 57% to 43%;

(ii) government measures may have improved the efficiency of unemployed people in looking for jobs and the skills of the long-term unemployed; long-term unemployment peaked at a lower level in the recent recession than in the mid-1980s (partly because more people passed through government schemes);

(iii) research suggests that employees can win real wages above market-clearing levels only where employers have some monopoly power in their product markets. World trade growth and the increasing integration of the European economies have opened up more sectors to competition. Implementation of the agreement on the Uruguay GATT Round will increase competition further;

(iv) wage bargaining became more decentralised in the 1980s: the Workforce Industrial Relations Surveys show that, between 1980 and 1990, there was a fall in the proportion of collective bargains covering multiple employers and an increase in the proportion of non-collective pay settlements set at establishment level. At the regional level, these changes have been associated with an increase in the variation of earnings (Chart 4.8). In principle, this should assist wage flexibility in response to

local economic conditions and lower the rate of unemployment;

(v) the structure of benefits determines what proportion of their previous employment income the unemployed receive. That proportion has fallen over recent years;

(vi) self-employment has increased in importance (from 6.9% of the economically-active population in 1979 to 11.4% in 1993) and, on average, self-employment incomes are more sensitive to the cycle than are employees' wages; and

(vii) periods of high unemployment can raise the rate of unemployment consistent with price stability. If the unemployed's ability to compete in the labour market declines with the length of unemployment (for example as old skills decay and new ones are not learned), and if the unemployed are slow to lower the minimum wages they will accept in line with their reduced productivity, the economy will need higher levels of unemployment to contain nominal wage demands. Furthermore, if the capital stock is slow to rise when demand recovers and if the existing capital stock incorporates fairly fixed capital-labour ratios, price pressures may emerge in the goods market before unemployment falls to its equilibrium rate. Such arguments may explain the fact that after each peak in recent recessions unemployment has never fallen to its previous low.

The first six of these factors should all lower the level of unemployment consistent with stable inflation in the long run. The seventh works in the opposite direction in the short to medium term. Thus the seventh factor will have more influence on the speed at which unemployment approaches its natural rate than on the natural rate itself. It is clear that the current level of unemployment is much higher than the long-run equilibrium rate. It should not be necessary for unemployment to remain at current levels to contain inflation.

4.7 Outlook

The upturn in nominal earnings growth does not mean that the economy has already reached its long-run equilibrium unemployment rate. Almost all the recent structural changes in the labour market mean that the long-run equilibrium unemployment rate should now be

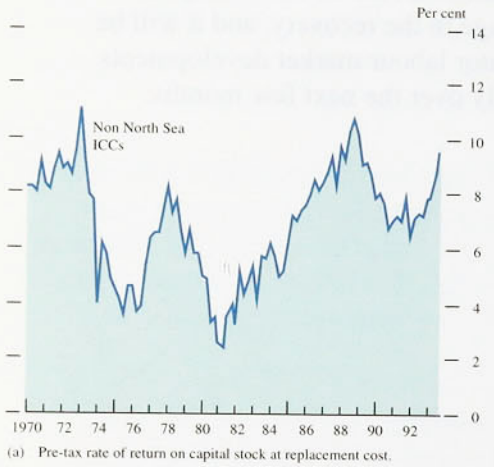
lower than in the 1980s, though the loss of skills associated with unemployment will hold it up in the short run. Past inflation projections had built in some increase in nominal earnings growth, and some recovery in real earnings was to be expected following a fall (relative to productivity) during the recession, although the increases are a little larger at this stage than expected. The increases will nevertheless become a source of concern if they lead to an upward revision of inflation expectations on the part of employers and employees, or if they reflect upward shocks to real wages unrelated to increases in labour demand. It is puzzling that earnings should be increasing as fast as they are at this stage in the recovery, and it will be necessary to monitor labour market developments extremely carefully over the next few months.

5 Price dynamics

5.1 Profitability

Profitability has continued to increase. The rise in profitability reflects higher prices relative to average costs, and increasing capacity usage. Cost increases remain subdued.

Chart 5.1
Return on capital(a)



(a) Pre-tax rate of return on capital stock at replacement cost.

The trough in profitability reached in 1992 was at a much higher level than in either of the two previous recessions. Since then, profits have increased at a rate broadly similar to those seen in previous recoveries. As a result, the pre-tax rate of profitability is twice as high as at a similar point in the 1982–84 recovery. In 1993 Q4, the rate of return on the capital stock (valued at replacement cost) was 9.5%, only 1.2 percentage points lower than its peak in 1988 Q4 (Chart 5.1). Indeed, the present rate has been exceeded in only four quarters since 1973. Several factors help explain this profitability:

- wider profit margins in the tradable goods sector, following sterling's exit from the ERM;
- higher capacity utilisation, as both domestic and export producers have increased their volumes; and
- a slow rate of growth in average unit costs, in part because of slower input price growth, but helped also by steps firms have taken to contain labour costs.

Chart 5.2
Manufacturers' output prices and input costs (excluding food, drink and tobacco)

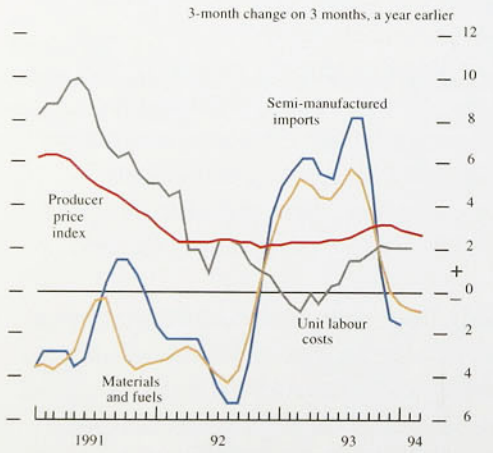


Chart 5.2 shows changes in manufacturers' output prices and the costs of the manufacturing sector. Some of the latter are highly variable. One way of gauging their importance for inflation is by testing whether shocks to the cost component have a continuing impact. Shocks to material and fuel costs and to unit labour costs usually do persist. Of these, unit labour costs are beginning to show signs of picking up. Material and fuel prices have rebounded somewhat over recent months, but on a 12-month comparison continue to fall.

Table 5.A shows how movements in input prices have fed through to manufacturing output prices. Weighted average costs increased by only 0.4% in the year to February. Net domestic margins, however, are estimated

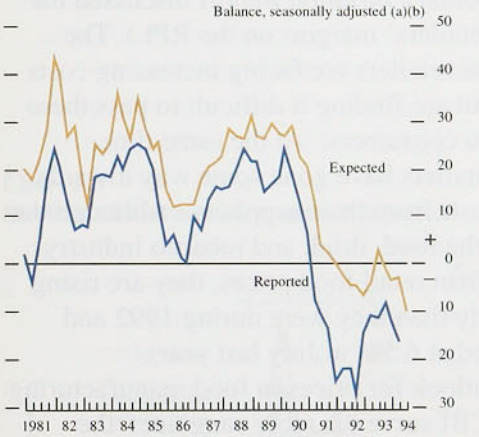
Table 5.A
Manufacturing input prices, unit profits and output prices

Percentage changes on a year earlier

		Unit labour costs	Manufactured imports (a)	Materials and fuels (b)	Bought-in services (c)	Weighted average costs (d)	Margins (b)(e)	Domestic output prices (b)
1990		7.1	0.4	-1.7	8.2	4.7	10.3	5.8
1991		7.2	-0.1	-2.7	1.1	3.4	10.3	4.8
1992		1.9	-0.7	-2.0	6.0	1.7	4.2	2.2
1993		0.8	5.9	3.6	3.8	2.8	1.8	2.6
1993	Q1	-0.9	7.8	5.1	4.1	2.6	0.9	2.3
	Q2	0.2	7.0	4.3	2.9	2.7	1.3	2.4
	Q3	1.4	9.1	5.2	3.2	3.9	-1.4	2.7
	Q4	2.3	0.2	-0.1	5.1	2.0	6.5	3.0
	Oct.	2.6	1.5	1.2	4.9	2.6	5.1	3.2
	Nov.	2.6	-1.1	-0.6	5.3	1.8	7.5	3.1
	Dec.	1.6	0.3	-0.8	5.1	1.7	7.0	2.9
1994	Jan.	2.3	-0.4	-0.5	4.5	1.8	5.8	2.7
	Feb.	2.2	-4.7	-1.2	3.8	0.4	10.1	2.5

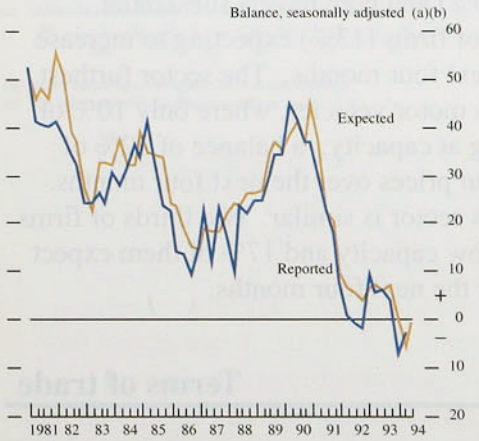
(a) Latest month's trade prices are estimated using data for non-EU trade.
(b) All manufacturing industry excluding food, drink and tobacco.
(c) Proxied by the services price deflator before 1993, and the price of non North Sea output from 1993 onwards. Data for the latest quarter are estimates.
(d) Calculated as a weighted average of the factor prices listed above, using variable weights.
(e) The annual change in $P_t/P_0 - \Sigma\omega_{i0}\, C_{it}/C_{i0})$, where P_t is the index of output prices in period t, P_0 is the index of output prices in 1989. C_{it} is the price index for factor i in period t and C_{i0} is the price index of factor i in 1989. ω_{i0} is the weight for factor i in the total value of output in 1989 (from the 1989 Input-Output Tables).

Chart 5.3
Manufacturers' reported and expected price developments (CBI Industrial Trends Survey)



(a) Balance of firms expecting/reporting rises in average prices of domestic orders minus those expecting/reporting falls.
(b) CBI questions refer to next four months and past four months.

Chart 5.4
Manufacturers' reported and expected cost developments (CBI Industrial Trends Survey)



(a) Balance of firms expecting/reporting rises in average costs per unit of output minus those expecting/reporting falls.
(b) CBI questions refer to next four months and past four months.

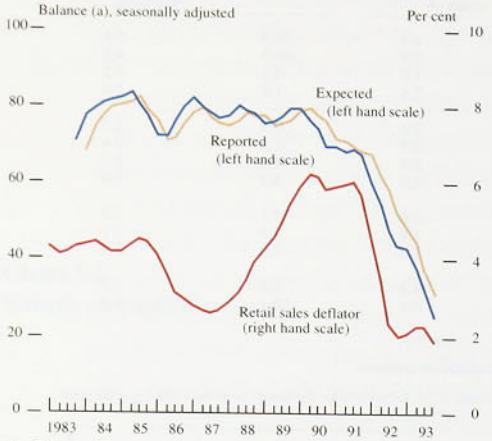
to have risen by 10.1%. Some rebound in margins was to be expected once the squeeze on domestic producers induced by the exchange rate depreciation dropped out of the year-on-year comparison, but the extent to which manufacturers' net margins have contributed to output price inflation over the past four months has been considerable.

Charts 5.3 and 5.4 depict reported and expected cost and price developments, taken from CBI surveys of manufacturers. Costs have turned out broadly as manufacturers expected, but they have consistently been too optimistic about their selling prices. This has been true to some extent since the surveys began, but the feature was much more pronounced during the early 1980s and the 1990–93 period. Closer inspection of the survey shows that the gap between reported and expected prices is largely explained by more firms having to cut their prices than expected to do so. Such discounting might not be picked up in the official price data.

The picture that emerges for the retail sector is very different. After removing the effect of duties and VAT, retailers' selling prices have risen much more slowly over the last two years than the prices they have had to pay for their stock—the difference was 4½ percentage points over the two years to 1994 Q1.

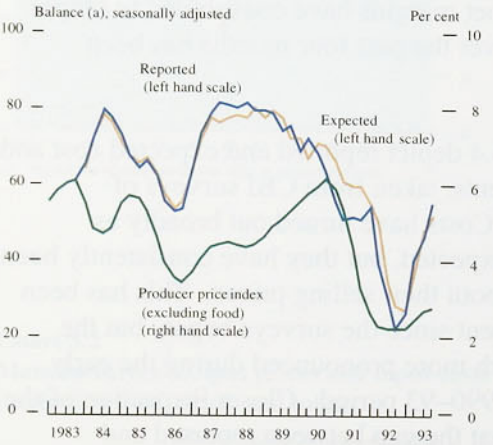
In its Distributive Trades Survey, the CBI asks retailers and wholesalers about reported and expected price movements. Charts 5.5 and 5.6 illustrate that in the past the responses have not moved with the prices actually charged to either wholesalers or retailers, but that both have mirrored the declines in inflation seen since 1991.

Chart 5.5
Retailers' reported and expected price changes (CBI Distributive Trades Survey) and the retail sales deflator



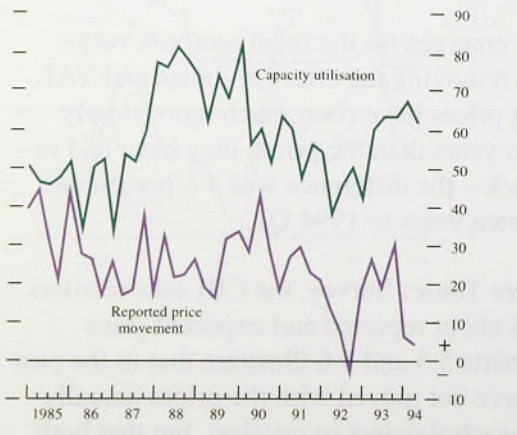
(a) Balance of firms expecting/reporting rises in average prices of domestic orders minus those expecting/reporting falls.

Chart 5.6
Wholesalers' reported and expected prices (CBI Distributive Trades Survey) and producer prices



(a) Balance of firms expecting/reporting rises in average prices of domestic orders minus those expecting/reporting falls.

Chart 5.7
Price-cost differential[a] and capacity utilisation:[b] food, drink and tobacco manufacturers



(a) Balance of firms reporting rises in prices minus those reporting falls.
(b) The proportion of firms not working below capacity.

Retailers have been consistently overoptimistic in the prices they expected over the past couple of years; this has been less true of wholesalers.

It is useful to look at pricing behaviour and developments in margins alongside developments in capacity. The CBI's survey asks manufacturing firms whether they think prices and costs will rise or fall, and at what level of capacity they are operating. The sector with the highest level of capacity utilisation relative to its long-term average is food, drink and tobacco, where two thirds of firms currently report themselves working at capacity (Chart 5.7); the sector also has one of the highest balances of firms reporting having raised prices over the last four months (a balance of +13). In stark contrast is the experience of food *retailers*, who have experienced a squeeze in their margins: while food retailing prices rose by 0.2% in the year to March, the prices of domestic manufactured foods rose by 1.4%. (A box in the February *Inflation Report* discussed the impact of food retailers' margins on the RPI.) The implication is that retailers are facing increasing costs for their stock, but are finding it difficult to pass these higher costs on to consumers. At the same time, however, food retailers have gone some way towards containing the costs from their suppliers. Although the output prices of the food, drink and tobacco industry are rising faster than retail food prices, they are rising much more slowly than they were during 1992 and 1993 (they peaked at 6.5% in July last year). Moreover, the outlook for prices in food manufacturing given the latest CBI survey is more sanguine: the balance of firms' intending to raise prices has fallen from +19% in Q1 to -3% in Q2.

The chemicals and textiles industries both report a relatively high number of firms working at or above capacity (over 50%) and both have a substantial positive balance of firms (13%) expecting to increase prices over the next four months. The sector furthest below capacity is motor vehicles, where only 10% of firms are working at capacity; a balance of 32% of firms expect to *cut* prices over the next four months. The capital goods sector is similar: two thirds of firms are operating below capacity and 17% of them expect to cut prices over the next four months.

5.2 Terms of trade

In the past, exchange rate changes have produced a much greater reaction from import prices than from

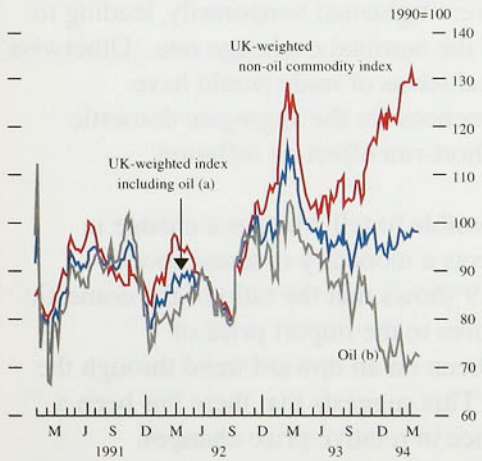
export prices—in terms both of the speed and the extent of the response. But this has not happened in the period since sterling's departure from the ERM. Export and import prices both rose almost immediately by roughly the amount of the depreciation, as would be expected in a small open economy trading in competitive world markets. The subsequent strengthening of the exchange rate was then accompanied by a fall in import prices but a further rise in export prices. As a result, the non-oil terms of trade reached a peak of 105 in August 1992, fell below 100 between October and December of that year and then rose to 108 by the end of 1993.

Import and export price changes might affect UK inflation in a number of ways. The impact of import price changes is relatively clear: higher prices increase firms' input costs, and prices of higher imported consumer goods directly increase RPIX, unless retailers react to the increases. Export prices do not have a direct effect on UK inflation, but they can have indirect effects, for example, through domestic firms' capacity.

Import and commodity prices

Using a UK-weighted sterling index, commodity prices excluding oil rose by over 12% during the first quarter of this year (Chart 5.8); in March, the index was over 7% higher than a year earlier. Because of weak oil prices, the all-commodities index (in which oil has a 55% weight) rose by only 2% during the first quarter. Oil prices are likely to remain low, given OPEC's failure to agree a price increase, buoyant non-OPEC supply and little prospect of a substantial increase in demand.

Chart 5.8
Sterling oil and non-oil commodity prices



(a) Index including oil weighted 45:55 commodities:oil.
(b) Oil price measured by close-dated Brent crude.

The recent increases in non-oil commodity prices have reflected a number of supply shocks. Although the impact of these shocks is fading, a revival in world demand would tend to push up prices further. But the existence of sizable stocks of several commodities (particularly metals) should help to prevent substantial price rises.

The fall in the value of sterling since the beginning of this year (over 2% in effective terms by 4 May) will almost certainly push up import prices. Whether these changes will be passed through to retail prices is less certain; at present, retailers appear largely unable to pass on increases in their costs.

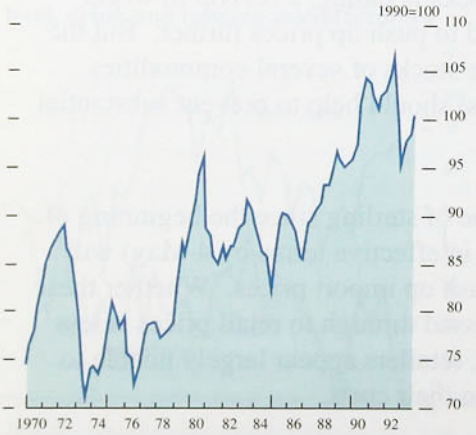
Whether movements in import prices provide genuine information about the future domestic price level

depends chiefly on the cause of the price change. For example, consider a monetary shock, such as a rise in overseas interest rates. Where prices take time to adjust to changes in monetary conditions, higher interest rates overseas could be associated with a depreciation of the sterling exchange rate, overshooting its long-run level, and a rise in sterling import prices. In the longer term, however, overseas inflation would fall in response to the earlier monetary tightening, some of the depreciation of sterling would be reversed, and sterling import prices would return to their initial levels. In general, changes in import prices caused by monetary shocks overseas should have no permanent impact on domestic inflation, as long as both policy-makers and firms do not misperceive the initial change in import prices as entailing a permanent change in the aggregate price level.

Alternatively, consider a rise in the relative price of imports caused by an adverse real shock, such as a reduction in supply of a particular commodity that the United Kingdom imported and did not produce domestically. In the long run, the rise in import prices relative to domestic prices would be expected to persist, and the real exchange rate would therefore be lower. Domestic prices would rise somewhat, unless the monetary stance were tightened temporarily, leading to an appreciation of the nominal exchange rate. Otherwise the shock to the real terms of trade would have permanent consequences for the aggregate domestic price level and a short-run effect on inflation.

It is not always possible to tell whether a change in import prices reflects a monetary or a real shock. However, Chart 5.9 shows that the ratio of the domestic price of manufactures to the import price of manufactures has been on an upward trend through the 1970s and 1980s. This suggests that there has been a degree of persistence in relative price changes.

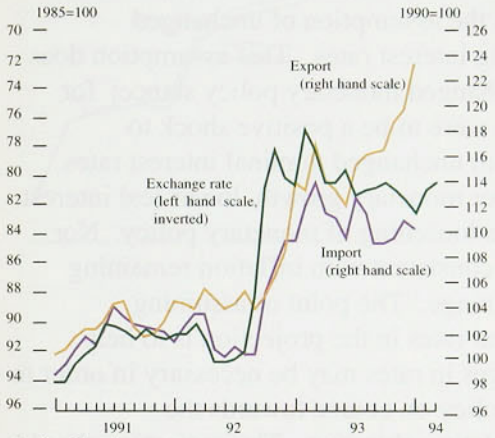
Chart 5.9
Relative price of domestic to imported manufactured goods



Export prices

Export price changes may have an indirect impact on UK inflation through their effect on capacity utilisation; if the demand for—and profitability of—exports increases, this will push domestic firms closer to capacity, which could affect their domestic pricing behaviour as UK demand picks up. To the extent that UK demand is satisfied from abroad, the upward pressure on prices will be lessened. In general, the link between changes in export prices and domestic prices will be stronger the more the prices of traded goods are

Chart 5.10
Import and export prices[a] and the effective exchange rate



(a) Non-oil goods.

determined in competitive world markets, and the stronger the links between wages and profits in the tradable and non-tradable sectors.

The rise in export prices over the past 18 months has reflected a widening of exporters' margins. Bank calculations suggest these are now higher than at any time since 1982. They are also above the margins earned on domestic sales, increasing the incentive to sell abroad, although the differential between export and domestic margins is still low relative to the levels reached in the late 1970s and early 1980s. The increase in margins may result from UK firms believing they had insufficient capacity to meet any additional demand. More likely, however, firms felt that their margins had been squeezed below equilibrium levels during the period of ERM membership and took advantage of the lower exchange rate to redress this. In Sweden, where the effective exchange rate depreciated by around twice as much as in the United Kingdom, exporters only raised their home currency price by an amount similar to UK exporters (11%) in the year to September 1993. The increase in margins continued through the period in which the exchange rate has appreciated, with potentially adverse implications for UK competitiveness.

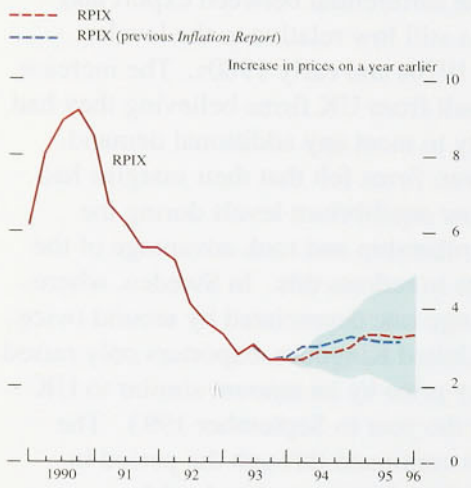
It is also possible that export prices—and in turn, exporters' margins—were overstated in last year's statistics, as a result of the introduction of the Intrastat system. According to the CBI, the balance of firms expecting rises in domestic margins has increased by 17 percentage points since 1992 Q3, whereas the balance for export margins has risen by only 15 percentage points.

5.3 Summary

Both domestic and export margins seem to have widened as firms move closer to capacity, though for export margins the increase may not be as much as the official data suggest. This widening is reflected in the current high levels of profitability. Retail margins, though, have probably narrowed. It is unlikely that these changes will continue indefinitely. On the production side, current profit levels are likely to attract new capacity as investment recovers. On the retail side, pricing has already reflected increased (current and prospective) competition. There are no immediate causes for concern in the behaviour of the terms of trade, although non-oil commodity price increases, if they continue, could lead to increases in retail prices in the future.

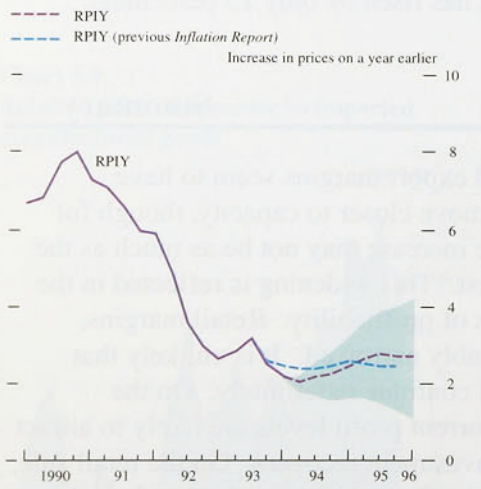
6 Prospects for inflation

Chart 6.1
RPIX inflation outturns and projections



The range is defined as the central projections plus or minus the absolute average error on RPIX inflation projections since 1985. These projections have all been based on the assumption that short-term nominal interest rates are unchanged.

Chart 6.2
RPIY inflation outturns and projections



The range is defined as the central projections plus or minus the absolute average error on RPIX inflation projections since 1985. These projections have all been based on the assumption that short-term nominal interest rates are unchanged.

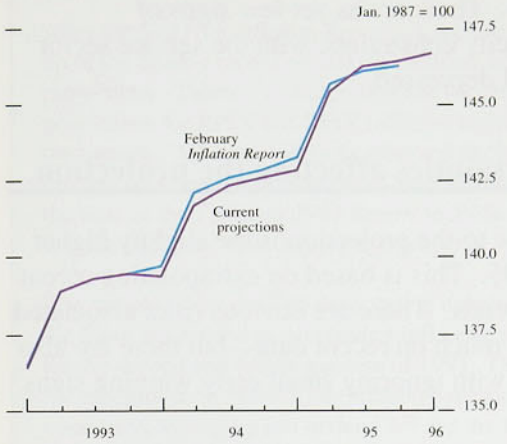
The Bank's projection of inflation over the next two years is based on the assumption of unchanged short-term sterling interest rates. This assumption does not imply an unchanged monetary policy stance; for example, if there were to be a positive shock to aggregate demand, unchanged nominal interest rates would imply faster monetary growth, lower real interest rates, and hence a loosening of monetary policy. Nor will it always be consistent with inflation remaining within the target range. The point of assuming unchanged interest rates in the projection is to help judge what changes in rates may be necessary in order to keep monetary policy on course towards the medium-term inflation objective. The projection should not be interpreted as the most likely outcome for inflation, all things considered, but rather as what would be likely to happen if interest rates did stay at the assumed level.

6.1 The Bank's medium-term inflation projection

Chart 6.1 shows the Bank's central projection for the annual rate of RPIX inflation over the next two years, assuming official interest rates unchanged at 5¼%. The exchange rate is assumed to move to bring about uncovered interest parity. Hence the exchange rate will appreciate or depreciate to offset projected differences in interest rates between the UK and overseas markets. Chart 6.2 shows the Bank's projections for RPIY inflation. Compared with the previous *Report*, inflation is now expected to be slightly lower during the rest of 1994. This reflects revisions to estimates of the effects of tax changes, both in the recent past (lowering our calculation of RPIY) and in the near future (lowering our projection of RPIX). In particular, previous estimates of increases in the Council Tax for 1994/95 have proved to be too high.

In 1995, inflation is now expected to be slightly higher than in the previous *Report* and to be on a flat, rather than shallow downward, trend. The size of these changes should not be exaggerated: they are small in relation to the average error of past projections (as shown by the shaded areas on Charts 6.1 and 6.2) and to

Chart 6.3
RPIY index, current and previous projections



past movements in inflation. Chart 6.3 shows that the RPIY price level at the end of 1995 is projected to be slightly higher than in the February *Report*: lower inflation in 1994 is offset by higher inflation in 1995. Nevertheless, the revisions to the projection give a marginally more pessimistic view of inflation developments in 1995. Why is this?

- Recent evidence on employment, productivity and earnings suggests that unit labour costs are rising a little faster than expected. In the February *Report*, RPIY inflation was projected to be around 2½% a year and RPIX inflation around 3% a year. These projections were consistent with some moderate increase in average earnings growth. The February projection incorporated such a profile for earnings. But recent data suggest that the labour market is slightly tighter than previously projected. If these pressures are maintained, this could translate into higher inflation next year, as increased unit labour costs feed through into the prices of goods and services bought by firms and, eventually, consumers.

- RPIY inflation was unchanged between the fourth quarter of 1993 and the first quarter of 1994. Over the same period, RPIX inflation rose 0.3%. The lower increases in the prices of goods carrying duty and VAT (such as tobacco, alcohol and petrol), at a time when duties were increased, squeezed the margins of retailers of these commodities. The projection assumes that this squeeze is neither reversed nor intensified. As a result, with a projection of a roughly constant quarter-on-quarter change in RPIY inflation, its 12-month growth rate jumps in the first quarter of 1995.

As discussed in Section 4, there is little reason to suppose that there has been a significant increase in labour demand, nor is unemployment likely to be close to its long-run equilibrium rate. The size and timing of the upturn in earnings growth is therefore difficult to explain. It may reflect a fall in labour supply or, perhaps more likely, that inflation expectations in the labour market remain excessive.

According to the latest estimates, aggregate demand grew somewhat faster and output slightly slower in 1993 than suggested by initial data. It is possible that both demand and output growth will weaken slightly in the second half of 1994, as tax increases affect disposable incomes. But this is likely to slow recovery for a while,

not to stall it. The direct influence of output growth on the inflation projection has changed little since the previous *Report*. There are as yet few signs of impending capacity constraints, with the service sector in particular still depressed.

6.2 Uncertainties affecting the projection

The main change to the projection is the slightly higher inflation for 1995. This is based on extrapolating recent labour market trends. There are obvious risks associated with relying too much on recent data—but there are also risks associated with ignoring small early warning signs.

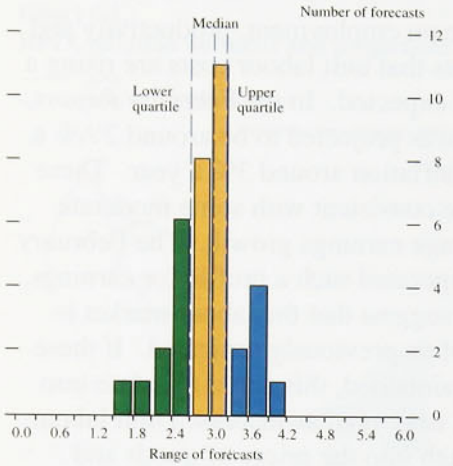
In most of the recovery period, real earnings growth has been subdued and, where pay rises have been conceded, firms have responded by bearing down on other costs so as to keep price increases low and profit rates rising. If this behaviour continues, the inflation projection may prove pessimistic. But if the private sector comes to expect higher inflation, this belief could cause employees and firms to push up earnings and prices even faster. A constant monetary policy stance would then imply the need for higher interest rates until inflation expectations were brought back into line. The impact of tax changes on demand and output is still uncertain and likely to remain so for much of this year.

A box on page 45 examines the track record of the Bank's medium-term inflation projections.

6.3 Private sector inflation forecasts

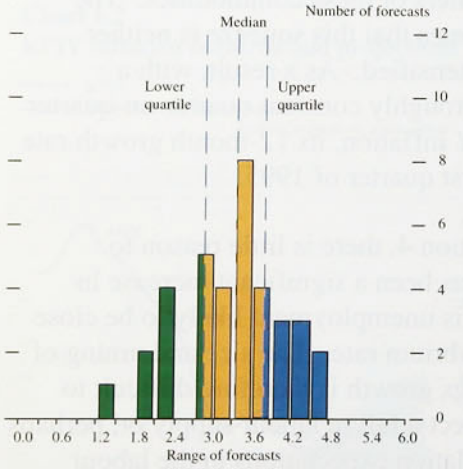
In Section 4, it was noted that employees' expectations of inflation have still not come down to existing levels and their one-year-ahead forecasts remain over 4%. Private sector forecasting organisations are, on average, more consistent with actual developments. Charts 6.4 and 6.5 present the distribution of a panel of 36 forecasts for the end of 1994 and the end of 1995. They show that the median expectation of inflation at the end of 1994 has fallen from 3.3% to 3.1% since the last *Inflation Report*, but that for the end of 1995 has risen from 3.3% to 3.4%, slightly above the Bank's current projection. The April survey of fund managers carried out by Smith New Court/Gallup gives an expected RPI inflation rate of 3.2% for end-1994 (up from 3.1% in January) and 3.9% for end-1995 (up from 3.7% in January). A deterioration in medium to long-term inflation expectations is mirrored in the inflation term structure

Chart 6.4
Distribution of RPIX inflation forecasts for 1994 Q4



Source: Forecasts of 36 private sector organisations as of April 1994.

Chart 6.5
Distribution of RPIX inflation forecasts for 1995 Q4



Source: Forecasts of 36 private sector organisations as of April 1994.

Medium-term inflation projections: the track record

After the first five *Inflation Reports*, a picture is building up of the Bank's record of making medium-term projections. Tables 1 and 2 present the successive projections for RPIX and RPIY inflation together with the outturn. All the projections assumed unchanged interest rates; in fact interest rates were cut from 6% at the time of the February 1993 *Report* to 5½% at the time that the February 1994 *Report* was prepared.

The sample is too small to draw strong conclusions, but the Bank has tended to overpredict inflation, particularly for the second and fourth quarters of 1993. Despite this, the medium-term outlook has remained reasonably consistent, averaging just under 3½% for the fourth quarter of 1994 and a similar rate for mid-1995.

Table 1
RPIX projections and actual increase on a year earlier

Per cent

	Actual	*Inflation Report*				
		1993				1994
		Feb.	May	Aug.	Nov.	Feb.
1993						
Q1	3.4	3.5				
Q2	2.8	3.4	3.4			
Q3	3.1	3.0	3.4	3.0		
Q4	2.7	3.1	3.2	3.0	3.3	
1994						
Q1	2.7	3.4	3.2	3.2	3.6	2.8

The February 1994 assessment did indicate a clear, if small, step downwards in the medium-term projection, particularly for RPIY inflation. This principally reflected the effects of the Budget measures, although the tendency of statistical models to overpredict inflation has been increasingly allowed for in the projections.

Table 2
RPIY projections and actual increase on a year earlier

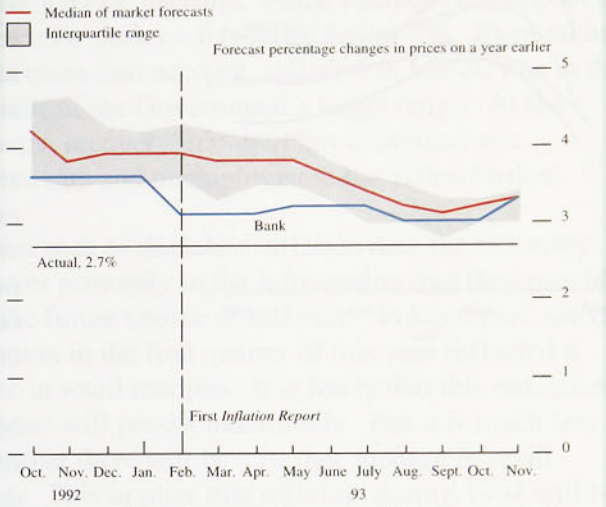
Per cent

	Actual	*Inflation Report*			
		1993			1994
		May (a)	Aug.	Nov.	Feb.
1993					
Q1	2.6				
Q2	2.8	3.4			
Q3	3.2	3.4	3.1		
Q4	2.5	3.2	3.2	3.5	
1994					
Q1	2.1	3.2	3.2	3.5	2.4

(a) Excludes VAT only: RPIY was introduced in the August 1993 *Report*.

The tendency to overpredict inflation has been even more pronounced with outside forecasters. Chart A shows the median forecast and interquartile range for a panel of 36 outside forecasts of RPIX inflation for 1993 Q4, sampled monthly throughout the course of 1993. The Bank projection is shown to be consistently in the lower part of the distribution, with the median forecast coming down towards the Bank's. From February 1993 onwards, the Bank projection was subject to less downward revision than the median. Most forecasters, including the Bank, were surprised by the low level of inflation actually recorded in the fourth quarter.

Chart A
Distribution of RPIX inflation forecasts for 1993 Q4(a)

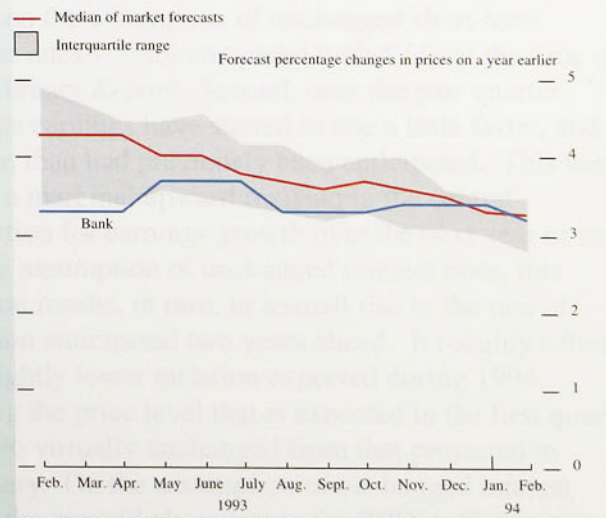


(a) Distribution of market forecasts taken from a sample of 36 private sector organisations.

The current projection carries forward a relatively low inflation profile through 1994 but has RPIX inflation returning towards the 3½% level during 1995.

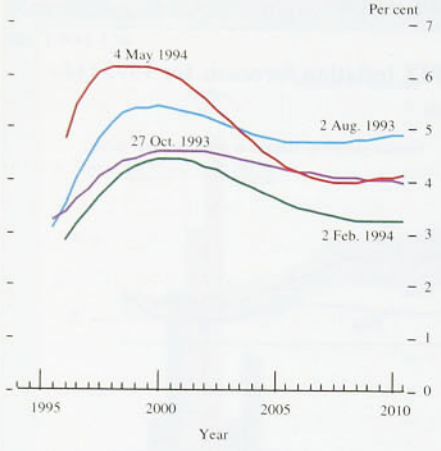
Chart B shows the evolution of RPIX inflation projections in 1994 Q4. The Bank's has been one of the lower projections and the median has tended to converge on the Bank's position. Current projections may not be comparable, since the Bank's projection assumes constant nominal interest rates whereas the market is expecting rates to rise.

Chart B
Distribution of RPIX inflation forecasts for 1994 Q4



(a) Distribution of market forecasts taken from a sample of 36 private sector organisations.

Chart 6.6
Inflation term structure derived from gilt-edged prices



derived from gilt-edged prices. Gilt yields have steadily risen since the last *Inflation Report* was published—by around 150 basis points at the short end (two years), around 200 points in the middle (10 years) and 180 points at the long end (25 years) by 4 May. Real yields, derived from index-linked gilt prices, have also risen but by a smaller amount. Consequently, the inflation term structure shown in Chart 6.6 has risen quite sharply and suggests inflation above 4% for the period from 1996 to early 2007. As discussed in Section 2, changes in the inflation term structure include changes in the inflation and real interest rate risk premia. Given the recent volatility in financial markets, the inflation term structure may be biased as an indicator of inflation expectations. But the changes do suggest that the credibility of the medium-term inflation target has proved fragile. If it is not restored, and people's behaviour is based on higher inflation expectations, then containing inflationary pressures will be more difficult.

Market forecasts of inflation are not comparable with *Inflation Report* medium-term projections because they do not assume constant nominal short-term interest rates. Since the February 1993 *Report*, base rates have fallen from 6% to 5¼%, and for most of the time the market has generally expected either no immediate change or cuts in the near future. But now market projections are for interest rates to rise. Initially this should raise market RPI forecasts, since the housing costs element in the index would be increased. The short-term effect on RPIX is not clear, but in the medium term market forecasts of inflation ought on average to be lower than the Bank's projections, given the difference in interest rate assumptions.

Conclusions 7

Inflation fell again in the first quarter of this year. Since the February *Inflation Report*, inflation—as measured by the Bank's RPIY measure, which excludes the impact of higher excise duties—has fallen below 2%. Even taking indirect taxes into account, inflation in March was in the lower half of the Government's target range. At the same time, recovery in output has continued at a moderate rate and unemployment has fallen further.

The relevance of the latest inflation data for monetary policy lies primarily in the information that they provide about the future course of inflation. In large part, the fall in inflation in the first quarter of this year reflected a squeeze in retail margins. It is likely that this reduction in margins will persist indefinitely. But it is much less evident that there will be a further squeeze in retail margins. This implies that inflation during 1994 will be lower than previously anticipated—consistent with the survey evidence on price intentions—but will rise in the first quarter of 1995, as the reduction earlier this year drops out of the 12-month comparison.

Since changes in monetary policy take time to affect output, employment and inflation, it is necessary to form a judgment about the direction in which inflation is headed over the next two years or so. Although there has been virtually no change in the Bank's projection of inflation in the early part of 1995, there has been a marginal change in the projection for two years ahead. There are two reasons for this. First, the projection is based on the assumption of unchanged short-term interest rates—5¼% compared with 5½% at the time of the February *Report*. Second, over the past quarter average earnings have started to rise a little faster, and sooner, than had previously been anticipated. This has led to a marginal upward revision in the central projection for earnings growth over the next year or so. On the assumption of unchanged interest rates, this revision results, in turn, in a small rise in the rate of inflation anticipated two years ahead. It roughly offsets the slightly lower inflation expected during 1994, leaving the price level that is expected in the first quarter of 1996 virtually unchanged from that projected in February. On the assumption of unchanged interest rates, the most likely outcome for RPIX inflation two years hence is 3%–3½%, and for RPIY inflation just

under 3%. There are, of course, large margins of error in any such projection, but the lags between changes in interest rates and their impact on inflation mean that monetary policy has to be based on a forward-looking assessment of inflation.

The main risks to the inflation outlook are threefold. First, rates of monetary growth—both narrow and broad—have continued to increase. For the moment, they do not pose a threat to the inflation target. But if they continue to increase in the months ahead, the implications for inflation would be more disturbing.

Second, inflation expectations have risen and are no longer coming down into line with the inflation target. Independent forecasters, the Bank's industrial contacts and financial markets now all exhibit higher inflation expectations than at the time of the February *Report*. Expectations affect behaviour, and an expectation of higher inflation can make it more difficult to achieve the combination of low inflation and output expansion permitted by the current growth of nominal demand.

Third is the rise in the growth of underlying average earnings from 3% in November of last year to 3½% in February, and possibly higher in March—perhaps an early reflection of a behavioural response to changed expectations. Pay developments will need to be monitored closely. Higher wages do not cause inflation—provided that they are not accommodated by monetary policy. But if policy is expected to accommodate higher levels of wages and prices, that expectation can in itself lead to higher wage bargains and settlements. A belief that the inflation target will be met should help to restrain the rise in earnings as the economy recovers. That belief must be reinforced by adherence to a firm monetary stance.

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