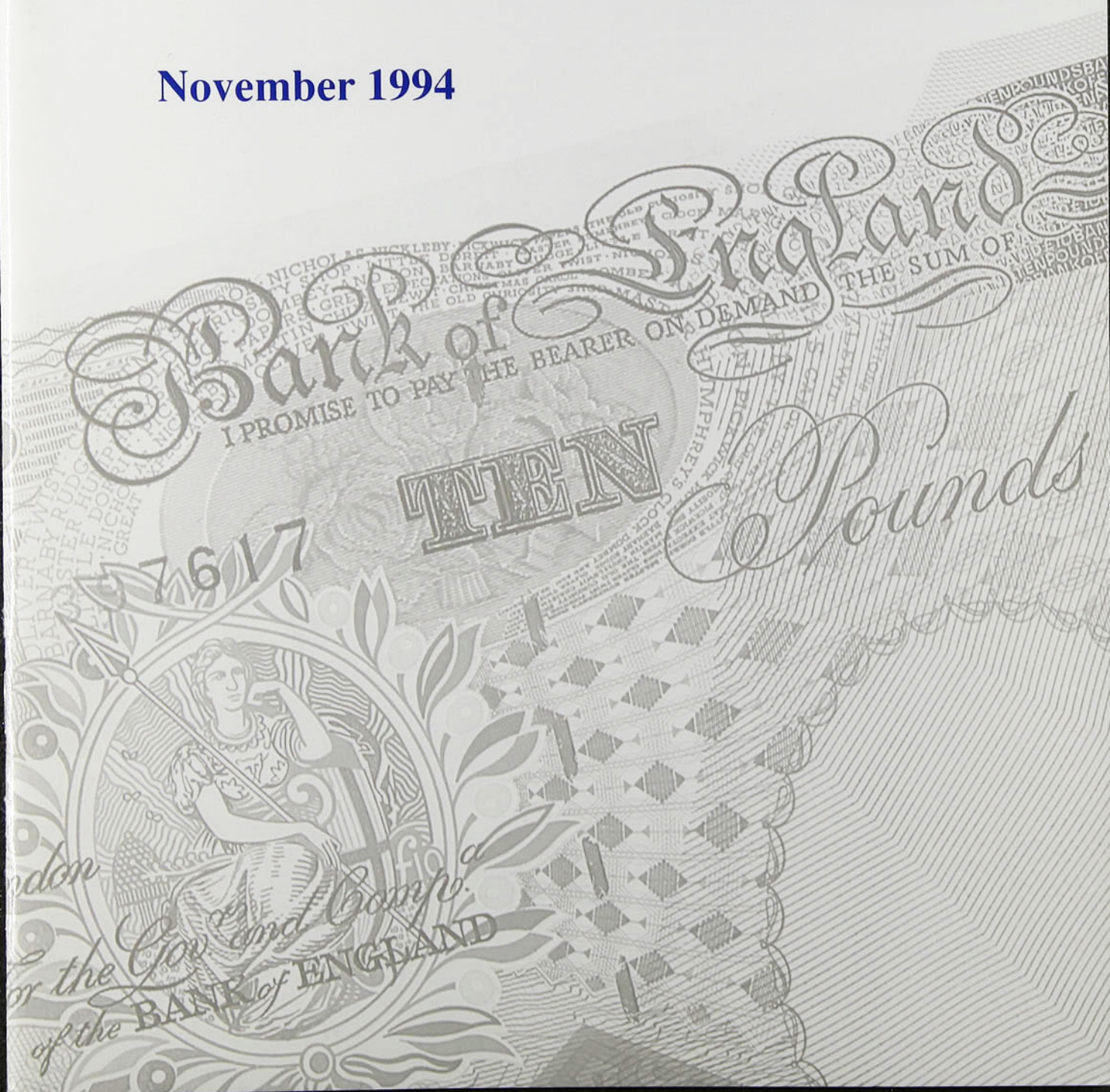


Bank of England

Inflation Report

November 1994



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Symbols and conventions

- .. not available.
 - nil or less than half the final digit shown.
- Because of rounding, the sum of the separate items may sometimes differ from the total shown.
- On the horizontal axes of graphs, larger ticks denote the first observation within the relevant period, eg data for the first quarter of the year.

Summary

RPIX inflation—the Government's target measure—was 2.0% in September, its lowest rate since the series was first published in 1975. The Bank's RPIY measure of underlying inflation was 1.2%, having fallen by half a percentage point since June. Most other measures of inflation also fell in the three months to September.

Broad money growth has remained subdued. Narrow money growth has continued to be above its 0%–4% monitoring range. The financial markets responded positively to the increase in official interest rates, suggesting that the credibility of the monetary authorities has been enhanced.

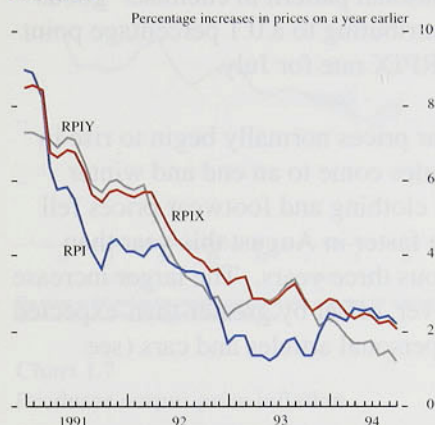
Over the next two years, output is likely to continue growing at a rate faster than long-run potential, and from a level closer to potential than was previously thought. Net external trade has been important in maintaining growth as consumption has slowed down. Labour demand has increased. But, although there is some evidence of an increase in skill shortages and settlements may be edging upwards, these have not yet led to an acceleration in nominal earnings. At the moment, it is uncertain whether this is because inflation expectations have fallen rapidly enough to counteract these factors, or because earnings growth is about to move upwards. The strong increase in input prices seen earlier in the year has begun to feed through to manufacturing industries' customers. The rise in output price inflation is consistent with recent survey evidence from the manufacturing sector, which suggests that larger increases are in store.

The outlook for inflation remains favourable. The economic news has led the Bank to lower its medium-term projection. The Bank's central projection is that RPIX inflation will bottom out in the coming months, and will rise gradually over the next two years to around 2½%, at the top of the lower half of the target range. There are many risks to that outcome, and the Bank's judgment is that they are not, at present, symmetrically distributed around the central projection. The greatest uncertainty concerns the continuing difference between retail and producer price inflation. As output continues to grow above trend, it becomes more likely that rises in the prices of intermediate goods will feed through to retail prices. It will be necessary to monitor these developments very carefully.

Recent developments in inflation

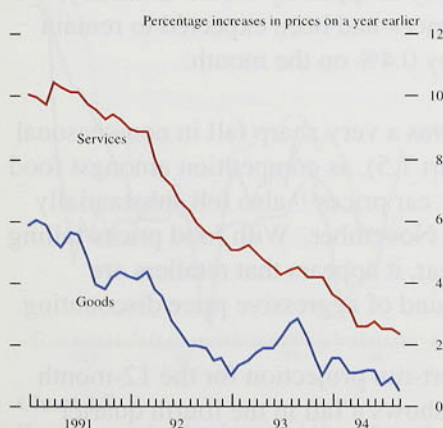
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Chart 1.1
Inflation



RPIX = Retail price index excluding mortgage interest payments.
RPIY = RPIX excluding VAT, local authority taxes and excise duties
(Bank calculations).

Chart 1.2
Goods and services inflation



Based on components of RPIY.

Table 1.A
Short-run measures of inflation

Percentage changes (a)

	RPI	RPIX	RPIY	Goods (b)	Services (b)
1993					
Sept.	4.3	4.2	3.7	3.6	3.7
Dec.	1.5	1.7	-0.8	-3.9	3.5
1994					
Mar.	2.3	2.7	2.4	3.1	1.7
June	2.4	1.1	1.6	2.0	1.6
July	2.3	2.0	1.4	2.9	2.2
Aug.	2.8	2.6	2.0	1.8	2.5
Sept.	2.6	2.8	1.7	0.9	2.5

(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.

(b) Sub-categories of RPIY.

1.1

Retail prices

Inflation has continued to fall further and faster than expected. The Government's target inflation measure—the 12-month rise in the retail price index excluding mortgage interest payments (RPIX)—fell from 2.4% in June to 2.0% in September, the lowest rate since the index was first published in 1975 (see Chart 1.1). It has remained within the lower half of the Government's target range of 1%–4%.

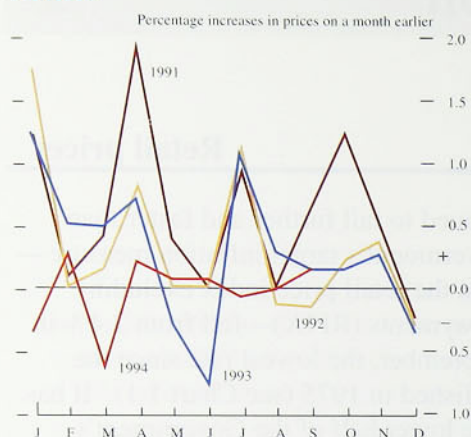
Changes in indirect taxes and the Council Tax affect RPIX and headline RPI inflation. So, to assess underlying inflation, the Bank calculates an index—RPIY—which excludes these taxes. Recent increases in indirect tax rates have masked the very low level of underlying inflation: RPIY inflation fell from 1.7% in June to 1.4% in July, increased slightly to 1.5% in August and then fell again to 1.2% in September.

Headline RPI inflation has followed a similar monthly pattern: 2.6% in June, its highest level since December 1992, 2.3% in July, 2.4% in August and 2.2% in September. The RPI measure, unlike RPIX or RPIY, includes mortgage interest payments, so changes in mortgage interest rates—or in the rate of mortgage interest tax relief⁽¹⁾—create a wedge between RPI and RPIX inflation. The 0.5 percentage point interest rate rise on 12 September, which took base rates to 5³/₄%, will push up headline inflation. By the end of September, the major banks and building societies had increased their mortgage rates by an average of 0.4%; this will add a little over 0.2 percentage points to annual RPI inflation in the 12 months from October.

Annual inflation continues to be lower for goods than for services (Chart 1.2). Goods price inflation in September was 0.5%, 0.6 percentage points lower than in June. A short-run measure of goods price inflation—the annualised three-month rate—was 0.9% in September, lower than the 2.0% recorded in June. Annual service price inflation has continued to fall—to 2.3% in September from 2.7% in June. But its shorter-run measure, at 2.5% in September, has picked up (see Table 1.A).

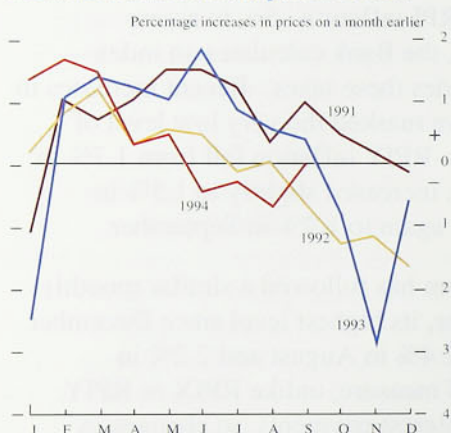
(1) The rate of mortgage interest tax relief was reduced from 25% to 20% in April.

Chart 1.3
Seasonal movements in prices of household services



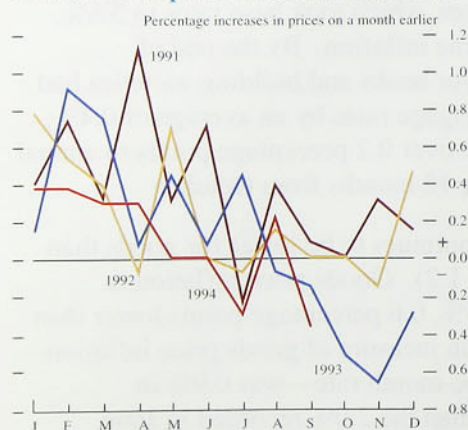
Source: Retail price index.

Chart 1.4
Seasonal movements in prices of cars



Source: Retail price index.

Chart 1.5
Movements in prices of non-seasonal food



Source: Retail price index.

The major news in July and August's RPI data was changes to the seasonal patterns of some of the component series. In previous years, the prices of household services, for instance, had increased by around 1.0% between June and July. But this year conveyancing fees, among other sub-components, fell in July (see Chart 1.3). There were similar price falls against the normal seasonal pattern in chemists' goods and insurance, all contributing to a 0.1 percentage point fall in the 12-month RPIX rate for July.

Clothing and footwear prices normally begin to rise in August, as summer sales come to an end and winter fashions appear. But clothing and footwear prices fell more in July and rose faster in August this year than they had in the previous three years. The larger increase in August was, however, offset by greater-than-expected falls in the prices of personal articles and cars (see Chart 1.4).

The fall in RPIX inflation in September reflected a sharp decline in food prices. Seasonal food prices had been projected to fall by 1.0% between August and September but actually dropped by 3.6%. Similarly, non-seasonal food prices had been expected to remain unchanged but fell by 0.4% on the month.

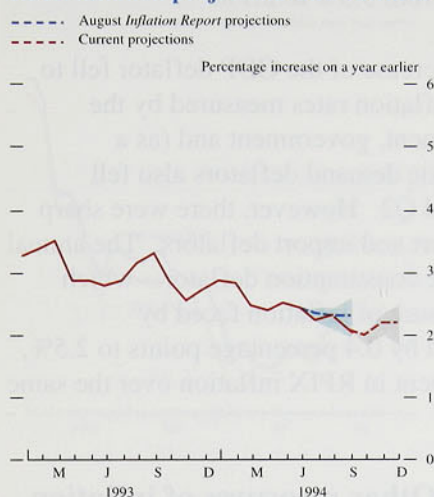
Last autumn, there was a very sharp fall in non-seasonal food prices (see Chart 1.5), as competition amongst food retailers intensified; car prices⁽¹⁾ also fell substantially and unexpectedly in November. With food prices falling in September this year, it appears that retailers are entering a further round of aggressive price discounting.

The Bank's new short-run projection for the 12-month RPIX inflation rate shows a fall in the fourth quarter compared with the third, with RPIX inflation remaining flat in October and picking up slightly thereafter (see Chart 1.6). As usual, the projection is based on price information already available as well as statistical extrapolations of past price increases.

Milk and car prices are of particular interest. There has been speculation that milk prices could rise in November, following the replacement of the Milk Marketing Board by Milk Marque—a private company—and the deregulation of prices. As milk has a

(1) Car prices are represented in the retail price index by an index of the average price for two year old second-hand cars. Second-hand car prices have been falling faster this year than in previous years. Increased pre-registration of vehicles and greater use of short-term leasing deals have increased the number of nearly-new cars coming on to the second-hand market. This has depressed the prices of older stock.

Chart 1.6
RPIX inflation projections and outturns



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

Chart 1.7
Producer output price inflation

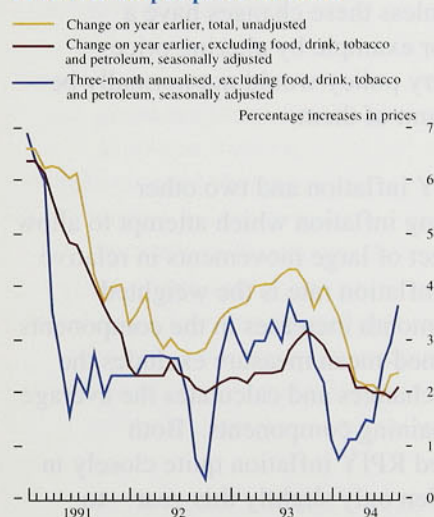
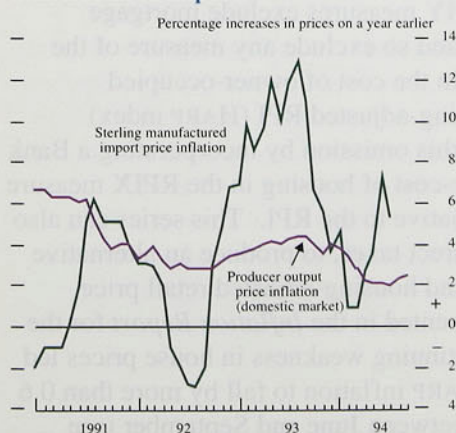


Chart 1.8
Producer output prices and the price of manufactured imports



weight of 1% in the RPI, and cheese and other milk products a further 0.7%, any sharp price rise would have a significant impact on measured price inflation.

Door-step deliveries account for around 50% of milk sales. According to the Bank's Agents, if prices rise, firms in this sector are likely to pass any increase straight on to the customer. But competition in food retailing will probably lead to milk prices in shops being held down.

Car prices are usually weak in the fourth quarter. Moreover, with new car sales not as high as expected, further downward pressure on the prices of nearly-new cars is expected during the next three months.

1.2

Output prices

Annual producer output price inflation rose by 0.3 percentage points between June and September, to 2.4%. Excluding those components most affected by changes in excise duties—food, drink, tobacco and petroleum—the annual rate was 2.1% in September, an increase of 0.1 percentage points over the same period (see Chart 1.7). But the annualised three-month measure (excluding those items) rose by 2.2 percentage points between June and September, to 3.6%.

The producer output price series may be a lagging indicator of changing inflationary pressure. It takes time for manufacturers at different stages of the production process to adjust their output prices in response to changes in costs. The prices of goods sold by one manufacturer to another in the same sector are excluded from the series. The sterling prices of imported manufactures—which are used both as inputs to the production process and to satisfy final demand—can be a guide to prices of intermediate goods in the production sector (see Chart 1.8). The annual inflation rate for imported manufactures increased in the three months to June but then fell back in July.

1.3

Expenditure deflators

Table 1.B reports the annual inflation rates of the price deflators for GDP and the major expenditure components. Although the GDP deflator is the most comprehensive measure of domestically generated inflation, it is less up-to-date than other indicators and is liable to greater revision. For instance, revisions since the publication of the August *Inflation Report* have

Table 1.B
Expenditure deflators

Percentage changes on a year earlier

	Consumption	Investment	Government	Domestic demand	Exports	Imports	GDP
1991	7.4	0.4	7.1	6.1	1.6	0.3	5.8
1992	4.7	-2.8	6.3	3.8	1.5	—	4.6

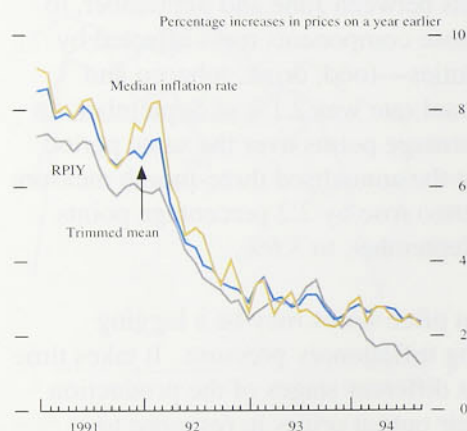
Seasonally adjusted growth rates

1993 Q1	3.6	-0.5	6.1	3.6	9.6	8.9	4.2
Q2	3.5	0.6	4.3	3.2	9.0	10.2	3.2
Q3	3.6	1.1	3.0	3.2	11.1	10.7	3.4
Q4	3.2	0.7	3.4	2.9	7.2	3.1	4.2
1994 Q1	2.9	0.8	2.8	2.4	0.5	-0.7	2.9
Q2	2.5	0.7	2.6	2.3	1.2	2.0	1.8
94 Q1 on 93 Q4	0.8	—	0.9	0.5	-0.8	-0.1	0.2
94 Q2 on 94 Q1	0.5	0.8	0.4	0.8	0.7	3.0	—

reduced the estimated annual rate of increase of the GDP deflator in 1994 Q1 from 3.3% to 2.9%.

The annual rate of increase of the GDP deflator fell to 1.8% in 1994 Q2. Inflation rates measured by the consumption, investment, government and (as a consequence) domestic demand deflators also fell between 1994 Q1 and Q2. However, there were sharp rises in both the export and import deflators. The annual rate of increase of the consumption deflator—which is an alternative measure of inflation faced by consumers—declined by 0.4 percentage points to 2.5%, similar to the movement in RPIX inflation over the same period.

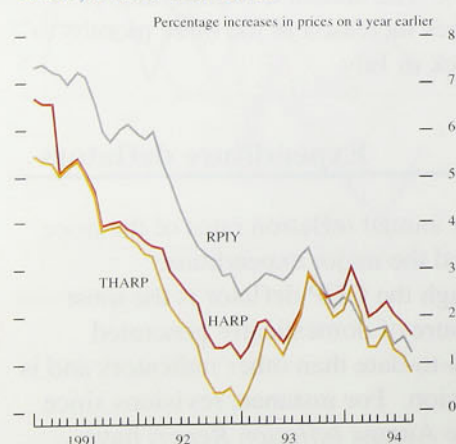
Chart 1.9
Alternative measures of inflation



One-off changes in relative prices can have temporary effects on the measure of inflation obtained from the retail price index. Unless these changes have a longer-run impact, for example by altering price expectations, monetary policy would not normally be adjusted to take account of them.

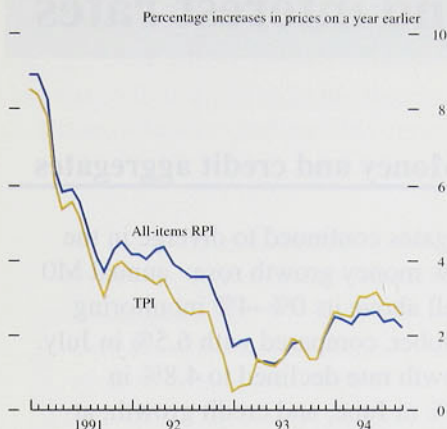
Chart 1.9 shows RPIY inflation and two other measures of underlying inflation which attempt to allow for the distorting effect of large movements in relative prices. The median inflation rate is the weighted median of all the 12-month increases in the components of the RPI; the trimmed-mean measure excludes the largest relative price changes and calculates the average change of all the remaining components. Both measures have tracked RPIY inflation quite closely in the past, but have fallen only slightly this year—to around 2.5% in the third quarter—while RPIY inflation declined further.

Chart 1.10
HARP, THARP and RPIY



Both RPIX and RPIY measures exclude mortgage interest payments, and so exclude any measure of the impact of changes in the cost of owner-occupied housing. The housing-adjusted RPI (HARP index) attempts to rectify this omission by incorporating a Bank estimate of the user-cost of housing in the RPIX measure to provide an alternative to the RPI. This series can also be adjusted for indirect taxes, to produce an alternative to RPIY—the tax and housing-adjusted retail price (THARP) index presented in the *Inflation Report* for the first time. The continuing weakness in house prices led both HARP and THARP inflation to fall by more than 0.6 percentage points between June and September (see Chart 1.10).

Chart 1.11
RPI and TPI inflation rates



The Tax and Price Index (TPI) adjusts the RPI for changes in direct taxes: it measures the increase in an individual's gross income required to maintain the purchasing power of net-of-tax income. April's income tax and national insurance contribution changes increased the gap between TPI and RPI inflation from 0.2 to 0.4 percentage points, and TPI inflation rose to 3.0% in April. TPI inflation has subsequently declined, to 2.6% in September, but the gap has not narrowed (see Chart 1.11).

1.5

Summary

RPIX inflation—the Government's target measure—was 2.0% in September, its lowest rate since the series was first published in 1975. The Bank's RPIY measure of underlying inflation was 1.2%, having fallen by half a percentage point since June. Most other measures of inflation also fell in the three months to September. RPIX inflation is expected to remain flat in October, but thereafter to pick up slightly.

2

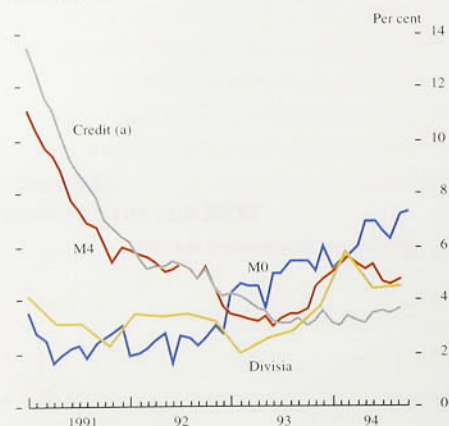
Money and interest rates

Table 2.A
Growth rates of monetary aggregates

	1994	1 month	3 months (a)	6 months (a)	12 months
Notes and coin	July	0.4	6.8	7.2	6.5
	Aug.	0.5	6.1	7.3	6.8
	Sept.	0.7	6.4	7.2	7.0
	Oct.	0.4	6.7	6.7	7.1
M0	July	0.6	6.5	8.2	6.5
	Aug.	0.2	5.2	6.7	6.3
	Sept.	1.1	7.8	8.2	7.2
	Oct.	0.5	7.1	6.8	7.3
M4	June	0.3	2.9	4.6	5.3
	July	0.1	2.4	3.9	4.7
	Aug.	0.4	3.1	3.5	4.6
	Sept.	0.4	3.3	3.1	4.8
M4 lending	June	0.4	3.4	3.1	3.4
	July	0.4	4.4	3.8	3.5
	Aug.	0.3	4.6	4.0	3.5
	Sept.	0.5	4.7	4.0	3.7
	1994 Q1		1994 Q2		1994 Q3
Divisia					
3 months	2.0	0.1	1.1		
12 months	5.8	4.4	4.5		

(a) Annualised.

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



(a) Bank and building society lending to the private sector.

2.1 Money and credit aggregates

The monetary aggregates continued to diverge in the third quarter. Narrow money growth rose: annual M0 growth remained well above its 0%–4% monitoring range at 7.3% in October, compared with 6.5% in July. But M4's annual growth rate declined to 4.8% in September from 5.3% in June, and credit growth, at 3.7%, remained modest (Table 2.A and Chart 2.1).

The monthly changes in M0 fluctuated during the past three months. M0 rose by only 0.2% during August, increased substantially by 1.1% in September, and then rose by 0.5% in October. Some of the month-to-month variation can be attributed to movements in bankers' balances, but notes and coin also accelerated to 7.1% in October from 6.5% in July. Some commentators, looking particularly at the large positive seasonal adjustment in September, have suggested that inadequate seasonal adjustment may explain recorded narrow money behaviour in recent months. The seasonal adjustment calculation, however, is based on weekly observations and made specific allowance for the boost to the note circulation from the August bank holiday. This year the boost affected the last weekly observation in August, rather than the first week in September.

The August *Inflation Report* concluded that narrow money grew faster than predicted from the start of the year to July and that monthly growth of 0.3% to 0.4% during the rest of the year would be consistent with constant inflation. In the three months to October, monthly notes and coin growth averaged 0.5%—slightly lower than the average monthly rate of 0.6% in the first half of the year, but still higher than expected. With the interest rate effect on narrow money growth diminishing (the series of reductions until February this year following the United Kingdom's exit from the ERM should by now have had most of their impact, and the most recent rise will as yet have had very little effect⁽¹⁾), the growth of narrow money remains a cause for concern.

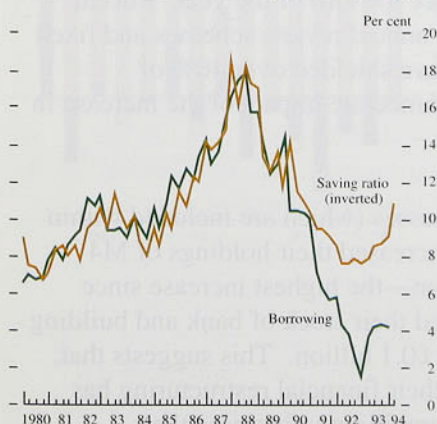
(1) The current Bank of England equation suggests that a change in interest rates would take about four quarters to affect narrow money demand.

M4 growth weakened further during the third quarter. After reaching a peak of 5.6% in March this year, its annual rate fell for two quarters and stood at 4.8% in September. Over the past six months, the underlying monthly growth of M4 appears to have settled around 0.3%, compared with an average of 0.5% in the first three months of the year. This slowdown appears to be related to the behaviour of the retail component of M4, which, having increased by an average of £2.1 billion a month in the first quarter, increased by only £1.1 billion a month in the past six months.

The main credit counterpart to M4—bank and building society lending to the private sector—has remained relatively subdued. Lending to the M4 private sector rose by 1.1% in the third quarter, compared with a quarterly average of 0.8% in the first half of the year. Its 12-month growth rate was 3.7% in September, compared with 3.4% in June.

One of the main difficulties in interpreting broad money is the diversity of motives for holding M4. Broad money is held both to finance transactions and as a store of value so that, in principle, a given level of M4 is consistent with a large number of consumption and savings combinations. Recent Bank research suggests that sectoral breakdowns of broad money and credit help to disentangle the motives for holding financial balances. By looking at personal and corporate holdings of M4 separately, it is possible to estimate reasonably stable money-demand functions.

Chart 2.2
Personal sector borrowing and saving ratio



A significant feature of the most recent recession and recovery has been the balance-sheet restructuring that the private sector has undertaken. This process has affected M4, as members of the private sector have used income that they might have otherwise held on deposit or spent to repay past debt—reducing the size of their balance sheets.

Since the recession, real personal sector net wealth initially fell as a proportion of income, but has subsequently risen. The initial fall reflected changes in tangible wealth—and in particular changes in house prices. But between 1991 and 1993, the personal sector also reduced its gross financial debt as a proportion of income—thus boosting net wealth as a proportion of income. The breakdown of the previously close inverse relationship between personal sector borrowing and the saving ratio (Chart 2.2) probably reflects a shift towards financing consumption from income rather than borrowing.

Individuals' holdings of M4 picked up in the third quarter, increasing by £3.3 billion compared with £1.4 billion in the previous quarter. In the three months to June, individuals appeared to draw down their deposits to finance expenditure in the face of the reduced post-tax spending power; this has been reversed in the third quarter.

Bank and building society lending to households grew by 1.5%. The third quarter growth would have been slightly stronger had it not been for two securitisations. After adjusting for loan securitisations in previous quarters, lending for consumption remained broadly unchanged in the third quarter. But within this, banks' credit card lending, at £0.4 billion, was the highest recorded increase since 1990 Q4.

Bank and building society lending to individuals for house purchase rose by 1.4%, similar to the growth rate in the second quarter, but below that recorded in the first three months of the year. Looking at a wider coverage of financial institutions, however, suggests that net borrowing has been relatively stable over the past year. Other specialist mortgage lenders appear to be re-entering the market, seemingly taking market share from the banks.

Much of the 50 basis-point rise in official interest rates was passed through to borrowers in higher mortgage rates. The average variable rate for banks and building societies is now 8.1%, compared with 7.7% before the rise. Building societies in general increased rates by more than banks, thus eliminating the small differential which had existed since the turn of the year. Recent analysis suggests that annual review schemes and fixed rate mortgages will have shielded over 40% of borrowers from the immediate impact of the increase in rates.

Unincorporated businesses (which are included within the personal sector) increased their holdings of M4 deposits by £1.2 billion—the highest increase since 1988 Q3—and reduced their stock of bank and building society borrowing by £0.1 billion. This suggests that, although the pace of their financial restructuring has slowed, they remain unwilling to increase their borrowing.

Given firms' access to a wider range of external funds, it is probable that the process of balance-sheet

Chart 2.3
UK corporate net debt as a percentage of post-tax profits

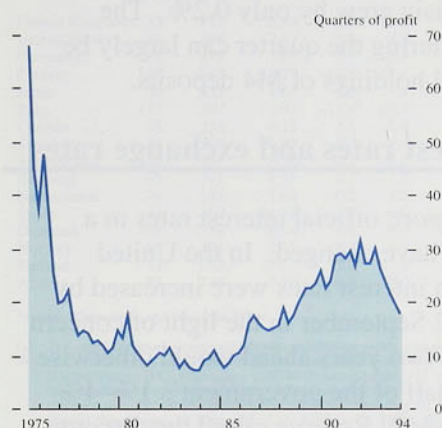
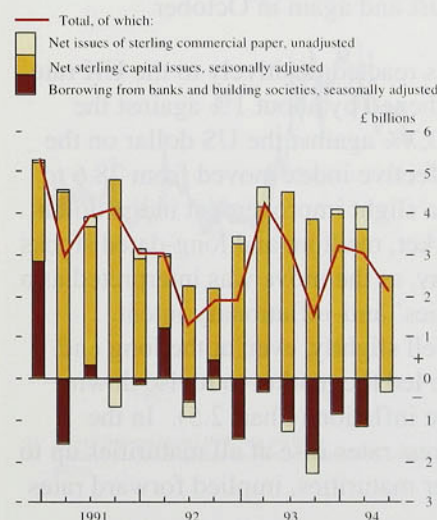


Chart 2.4
Total quarterly sterling borrowing by ICCs



restructuring is nearer to completion in the corporate sector. In the early stages of the current recovery, corporate sector net debt changed little in proportion to post-tax profits. Since the beginning of 1993, however, the ratio has fallen sharply (Chart 2.3). Although both sides of the balance sheet have fallen over this period, the decline in gross debt has been much larger than that of assets, and accounts for most of the decrease in net debt. This behaviour is evident in the cumulative net repayment of bank and building society debt by industrial and commercial companies (ICCs), in the region of £7.0 billion since the start of 1993. Bank finance appears to have been replaced by a combination of net capital issues, which totalled £16.0 billion in 1993 and £10.0 billion in the first three quarters of 1994, and retained earnings, which have increased steadily as a proportion of GDP from 10% in 1993 Q1 to 14% in 1994 Q2.

For the second consecutive quarter, ICCs increased their holdings of M4 by only 0.2%, compared with 3.7% in the first three months of this year and a quarterly average of 2.1% in 1993. ICCs have now repaid borrowing from banks and building societies in each of the last seven quarters (Chart 2.4). However, at £0.1 billion, the value of debt repayment in the three months to September was not as high as the previous six quarters. During the period, ICCs' sterling capital issues were lower—the monthly average in Q3, at £0.8 billion, was well below the monthly average of £1.3 billion in the first six months of 1994. The weakness of companies' external financing, however, does not necessarily indicate that ICCs are liquidity constrained. In particular, data on retained earnings, available only to the second quarter, indicate companies' internally generated funds remain strong. The latest CBI Quarterly Survey reported that companies do not anticipate their capital expenditure over the next 12 months to be constrained by an inability to raise external finance.

Other financial institutions (OFIs) holdings of M4 deposits fell by 0.5% in the third quarter, compared with an average quarterly increase of 2.3% during the previous four quarters. This fall is consistent with recent activity in the financial markets. In particular, the M4 private sector purchased £5.4 billion of gilts in the three months to September, compared with a quarterly average of £3.7 billion in the first half of the year. OFIs borrowed £1.9 billion in 1994 Q3. The increase was largely accounted for by borrowing by securities dealers.

Chart 2.5
Implied forward inflation rates

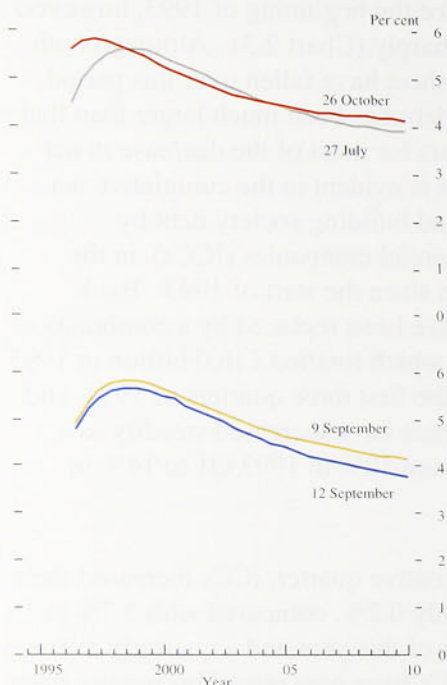
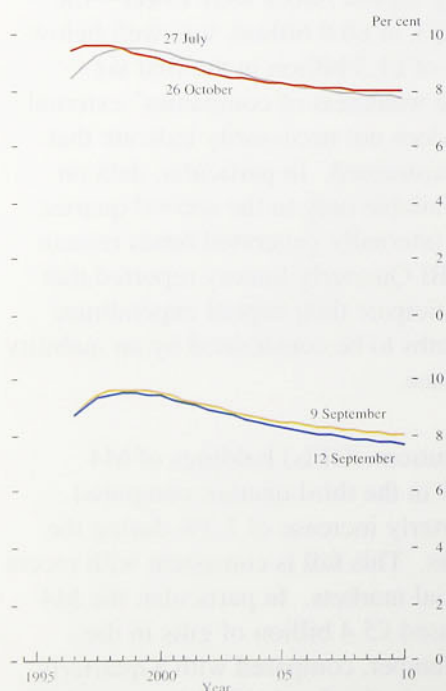


Chart 2.6
Implied forward nominal interest rates



The Bank's index of Divisia money⁽¹⁾ rose by 1.1% in the third quarter, compared with a revised growth of 0.1% in the previous quarter. On an annual basis, the aggregate index increased slightly to 4.5%. This growth was largely explained by personal sector activity—personal sector Divisia increased by 1.4%, whereas corporate sector Divisia grew by only 0.2%. The differing behaviour during the quarter can largely be explained by sectoral holdings of M4 deposits.

2.2 Interest rates and exchange rates

Since the *August Report*, official interest rates in a number of countries have changed. In the United Kingdom, short-term interest rates were increased by 50 basis points on 12 September in the light of concern that inflation around two years ahead would otherwise be above the lower half of the government's 1%–4% target range. The Federal Reserve raised the discount rate (the rate charged to depository institutions when they borrow from their district Federal Reserve banks) and target federal funds rate (the rate which banks charge each other on overnight balances) by 50 basis points on 16 August, to 4% and 4.75% respectively, the fifth increase this year. Italy and Sweden also raised rates in August, and Australia raised its official money-market interest rates in August and again in October.

The financial markets reacted positively to the UK rate rise. Sterling strengthened by about 1% against the Deutsche Mark and 0.7% against the US dollar on the day, and sterling's effective index moved from 78.6 to 79.1, helped also by a slight improvement in the dollar. In the gilt-edged market, medium and long-dated stocks both rallied on the day, as the move was interpreted as a signal of the authorities' anti-inflationary intent. Index-linked prices fell slightly, even at the long end. The nominal rate rise led the market to revise down expectations of future inflation (Chart 2.5). In the money markets, interest rates rose at all maturities up to 12 months. At longer maturities, implied forward rates fell (Chart 2.6).

Although the move by the Federal Reserve had been anticipated, 50 basis points was at the upper end of the markets' expectations and helped to steady both the bond market and the dollar briefly, both of which had previously been falling. Both Sweden and Italy raised their official rates by 50 basis points on 11 August. In both cases, bond yields rose sharply and the currency

(1) The Divisia measure attempts to allow for the varying transactions properties of different monetary assets by giving them different weights.

Table 2.B
Financial market developments

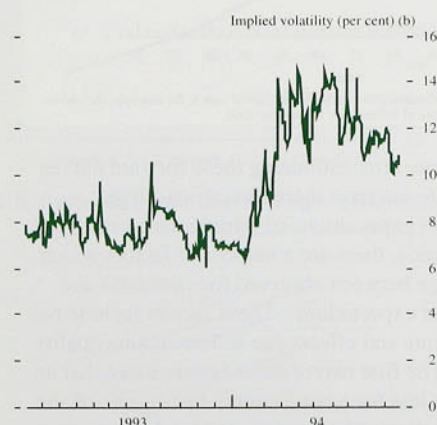
Changes between 27 July and 26 October 1994; changes between 26 October 1993 and 26 October 1994 in *italics*

	Long-dated bond yields (a) (basis point change)	Current yield (26 Oct.)	Equities (b) (percentage change)	Effective exchange rate (c) (percentage change)
United Kingdom	35 175	8.84	-2.7 -5.2	2.4 0.2
United States	31 246	7.87	3.4 4.8	-3.8 -8.6
Germany	81 175	7.62	-5.6 -1.9	0.9 1.6
France	113 248	8.37	-10.9 -17.1	0.6 3.7
Japan	30 85	4.65	-1.9 -1.4	-2.0 4.8
Italy	117 307	12.07	-11.9 -23.3	-0.8 -5.0
Canada	-23 238	9.12	3.0 1.7	1.2 -4.9
Sweden	43 356	10.98	-0.4 2.8	3.9 2.5
Switzerland	48 151	5.58	-2.7 -3.2	2.3 7.3
Belgium	65 141	8.51	-6.7 -1.3	0.6 6.6
Netherlands	76 185	7.64	-0.2 4.6	0.7 1.3
Spain	84 282	11.24	-7.2 -6.0	-0.1 -2.5
Denmark	106 258	8.94	-8.4 -0.9	0.5 3.5
Norway	93 301	8.71	-5.6 3.9	— 0.8
Finland	12 252	10.07	3.4 23.3	8.5 14.9
Austria	72 145	7.70	-8.8 -9.0	0.3 0.8

Sources: Datastream and Financial Times.

- (a) Ten-year benchmark government bonds, redemption yields, mid-day yields.
 (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), Affarsvården (Sweden), SBC General (Switzerland), BEL20 (Belgium), CBS TiltRnGen (Netherlands), Madrid SE (Spain), Copenhagen SE (Denmark), Oslo SE (Norway), HEX General (Finland), Credit Aktien (Austria).
 (c) Bank of England index.

Chart 2.7
UK implied bond market volatility^(a)



- (a) Derived from option on LIFFE long gilt future.
 (b) The annualised daily standard deviation of continuously compounded returns.

Table 2.C
Sterling exchange rates

	1993 2 Nov.	1994 2 Feb.	4 May	27 July	26 Oct.
Sterling ERI	80.9	81.9	79.6	78.6	80.5
US dollar	1.48	1.50	1.50	1.53	1.63
Deutsche Mark	2.51	2.59	2.49	2.41	2.44

weakened, with the Swedish krona and the lira each falling on the day. In contrast, the 0.75 percentage-point increase in Australian short-term interest rates in August and the further move of one percentage point in October were welcomed by the bond and foreign exchange markets against a background of fiscal consolidation and low inflation, and the Australian dollar appreciated by 0.7% against the US dollar on both days following the respective moves.

Table 2.B summarises developments in international financial markets during the period since the August *Inflation Report* and over the past year. Yields in nearly all the major bond markets have risen further since the end of July. In contrast to previous experience this year, however, the increase in UK bond yields was smaller than in a number of countries elsewhere. Chart 2.7 shows that although implied bond market volatilities fell sharply in October—below the levels seen for most of the year—they still remain significantly above their start-of-year levels.

The current structure of short-sterling futures prices suggests that markets expect a further increase in interest rates before the year's end. Three-month money rates at 26 October stood at 6.6% for December contracts, rising to 7.5% and 8.1% by March and June 1995 respectively. Beyond that, implied forward rates suggest that short-term interest rates are expected to reach a peak at just over 9% around 1997 (see Chart 2.6).

Sterling's effective index (ERI) has appreciated by 2.4% since the time of the last *Report*, compared with a fall of 3.8% in the dollar index and a slight appreciation of 0.9% in the DM effective exchange rate (see Table 2.C). The UK trade-weighted world interest rate differential increased further over the period since the August *Inflation Report*, with UK rates increasing by more than the world average (Chart 2.8). For three-month interest rates the differential is currently around 50 basis points, compared with 20 basis points at the time of the previous *Report*. The differential for 12-month rates has widened further and currently stands at 113 basis points (26 October) compared with 65 basis points at 27 July. Both US and German eurocurrency market rates have increased over the period, with three-month rates at 5.5% and 5.0% respectively, compared with 4.7% and 4.9% at the end of July.

The rise in the UK-world interest rate differential implies that, if the exchange rate is assumed to move to bring about uncovered interest parity—so that the

Estimating market expectations of inflation

The August *Quarterly Bulletin* included an article that examined the estimation techniques for, and interpretation of, market interest rate and inflation expectations from the prices of UK government bonds.⁽¹⁾ The article proposed some changes to the method used to derive inflation expectations from the market prices of government bonds presented in the *Inflation Report*. The following outlines the changes now implemented.

The curves presented in the *Inflation Report* are of implied forward interest rates and inflation rates. These are of future one-year interest rates and inflation rates implicit in the yields on longer-term bonds. Estimates of these forward rates are very sensitive to slight changes in the relative yields on longer-term bonds. And if one tries to fit a forward curve that fits through all the observed bond yields, very large swings in the slope of the estimated curve can be generated by a small change in yield on a specific bond. This means that, in practice, fitting an implied forward rate curve involves a trade-off between how smooth the curve should be and how closely it should fit observed bond yields. It also means that the estimates derived from any technique are subject to a margin of error.

For the purposes of monetary policy analysis, overall trends in the bond market, and not individual bond-specific effects, are of main interest. There is therefore a preference for smoother implied forward rate curves. For this reason, the Bank has decided to change to a relatively restricted method of fitting the conventional forward curve based on the extended Nelson and Siegel model, first proposed by Lars Svensson.⁽²⁾ This model is described in the August article.

In order to derive the inflation forward curve, it is necessary to fit a real interest rate forward curve to the observed yields on index-linked bonds. Given the limited number of these bonds and the relative stability of their yields, the Bank has decided to use a simplified version of the Svensson approach to fit this curve.

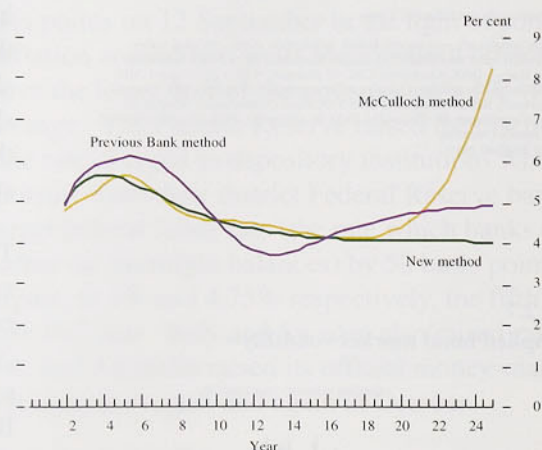
Unlike the conventional forward curve which includes explicit tax adjustments, the Bank's real yield curve implicitly assumes that the marginal investor at all maturities in the index-linked market pays no income tax. Although anecdotal evidence has tended to point to a number of different tax clienteles in the index-linked market, preliminary analysis has yet to find any significant tax effects in the real forward curve, but research continues.

As well as changing the estimation method used to derive forward curves, it has been decided to take this opportunity to drop shorter-dated callable bonds from the

estimation procedure. Callable bonds can be redeemed by the Bank at a range of different dates rather than a single fixed date. Analysis of these bonds suggests that their prices are subject to a number of bond specific effects which means that their inclusion in the estimation of the forward curve is likely to lead to distortions.

The chart below illustrates implied forward inflation rate curves for the previous Bank method, the new Svensson method and, for comparison, an approach suggested by McCulloch (also described in the August article). The differences between the various estimates demonstrate the sensitivity of the results to changes of technique.

Implied forward inflation rates^(a)



(a) Based on prices on 11 October 1994 so that at the start of year 6, for example, the curves estimate the expected rate of inflation on 11 October 2000.

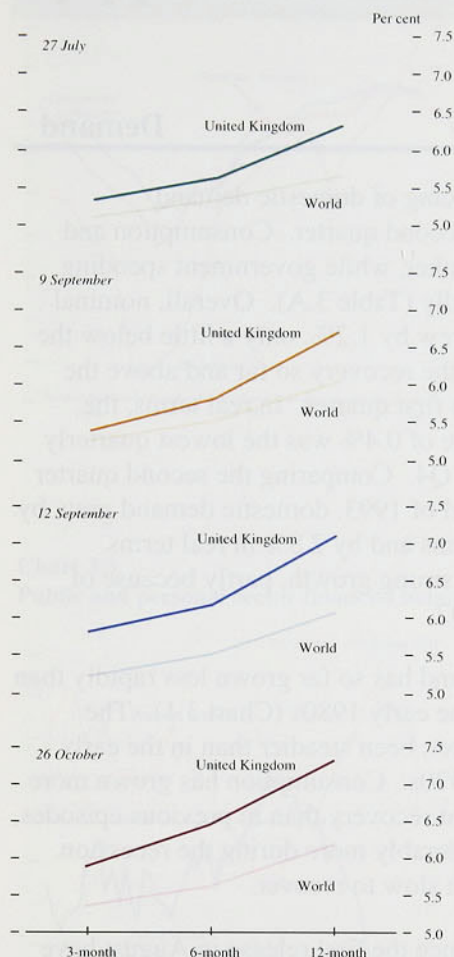
Unfortunately, even after estimating these forward curves it is not possible to interpret them directly as a true measure of market expectations of future interest rates and inflation. In practice, there are a number of factors which may drive a wedge between observed forward rates and underlying market expectations. These factors include risk and liquidity premia and effects due to Jensen's inequality (or convexity). The first two of these factors mean that an investor may pay less for a bond simply because he or she needs to be compensated for the risk and liquidity characteristics of that bond. The Jensen's inequality effect means that, for technical reasons, some bonds give better insurance for unexpected outcomes than others and so investors may pay a premium for those bonds, even if their best guess of where interest rates and inflation will be in the future would seem to make such a bond expensive.

However, since these factors are unlikely to change a great deal over time, it is possible to interpret changes in implied forward interest and inflation rates as being primarily caused by changes in market expectations of inflation.

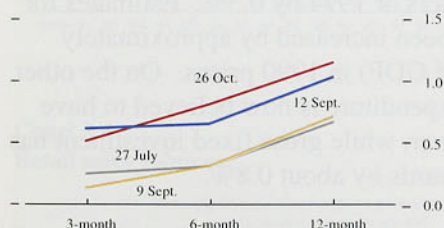
(1) "Estimating market interest rate and inflation expectations from the prices of UK government bonds", *Bank of England Quarterly Bulletin*, August, pages 232-40.

(2) Svensson, L. E. O., "Estimating and interpreting forward interest rates: Sweden 1992-93", *mimeo*, Institute for International Economic Studies, Stockholm University.

Chart 2.8
UK and trade-weighted world interest rate
yield curves



UK trade-weighted interest rate differentials



expected depreciation of one currency against another equals the current interest rate differential—then sterling's effective exchange rate is expected to fall over the next year by more than was the case at the time of the last *Report*.

2.3

Summary

Broad money growth has remained subdued. The marginal fall in its growth rate was largely related to corporate sector activity. Narrow money growth has continued to be above its 0%–4% monitoring range.

The financial markets responded positively to the increase in official interest rates, suggesting that the credibility of the monetary authorities had been enhanced. Nonetheless, the markets appear to expect further upward moves in short-term interest rates.

3

Demand and supply

Table 3.A
Growth in domestic demand

Percentage quarterly changes

	Current prices		1990 prices	
	1994 Q2	1992 Q1–94 Q1 average	1994 Q2	1992 Q1–94 Q1 average
Consumption	0.7	1.5	0.2	0.6
Investment	0.1	0.2	-0.7	0.5
Government spending	1.6	1.1	1.2	—
Domestic demand	1.2	1.3	0.4	0.6

Chart 3.1
Real domestic demand

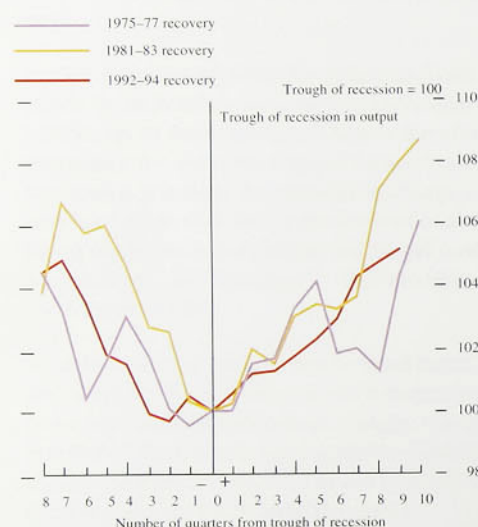


Table 3.B
Personal disposable income at current prices

	Quarterly changes		Four-quarter changes	
	1994 Q1	1994 Q2	1994 Q1	1994 Q2
Income from employment	1.7	-0.5	4.2	3.1
of which, wages and salaries	1.7	-0.7	4.0	3.0
Current grants from general government	0.5	-1.6	6.8	4.5
Other income	-1.4	0.2	-0.5	-0.9
Total income	0.8	-0.5	3.5	2.4
UK taxes on income	2.2	1.3	2.1	5.5
Social security contributions	3.1	2.8	6.8	7.9
Council Tax payments	—	7.9	-2.0	7.9
Other deductions	-12.1	4.0	-2.9	5.9
Total personal disposable income	0.5	-1.2	3.5	1.3
Real personal disposable income (a)	-0.3	-1.8	0.7	-1.2

(a) Total personal disposable income revalued by the implied consumers' expenditure deflator.

3.1

Demand

There was a rebalancing of domestic demand components in the second quarter. Consumption and investment were weaker, while government spending increased more rapidly (Table 3.A). Overall, nominal domestic demand grew by 1.2%, only a little below the average increase in the recovery so far and above the 1.0% increase in the first quarter. In real terms, the quarterly growth rate of 0.4% was the lowest quarterly increase since 1992 Q4. Comparing the second quarter with the same period of 1993, domestic demand grew by 5.2% in nominal terms and by 2.8% in real terms. Investment showed strong growth, partly because of weakness in 1993 Q2.

Real domestic demand has so far grown less rapidly than in the recovery of the early 1980s (Chart 3.1). The increase has, however, been steadier than in the early 1980s or the mid-1970s. Consumption has grown more rapidly in the current recovery than in previous episodes, having fallen considerably more during the recession. Investment has been slow to recover.

Revisions to data since the first release in August have raised the estimate of the level of real domestic demand in the first two quarters of 1994 by 0.3%. Estimates for stockbuilding have been increased by approximately £1.8 billion (0.7% of GDP) in 1990 prices. On the other hand, consumers' expenditure is now believed to have been about 0.3% lower, while gross fixed investment has been revised downwards by about 0.8%.

Personal sector

Real personal disposable income fell by 1.8% in the second quarter. This reflected previously announced changes in income taxes, social security contributions and Council Tax. There were also falls in current grants from general government and in total wages and salaries (Table 3.B). The estimated fall in wages and salaries, which was only the second quarterly decline in the past 25 years, was based on Employment Department data showing declines in both whole-economy earnings per employee and the workforce in employment. Other sources, however, suggest that employment has been

Chart 3.2
Real total domestic demand, consumers' expenditure and gross fixed investment

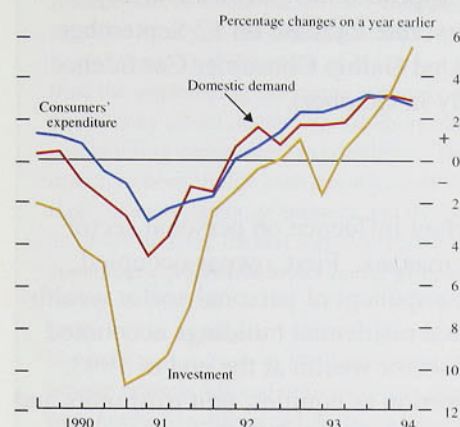


Chart 3.3
Public and personal sector financial balances

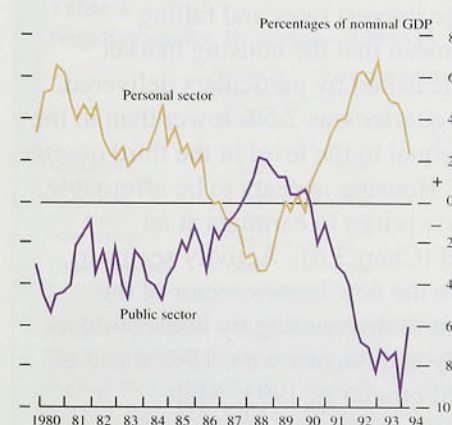
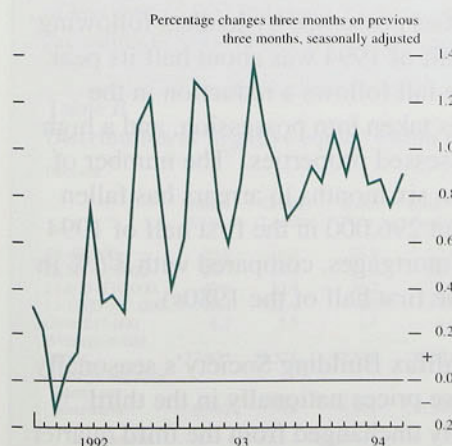


Chart 3.4
Retail sales volume



increasing. If so, disposable incomes and saving are probably underestimated (see Section 4 below for a further discussion of employment data).

The fall in disposable income contributed to a slowing in the real growth of consumption to 0.2% in the second quarter, its lowest level for two years (Chart 3.2). Real expenditure on durable goods (other than vehicles) increased by 1.9% during the quarter, the same rate as during the first. On the other hand, real expenditure fell on every main category of non-durable goods: for example, spending on food fell by 2.6%.

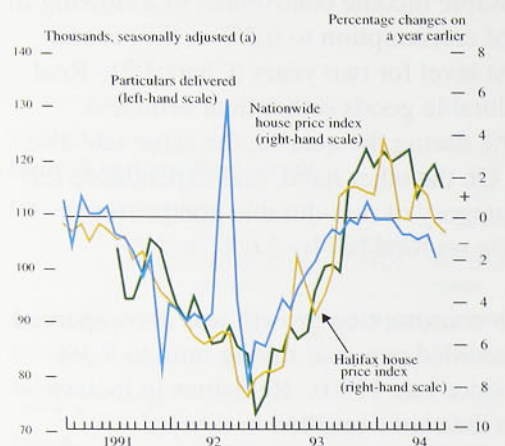
The slowdown in consumption growth was accompanied by a fall in the recorded personal saving ratio to 9.3% (its lowest level since late 1990). Revisions to income and consumption data have resulted in upward adjustments to the estimated saving ratio in the last two years; it is now thought to have peaked in the middle of 1992. The estimate for the first quarter has been increased from 10.4% to 11.0%. The financial surplus of the personal sector fell to 2.3%, from 4.3% in the first quarter (Chart 3.3).

In the third quarter, retail sales volumes showed a continuation of the moderate growth seen since late 1993 (Chart 3.4). Growth in September was stronger than in July and August, led by sales of food, clothing and footwear. The strength of retail sales was consistent with the results of the CBI Distributive Trades Survey for September, which suggested that such a rate of increase was likely to continue in the short term.

Sales by food retailers may be overestimated in the retail sales data, since aggressive discounting by large chains may have helped them capture market share from smaller retailers, who are underrepresented in the sample. The CBI Survey indicated that sales among specialist food retailers have been especially weak in recent months. Total registrations of new cars were up 3.3% on a year earlier in the third quarter. Sales of new cars to non-fleet buyers were subdued in August and September, possibly as a result of dealers and fleet owners increasing the supply of 'nearly new' second-hand cars.

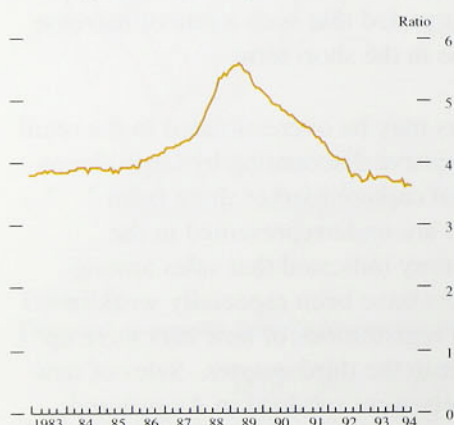
The outlook for consumption is for continued modest growth. Disposable incomes are likely to rise only slowly, while personal sector wealth has been reduced by depressed asset prices. From a peak of almost 6½ times personal disposable income in 1989, personal sector

Chart 3.5
Housing market activity



(a) The particulars delivered series is lagged one month because the series refers to the previous month's activity.

Chart 3.6
House price to earnings ratio^(a)



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

wealth had fallen to just over $5\frac{1}{2}$ times personal disposable income by 1993. However, consumer confidence does not appear to have been adversely affected by the interest rate increase on 12 September (the seasonally adjusted Gallup Consumer Confidence Index rose marginally in October).

Housing

Housing is an important influence on personal sector demand, for several reasons. First, owner-occupied housing is a major component of personal sector wealth: the CSO estimates that residential buildings accounted for 43% of personal sector wealth at the end of 1993, about the same proportion as equities, unit trust units and life assurance and pension fund holdings combined. Second, increases in housing turnover have in the past signalled increases in the demand for durable household goods. Finally, increases in house prices have been an early indicator of more widespread excess demand.

Increases in mortgage interest rates and falling disposable incomes mean that the housing market remains subdued. Measured by particulars delivered, turnover in the third quarter was 2.5% lower than in the second quarter, and equal to the level in the third quarter of 1993 (Chart 3.5). Housing appears to be affordable, with the ratio of house prices to earnings at an historically low level (Chart 3.6). Activity seems to have been stronger in the new homes sector of the market, thanks in part to discounting by housebuilders. Housing starts in July and August were 13% ahead of their level in the third quarter of 1993, while completions were 11% up. Survey evidence from the House Builders Federation shows an increasing balance of respondents reporting that stocks of unsold dwellings are adequate to meet demand.

The stock of properties possessed by lenders following default in the first half of 1994 was about half its peak level, at 33,000: the fall follows a reduction in the number of properties taken into possession, and a high level of sales of possessed properties. The number of mortgages more than six months in arrears has fallen more slowly, to about 296,000 in the first half of 1994 (almost 2.9% of all mortgages, compared with $3\frac{1}{2}\%$ in 1993 and 0.5% in the first half of the 1980s).

According to the Halifax Building Society's seasonally adjusted index, house prices nationally in the third quarter were virtually unchanged from the third quarter of 1993 (Chart 3.5). The unadjusted house price index

Negative equity

Recent falls in house prices have renewed interest in negative equity in the housing market. A homeowner has negative equity if the value of his or her property is less than the outstanding mortgage secured on it. Negative equity may affect demand in the short term by constraining consumers' expenditure. The effect may be direct, as households with negative equity seek to rebuild their balance sheets, or indirect, via the housing market, as lower housing market turnover restricts the demand for consumer durables or lower house price inflation depresses personal sector wealth. Interest has tended to focus on the aggregate value of UK negative equity; however, an analysis of the distribution of the shortfall among households and regions shows that the problem may not be as widespread as the aggregate totals would suggest.

Table A shows the regional distribution of negative equity by the number of households and value. Negative equity is heavily concentrated in the south, with just four regions—the South East, Greater London, South West

Table A
Negative equity, by region—1994 Q3

	Number of households	Value of negative equity	
	Thousands	£ millions	Percentage of total
South East	439	2,795	50.2
Greater London	186	1,332	23.9
South West	155	758	13.6
East Anglia	68	404	7.3
Other regions	247	278	5.0
United Kingdom	1,096	5,566	100

and East Anglia—accounting for 95% of the total value; these regions experienced the sharpest house price falls during the recession. By contrast, Scotland and Northern Ireland have very little negative equity.

A high proportion of affected households have relatively little negative equity: of an estimated 1.1 million households with negative equity, over a third have a shortfall of less than £2,000, over a half have a shortfall of less than £5,000 and about 3% have a shortfall exceeding £15,000 (Table B). In most regions, the

Table B
Distribution of negative equity within region

Per cent	South East	Greater London	South West	East Anglia	Other regions	United Kingdom
£0–£2,000	20.9	16.4	23.9	22.6	84.2	34.9
£2,000–£5,000	26.7	20.4	31.9	26.2	15.1	23.7
£5,000–£10,000	29.8	35.7	36.2	29.7	0.7	25.1
£10,000–£15,000	18.4	22.0	6.7	16.9	—	13.1
Over £15,000	4.2	5.6	1.4	4.6	—	3.1
Average house price	77,933	78,521	62,689	59,871	..	63,125
Average negative equity per household	6,361	7,148	4,881	5,949	1,126	5,079

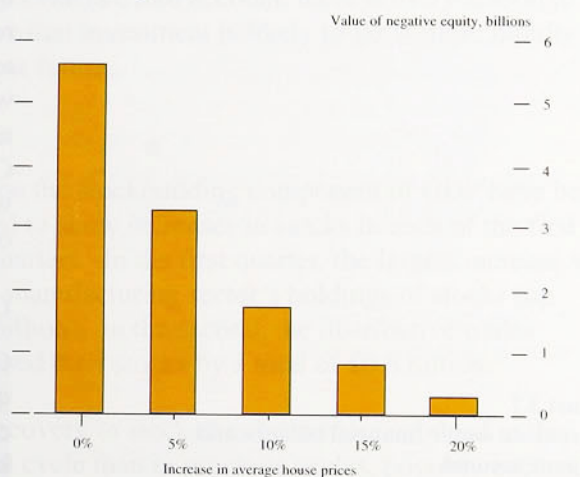
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average level of negative equity per affected household is less than £5,000.

Negative equity is related positively both to the level of average house prices in a region, and to the fall in house prices since their peak (the timing of which varies between regions). So in the South East and Greater London, where house prices fell sharply in the recession but are still relatively high, negative equity (in total and per household) is higher than in other regions.

The distribution of negative equity across households suggests that, for most regions, relatively modest increases in average house prices would eradicate the problem for a large number of households. Bank simulations show that a 5% increase in UK average house prices, applied equally to all regions, would reduce the total value of negative equity by around two fifths; a 10% increase would reduce it by over two thirds.

Negative equity and changes in house prices: United Kingdom



If the regions with the highest levels of negative equity (such as the South East) experienced faster-than-average house price inflation, a significant reduction in negative equity could occur with limited house price inflation for the United Kingdom as a whole. Between 1993 Q4 and 1994 Q3, average house prices increases in the four regions with the highest levels of negative equity ranged from 1.8% to 2.8%, higher than the 0.9% rise in UK average house prices. Over the same period, the value of negative equity fell by over £2 billion.

Although the estimated value of negative equity is large, at £5.6 billion, its distribution suggests that it may not be a significant constraint on consumers' future behaviour. Most of the negative equity is in the South East, where house prices have recently been rising more quickly than in many other regions, and the majority of households with negative equity have a relatively small shortfall.

published by the Nationwide Building Society, which has diverged from the Halifax index in recent months, increased by 2.9% in the year to the third quarter. Regional variation continues: for example, according to the Halifax, prices in the year to the third quarter rose by 1.8% in Greater London, 1.6% in the South East, and 1.4% in East Anglia. These regional movements have reduced the amount of negative equity (see the box on page 21), which contributes to lower turnover in the housing market. The value of negative equity in the United Kingdom is estimated to have fallen to £5.6 billion in the third quarter of 1994, compared with £6.3 billion in the second quarter.

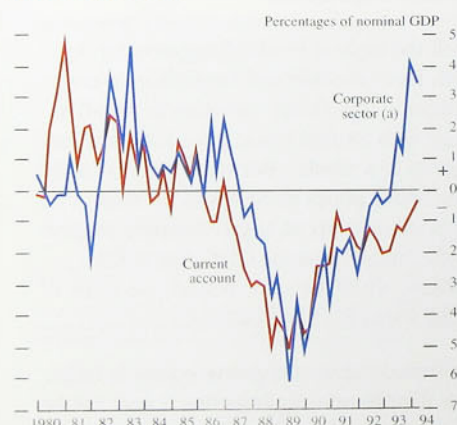
The housing market is more subdued than in earlier recoveries. Lower expectations of capital gains from future house price inflation and changes to the tax regime have increased the user cost of housing and higher mortgage indemnity premia have raised entry costs. The shift to more flexible employment patterns may have made potential entrants to the market more reluctant to take on mortgage commitments, especially as alternatives to owner-occupation are now more widely available. The difficulties in the mortgage market were reflected in the results of the latest CBI/Coopers and Lybrand financial services survey, which showed that building societies were markedly less optimistic about their overall situation than banks.

Corporate sector

Corporate finances continued to strengthen in the second quarter, with a financial surplus for industrial and commercial companies (ICCs), of £4.8 billion, the largest on record, slightly above that seen in the first quarter (Chart 3.7). Gross trading profits of non North Sea ICCs increased by 1.6%, and total retained earnings by 5.6%, compared with the already high levels seen in the first quarter. These retained earnings were used in part to finance increased holdings of stocks (see below), but companies also repaid £2.3 billion of bank debt in the second quarter. Income gearing is at an historically low level. Net sterling capital issues by UK ICCs were £4.7 billion in the second quarter, £1 billion up on the first quarter.

Despite the improved financial climate, gross fixed investment fell by 0.7% in volume terms in the second quarter. Investment in plant and machinery (34% of total investment) increased by 1.3% in the quarter, but spending on new buildings and works other than dwellings fell by 5.4%. Manufacturing investment grew

Chart 3.7
Corporate sector financial balance and current account



(a) ICCs plus financial companies and institutions.

by 3.7% in the quarter, but remained low relative to manufacturing output. Although volatile from month to month, output of investment goods continued to grow: in July and August it was on average 0.6% above its Q2 level.

Investment intentions have improved markedly, according to the October CBI Industrial Trends Survey. A balance of 16% of respondents indicated that they planned to spend more on plant and machinery in the next year than they had in the previous year. Uncertainty about demand and inadequate net return were the main reasons given as constraints on investment. Replacement of existing plant and gains in efficiency were reported as the main motivations for investment, but the number of respondents citing expanding capacity as a reason was at its highest since April 1990. Other surveys, such as that conducted by the British Chambers of Commerce, also indicate plans to increase investment. Taking the state of demand, company finances and survey evidence into account, there is every reason to believe that investment is likely to grow more rapidly in the near future.

Stocks

Data on the stockbuilding component of GDP have been revised to show increases in stocks in each of the first two quarters. In the first quarter, the largest increase was in the manufacturing sector's holdings of stocks (up £0.3 billion); in the second, the distributive trades increased their stocks by a total of £0.6 billion.

The recovery in stocks has been more subdued in the current cycle than in previous cycles, possibly because pressure on margins and techniques such as just-in-time delivery have made firms less willing to hold large stocks. If that is the case, variations in stockbuilding may in future be a less important influence on short-term fluctuations in output. However, the employment increase shown by the Labour Force Survey⁽¹⁾ suggests that the output of services, and hence GDP(0), may be understated. In the expenditure accounts, this would be reflected in an underrecording of stockbuilding.

Fiscal developments

General government real final consumption increased by 1.2% in the second quarter, with central government spending (64% of the total) increasing by 1.9% and local

(1) See Section 4.

Chart 3.8
Relative demand and costs and the trade balance

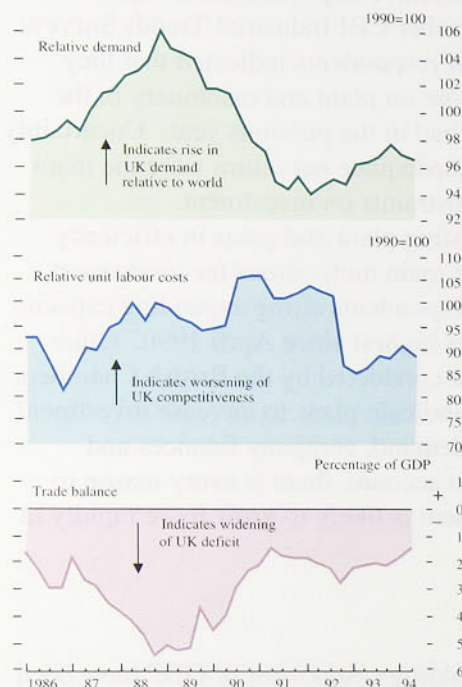


Table 3.C
Projections for GDP and domestic demand growth^(a)

Per cent

	Share of UK exports in 1992	1994 GDP	Domestic demand	1995 GDP	Domestic demand
Industrial countries (b)	79.5	2.7	2.8	2.7	2.8
of which:					
European Union	56.0	2.1	1.6	2.9	2.8
United States	11.4	3.7	4.4	2.5	2.6
Japan	2.1	0.9	1.6	2.5	3.3
Developing countries (b)	18.3	5.6	..	5.6	..
of which, Asia	7.2	8.0	..	7.3	..
Countries in transition (b)	2.2	-8.3	..	-1.0	..

.. not available.

(a) Source: IMF World Economic Outlook, October 1994 and IMF Directions of Trade Statistics Yearbook, 1993.

(b) As defined in the IMF's World Economic Outlook.

authority spending almost flat. This increase translated into a rise of only 1.7% over the second quarter of 1993. For the first six months of the 1994/95 financial year, the PSBR was estimated to be £19.5 billion, compared with £23.9 billion in the same period of 1993/94. Market expectations of the PSBR in 1994/95 are now about £33 billion, compared with £38 billion projected in last November's Budget.

Since inflation has been lower than was forecast in the Budget, the Government can maintain the planned real level of spending for 1995/96 with a lower nominal total. For example, nominal social security benefits will be increased by less than was anticipated, since inflation in the year to September was less than projected. The PSBR will also be lower because of the higher level of activity. The lower nominal PSBR will in turn lower the future path of government debt; the Budget projected that the ratio of gross general government debt to GDP would peak at 51% in 1996/97.

External trade

External trade contributed 0.5 percentage points and 0.9 percentage points to UK output growth in the first two quarters of 1994 respectively. The contributions were the result of strong growth in export volumes—up 7.2% in the first two quarters compared with the first half of 1993. Import volumes also rose over the period, but by only 5.8%. The strong export performance reflected robust demand in major export markets, as well as improvements in the price competitiveness of UK industry since 1992 (Chart 3.8). The overseas trade data for July suggested these trends were continuing.

During 1993, the major source of export growth was from outside the European Union. This year, intra-EU trade has become increasingly important as the European recovery has strengthened. Demand in major export markets worldwide is likely to strengthen by more than was envisaged at the end of 1993. Recent projections by the IMF show that prospects for output and domestic demand in both 1994 and 1995 have improved in many parts of the world (Table 3.C). In the United States, growth is projected to slow in 1995 as the economy approaches full capacity, while the recoveries elsewhere are still gathering momentum. In Japan, increased public spending is boosting domestic demand, while in Europe net exports (to areas such as Asia and the United States)

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

Percentage changes

	Weights (a)	Quarterly changes		Four-quarter changes	
		Q1	Q2	Q1	Q2
Construction	72	1.6	0.9	2.9	3.8
Production	281	1.0	2.1	4.2	5.8
of which:					
Manufacturing (b)	237	1.6	1.5	2.3	3.8
Mining and quarrying including oil and gas extraction	22	3.1	4.6	23.1	26.0
Services	629	0.9	0.7	2.8	3.0
of which:					
Financial and business	186	0.7	0.9	2.7	2.9
Distribution, hotels, catering	142	1.3	0.9	3.2	3.3
Transport, storage, communication	84	1.6	1.3	6.0	6.6
GDP	1,000	0.9	1.1	3.2	3.8
Non-oil	983	0.8	1.0	2.4	3.2

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

(b) Revised definition.

have been a major source of growth, but domestic demand is projected to strengthen in 1995.

The United Kingdom's external trade deficit fell to £2.4 billion (1.7% of GDP at market prices) in the second quarter, compared with £3.0 billion (2.1% of GDP) in the first. The bulk of the improvement came from oil and erratic items: excluding these, the deficit was £4.1 billion in the second quarter and £4.2 billion in the first. The change resulted from a narrowing of the deficit against countries outside the European Union, where the deficit fell from £2.1 billion to £1.5 billion. The deficit with other EU members was unchanged at £0.9 billion. As the European recovery continues, this component of the deficit can be expected to get smaller.

3.2

Supply

The recovery in output in the year to the second quarter was stronger than previously thought. Total output increased by 1.1% in the second quarter, with the production sector growing more quickly than services (Table 3.D). Taking revisions to first quarter data into account, output in the first six months of 1994 is now estimated to have been 0.6% above the level reported in the August *Inflation Report*, and 2.8% higher than in the first half of 1993.

North Sea output has grown particularly strongly in the past year—output net of this sector, which is perhaps a better guide to the state of domestic economic activity, rose by 3.2% in the year to the second quarter. As a result, real non-oil GDP passed the level achieved at the cyclical peak in 1990 Q2, having fallen 3.6% below this peak at the trough in 1992 Q1 (Table 3.E). The recovery is broadly based: among the main components of output, the mining and oil extraction industry has shown the greatest increase (as a result of the influence of North Sea activity), while construction has yet to experience any significant growth. Manufacturing output, although recovering, is still below its previous peak level.

The evidence about output growth in the third quarter is mixed. The CSO's preliminary estimate of GDP growth in the third quarter is 0.7% for both total and non-oil output. The output of the production industries in July and August showed little gain over the second quarter (although this would represent growth of over 4% from 1993 Q3). Anecdotal evidence (including reports from

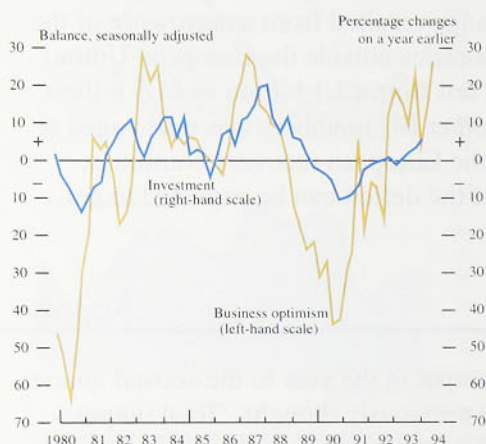
Table 3.E
Level of output in 1994 Q2, at constant 1990 factor cost

Percentage difference

	Compared with	
	1990 Q2	1992 Q1
Construction	-10.7	1.1
Production	1.2	7.8
of which:		
Manufacturing (a)	-2.5	5.2
Mining and quarrying including oil and gas extraction	26.1	30.0
Services	3.6	5.6
of which:		
Financial and business	2.9	5.6
Distribution, hotels, catering	1.1	7.7
Transport, storage, communication	8.5	9.6
GDP	1.9	5.8
Non oil	1.1	4.9

(a) Revised definition.

Chart 3.9
Investment and business optimism^(a)



(a) Balance from CBI Industrial Trends Survey of those firms more optimistic about general business situations compared with four months earlier minus those firms less optimistic.

the Bank's Agents) points to significant differences between sectors, and indeed companies. For example, some car plants are moving to short-time working, while others are planning to take on labour.

In contrast to the backward-looking production data, forward-looking surveys point to continuing improvements in the outlook for output. The October CBI Industrial Trends Survey showed that business confidence had risen (Chart 3.9), while optimism among exporters was higher than at any time since January 1985. The balance of firms expecting output to increase over the following four months was the highest since October 1988. A growing number of respondents quoted skilled labour and plant capacity as likely constraints on output. The Chartered Institute of Purchasing and Supply's September Purchasing Managers' Survey reported that almost one third of companies faced increasing difficulties in meeting delivery times. The overall Purchasing Managers' Index fell for the second month in succession, but still indicated continued expansion. The British Chambers of Commerce Survey reported increases in the levels of home and export orders.

It has taken four years for actual output to surpass its previous record level. Over this period, potential output will also have increased, although it is not possible to say precisely by how much. Examination of historical trends suggests a long-run growth rate in the range of 2%–2½%, but it has probably grown less quickly than this in the recent past as a result of lower labour force growth and reduced investment. But the output gap is substantially smaller than it was when output was at its trough, and the prospect is for it to shrink further as output, driven initially by net trade and then by a recovery in investment, continues to grow faster than potential.

3.3

Summary

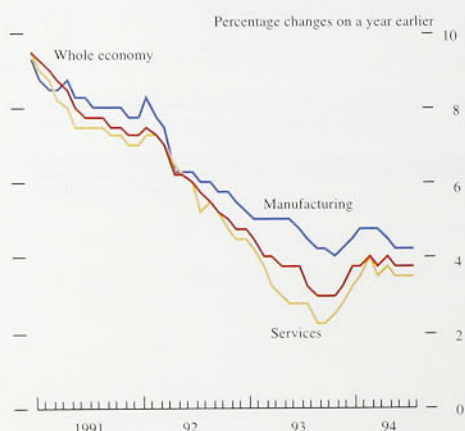
The preliminary estimate of growth in non North Sea output was 0.7% in the third quarter, and 3.2% in the year to the third quarter. Over the next two years, output is likely to continue growing at a rate faster than long-run potential, and from a level closer to potential than was previously thought. Net external trade has been important in maintaining growth as consumption has slowed down following falls in disposable income. Companies in some sectors are cutting back production in the face of weak demand, but in other areas they are

encountering capacity constraints. An upturn in industrial investment is expected following improvements in the financial situation of companies. The output gap is likely to be further reduced, but at a slower rate than in the recovery to date.

4.1

Earnings

Chart 4.1

'Underlying' earnings growth^(a)

(a) Underlying earnings growth is calculated by the Employment Department and makes allowances for temporary influences such as arrears of pay, variations in the timing of settlements, industrial disputes and the influence of public holidays in relation to the survey period.

As the labour market tightens, the risk of higher earnings growth remains a threat to the general inflation outlook. At present, though, there is little evidence of this. The 12-month increase in the Employment Department's measure of underlying average earnings is estimated to have been 4% in May (revised upwards from 3³/₄% since August's *Inflation Report*), and 3³/₄% in June, July and August. The 12-month growth rate of actual average earnings also changed little, falling from 4.6% in May (revised up from 4.3%), to 3.8% in June and July and 3.7% in August. The growth rate of average earnings increased at the end of 1993, but has remained almost constant so far in 1994.

Annual growth of underlying average earnings in manufacturing fell by a ¹/₄ of a percentage point in both May and June, and remained at 4¹/₄% from then until August—this was its second lowest rate of increase since the current series began in 1980. In the service sector, underlying earnings growth remained at 3¹/₂% between June and August, a ¹/₄ of a percentage point lower than in May. But, unlike the rate in manufacturing, it remained well above its most recent trough of 2¹/₄%, which was reached in October 1993 (see Chart 4.1).

Settlements data are mixed. In August, for the seventh consecutive month, the Industrial Relations Services (IRS) measure of median pay settlements remained at 2.5%. The Labour Research Department reported that the three-month median of settlements rose to 2.7% in July and August from 2.5% between January and May, but then fell back to 2.6% in September. The CBI reports settlements rising. Between the three months ending in June and the three months ending in July, it found that settlements in the manufacturing sector had risen from 2.6% to 2.9% (see Table 4.A). Incomes Data Services, in their October report, noted that the proportion of settlements being agreed at 2% or less has continued to diminish, and there are some initial signs that autumn deals may be moving higher. These findings should be treated cautiously, because only a few settlements are concluded during the summer months and those that do occur cover only a small proportion of

Table 4.A

Earnings and settlements

Percentage changes over a year earlier
Previous month/quarter in italics

Wages and salaries per head	Q2	3.1	3.9
Whole economy actual average earnings (Great Britain)	Aug.	3.7	3.8
Whole economy underlying average earnings (Great Britain)	Aug.	3.75	3.75
IRS whole economy settlements (a)	Aug.	2.5	2.5
IRS Private sector settlements (a)	Aug.	2.5	2.5
IRS Public sector settlements (a)	Aug.	2.5	2.3
CBI manufacturing settlements (b)	July	2.9	2.6
CBI services settlements	Sept.	3.4	3.3
IDS (c)	Sept.	3.0–3.9	3.0–3.9
LRD (b) (d)	Sept.	2.6	2.7

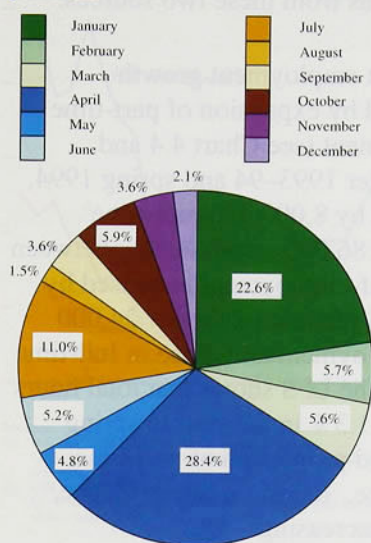
(a) IRS = Industrial Relations Services.

(b) Average for three months ending.

(c) IDS = Incomes Data Services. Range in which the median settlement falls.

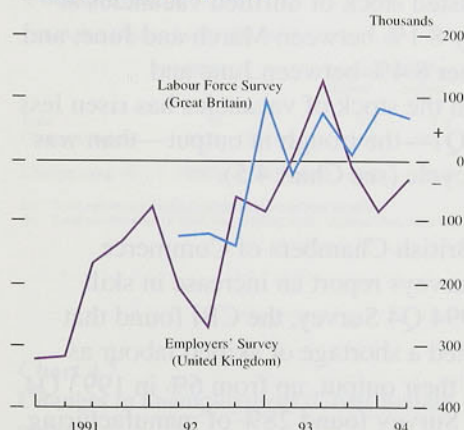
(d) Labour Research Department: Bargaining Report.

Chart 4.2
Proportion of 1992 pay settlements
by month



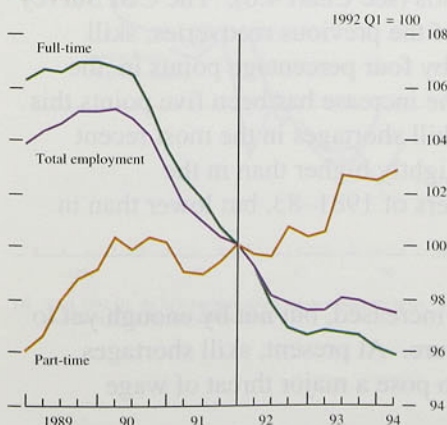
Source: IRS Pay and Benefits Bulletin 338.

Chart 4.3
Changes in employment^(a)



(a) Since 1992 Q1, the LFS has been conducted on a quarterly basis; previously it had been an annual survey.

Chart 4.4
Full and part-time employment in the latest
recovery



the UK workforce. Usually, over half of all settlements are made in the months between January and April (Chart 4.2 shows the breakdown in 1992 as an example).

Bonus payments have been less important in recent months than earlier in the year. Actual average earnings, therefore, have not been affected as much by one-off increases. The contribution of overtime payments to average earnings is harder to establish. Data are only available for operatives in the manufacturing sector—approximately 12% of the total workforce in employment. Total overtime hours for these workers fell by 3.4% between March and June, and fell a further 7.1% between June and August.

Many wage-bargaining agreements are explicitly linked to a price index—almost always the headline RPI, according to the CBI. The 12-month rate of RPI inflation is expected to pick up in November and December; any increase may be built into settlements at the end of 1994 and, more significantly, January 1995.

4.2

Employment

Has employment been increasing or decreasing? According to the workforce-in-employment measure, total employment in the United Kingdom fell by 35,000 between March and June, and by 9,000 in the year to June. This conflicts with the findings of both the spring and summer Labour Force Surveys (LFS) (see Chart 4.3). They found that total employment in Great Britain rose by 80,000 between winter 1993–94 and spring 1994, and by a further 65,000 between spring and summer. In the year to the summer, employment on this measure rose by 226,000. What accounts for these differences?

The summer LFS covers the three months to August, so it is two months more up-to-date than the workforce-in-employment measure. More importantly, the LFS estimates the number of people with jobs and shows that the number of full-time employees has increased less rapidly than other categories (eg self-employment, part-time work). The workforce-in-employment measure is derived from an employer-based survey which counts jobs, and appears less able to identify job generation in these other categories. For example, some workers on temporary contracts may not be counted as employed by the employer-based survey, but are by the LFS. Such

Table 4.B
Changes in employment^(a)

Thousands	Summer 1993	Autumn 1993	Winter 1993/94	Spring 1994	Summer 1994
Employees					
Full-time	-59	-48	23	-19	..
Part-time	9	89	4	57	..
Self-employed					
Full-time	20	31	14	11	..
Part-time	14	2	-21	29	..
Men					
Full-time	-26	11	30	18	38
Part-time	14	26	-12	43	15
Women					
Full-time	-12	-28	6	-26	29
Part-time	9	64	-4	43	9
Total					
Full-time	-38	-17	36	-8	67
Part-time	23	91	-17	86	24
Total (b)	-24	74	7	80	65
Total hours worked per week (millions); (c)	793	830	783	826	..
change on the same period a year ago	-4	-3	5	11	..

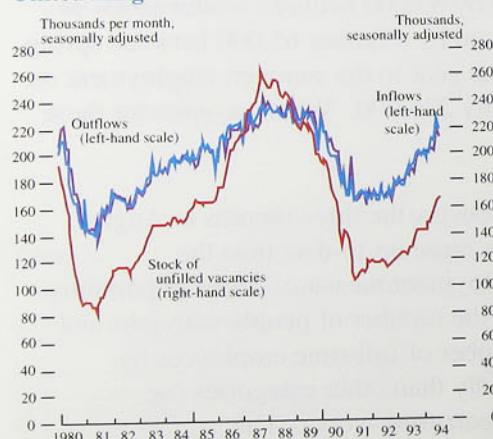
	1993 Q2	Q3	Q4	1994 Q1	Q2
Workforce in employment	2	125	-14	-85	-35

Source: Employment Department and Labour Force Survey.

Note:

- (a) Respondents are classed as 'part-time' or 'full-time' according to self-assessment.
 (b) Total in bold may differ because figures for full/part-time split do not include people on government training schemes or unpaid family workers.
 (c) 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.

Chart 4.5
Vacancies at Job Centres in the United Kingdom^(a)



Note: It is thought that about one third of all vacancies are notified to Job Centres.

(a) Excluding Community Programmes.

differences, combined with the differing sample periods and coverage, particularly of jobs in new firms, account for the contradictory signals from these two sources.

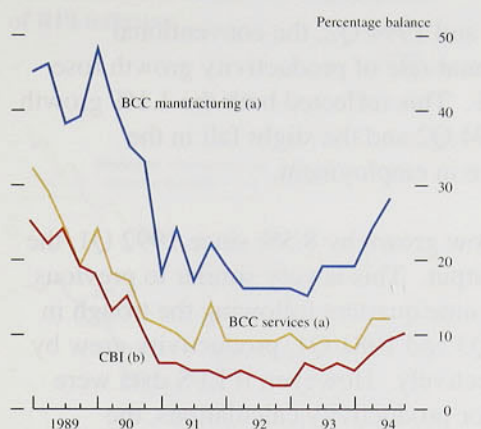
The spring LFS found that employment growth continued to be dominated by expansion of part-time working and self-employment (see Chart 4.4 and Table 4.B). Between winter 1993–94 and spring 1994, full-time employment fell by 8,000, but part-time employment increased by 86,000—split evenly between men and women—and self-employment increased by 41,000. The summer LFS recorded a further 24,000 increase in part-time employment and a rise in full-time employment of 67,000. The LFS shows that total hours worked per week rose by 1.3% in the year to spring 1994, despite the increased proportion of part-time workers in the labour force. Based on this evidence, labour demand has been increasing.

Indirect indicators of labour market activity, such as data on vacancies, confirm the growth of labour demand. The seasonally adjusted stock of unfilled vacancies at Job Centres grew by 8.1% between March and June, and increased by a further 8.4% between June and September, although the stock of vacancies has risen less rapidly since 1992 Q1—the trough in output—than was the case in the last cycle (see Chart 4.5).

Both the CBI and British Chambers of Commerce (BCC) Quarterly Surveys report an increase in skill shortages. In its 1994 Q4 Survey, the CBI found that 10% of firms reported a shortage of skilled labour as most likely to limit their output, up from 6% in 1993 Q4. The BCC 1994 Q3 Survey found 28% of manufacturing firms and 12% of service sector firms reporting difficulties in recruiting skilled manual workers, up from 19% and 9% respectively in 1993 Q3. Skill shortages have increased, but they remain below the levels of the late 1980s (see Chart 4.6). The CBI Survey shows that, in both of the previous recoveries, skill shortages increased by four percentage points in the first ten quarters. The increase has been five points this time. The level of skill shortages in the most recent recovery has been slightly higher than in the corresponding quarters of 1981–83, but lower than in 1975–78.

Labour demand has increased, but not by enough yet to generate wage pressure. At present, skill shortages are not so acute as to pose a major threat of wage inflation.

Chart 4.6
Labour shortages



Sources:

- (a) British Chamber of Commerce Quarterly Survey.
Q: Have you experienced difficulties in recruiting staff in any of the following categories: skilled manual?
(b) CBI Industrial Trends Survey.
Q: What factors are likely to limit your output over the next four months: skilled labour?

Table 4.C
Unemployment

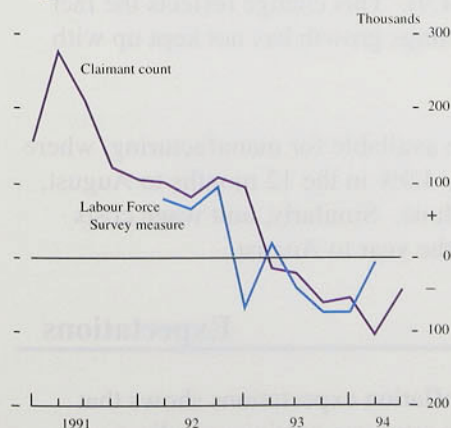
United Kingdom, seasonally adjusted

	Units	Latest period	Half year earlier	Year earlier
Rate	%	9.3	9.9	10.4
Change (qoq) (a)	000's 1994 Q3	-51.4	-160.5	-287.1
Change (qoq) (b)	000's 1994 Summer	-14.0	-93.0	-218.0

(a) Total numbers claiming unemployment-related benefit.

(b) Total numbers out of work and seeking work—Labour Force Survey.

Chart 4.7
Changes in unemployment (Great Britain only)^(a)



(a) Since 1992 Q1, the LFS has been conducted on a quarterly basis; previously it had been an annual survey.

4.3

Unemployment

All measures show that unemployment has fallen in 1994—the picture is clearer than it is for employment (see Table 4.C). Claimant unemployment was 2.57 million in September, 9.1% of the workforce. The claimant count fell by 77,300 between June and September and by 336,000 in the year to September. The spring and summer LFS confirm these findings (see Chart 4.7). The spring LFS recorded a fall in ILO unemployment⁽¹⁾ of 79,000 in the three months to May compared with the previous three months—a period in which the UK claimant count fell by 83,000. Between the spring and summer surveys, ILO unemployment fell by a further 14,000 and claimant unemployment by 63,000.

The fall in unemployment, while not entirely uniform, has affected all the main categories of the workforce. Both male and female claimant unemployment have fallen in every month bar one since January. In the three months to September, male unemployment fell by 64,300 and female unemployment by 13,000. Claimant unemployment rates fell in every region of the United Kingdom in the 12 months to August, and fell still further in September except in the South East, and Yorkshire and Humberside. According to the LFS, in the year to summer 1994, ILO unemployment rates also fell in all but two regions. The average fall was 0.9 percentage points. The exceptions were the North West—where the rate remained unchanged at 10.6%—and the East Midlands, where it rose from 8.8% to 8.9%. Similarly, ILO unemployment rates fell for all age groups, apart from men aged over 65 and women over 60.

The more uniform is the fall in unemployment across regions and demographic groups, the less likely it is to generate increased wage pressure. If the fall in unemployment were concentrated in only one region, for example, that local labour market might reach a 'bottle-neck', forcing local wages up. Divergent regional unemployment rates imply higher aggregate wage inflation for a given level of national unemployment, if the typical regional relationship between wage inflation and unemployment is non-linear. Regional unemployment rates are now less dispersed than in the past, which may help to account for the lower-than-expected increases in nominal earnings.

(1) According to the International Labour Office (ILO) measure of unemployment, an individual is deemed to be unemployed if at the time of interview he or she is (i) without a job, (ii) willing to start work in the two weeks following the interview, or (iii) waiting to start a job already obtained.

Chart 4.8
Whole-economy productivity and unit wage costs

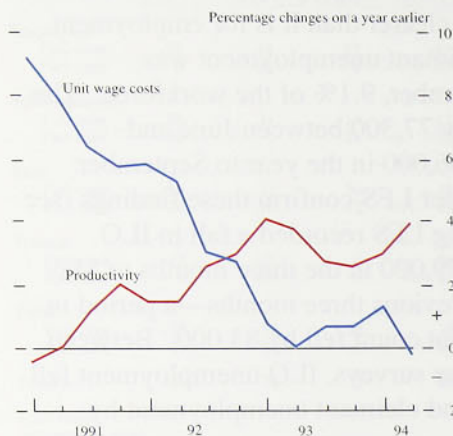


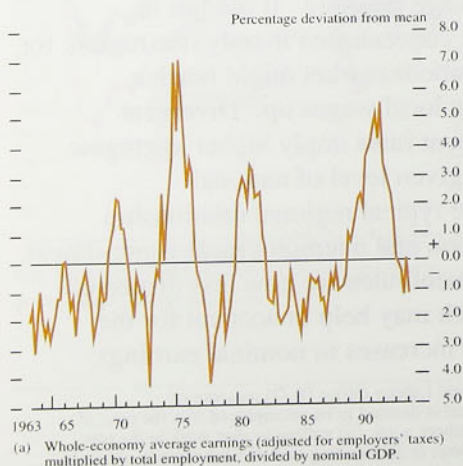
Table 4.D
Unit wage costs and their components

Percentage changes on same period in previous year

	Output	Employment	Labour productivity	Earnings per employee	Unit wage costs
(a) Whole economy					
1991	-2.1	-2.7	0.7	8.0	7.3
1992	-0.5	-2.5	2.1	6.3	4.1
1993	2.1	-1.2	3.2	3.7	0.5
1993 Q1	1.4	-2.4	4.0	4.8	0.7
Q2	1.8	-1.9	3.7	3.7	—
Q3	2.2	-0.6	2.7	3.4	0.6
Q4	2.7	0.1	2.5	3.1	0.6
1994 Q1	3.2	0.2	3.0	4.3	1.3
Q2	3.8	—	3.8	3.5	-0.3
(b) Manufacturing industry					
1991	-5.4	-8.0	1.2	8.2	7.0
1992	-0.6	-4.2	4.5	6.6	2.0
1993	1.4	-3.4	3.8	4.5	0.5
1993 Q1	1.4	-4.2	5.7	4.7	-0.9
Q2	1.3	-3.4	4.8	4.9	0.2
Q3	1.2	-1.6	2.9	4.4	1.4
Q4	1.6	-0.3	2.1	4.0	1.7
1994 Q1	2.3	-0.7	2.8	4.8	1.9
Q2	3.8	-1.0	4.5	4.4	-0.1

Note: Manufacturing employment and average earnings are based on SIC1980; manufacturing output is based on SIC92.

Chart 4.9
Real unit labour costs^(a)



4.4

Productivity

Between 1994 Q1 and 1994 Q2, the conventional measure of the annual rate of productivity growth rose from 3.0% to 3.8%. This reflected both the 1.1% growth in real GDP in 1994 Q2 and the slight fall in the recorded workforce in employment.

Productivity has now grown by 8.5% since 1992 Q1, the recent trough in output. This is very similar to previous recoveries. In the nine quarters following the trough in each cycle, 1975 Q3 and 1981 Q1, productivity grew by 8% and 10% respectively. However, if LFS data were used as the basis for productivity calculations, the estimate of the increase in whole-economy productivity since 1992 Q1 would be 6.2% (quarterly LFS data are not available prior to 1992). Slower productivity growth in the recovery is consistent with increased flexibility in the labour market. With easier hiring and firing, firms should be less inclined to hoard labour during a recession—productivity actually rose between 1990 Q2 and 1992 Q2—and more inclined to hire in an upturn, possibly on temporary contracts. The more flexible the labour market becomes, the less volatile productivity growth should be.

Whole-economy unit wage costs fell in 1994 Q2, to a level 0.3% lower than a year earlier, having fallen by 1.6% since the previous quarter (see Chart 4.8 and Table 4.D). The four-quarter growth rate of unit wage costs remains more than five percentage points below the average level for the 1990s. In 1994 Q2, real unit wage costs were around 1% below their long-run average, having been more than 5% above the mean in 1992 Q1 (see Chart 4.9). This change reflects the fact that average real earnings growth has not kept up with productivity growth.

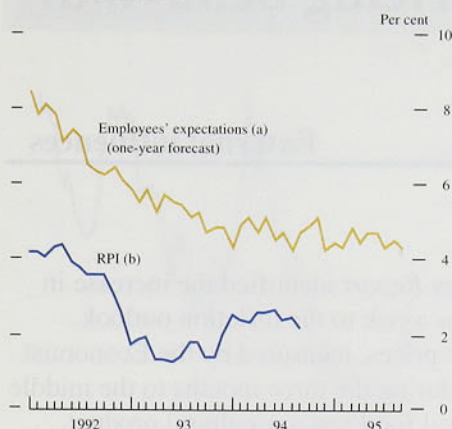
More timely data are available for manufacturing, where productivity grew by 4.9% in the 12 months to August, down from 5.7% in June. Similarly, unit wage costs were 0.3% lower in the year to August.

4.5

Expectations

Gallup's survey of inflation expectations shows that employees' price expectations continue to adjust very slowly. Employees expect RPI inflation to exceed 4% in 1995, despite having seen actual RPI inflation below 3.0% since November 1992, and having made an average forecast error of about two percentage points in

Chart 4.10
RPI inflation vs employees' expectations
of RPI inflation



(a) Based on Gallup Survey of Employees.
 (b) Percentage changes on a year earlier.

1993 and 1994 so far (see Chart 4.10). This is worrying, because although monetary policy will not validate inflation outside the target range, excessive price expectations may lead to unnecessarily high nominal wage claims and lower employment. This is particularly the case in wage agreements which are multiple-year deals.

However, as noted in the *August Report*, evidence from the Barclays Basix Survey showed that the price expectations of general secretaries of TUC-affiliated trade unions, although still above the actual RPI outturn, were lower than those of employees.

4.6

Summary

Labour demand has increased. Employment evidence is mixed, but the Labour Force Survey found an increase in both employment and total hours worked in the three months to May compared with the previous three months. The increase in employment continued in the three months to August. And the growth in the stock of vacancies over the same period confirmed the increase in labour demand. Unemployment continues to fall. For given expectations of inflation, this tightening of the labour market would be expected to push up nominal earnings. So would the growth of labour productivity if it had been faster than the growth of real wages. But, although there is some evidence of an increase in skill shortages and settlements may be edging upwards, these have not yet led to an acceleration in nominal earnings. At the moment, it is uncertain whether this is because inflation expectations have fallen rapidly enough to counteract these factors, or because earnings growth is about to move upwards.

5

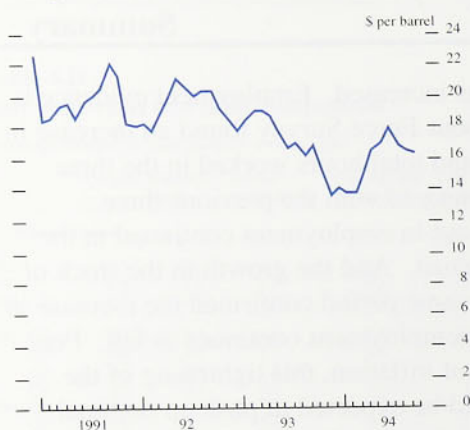
Pricing behaviour

5.1

External influences

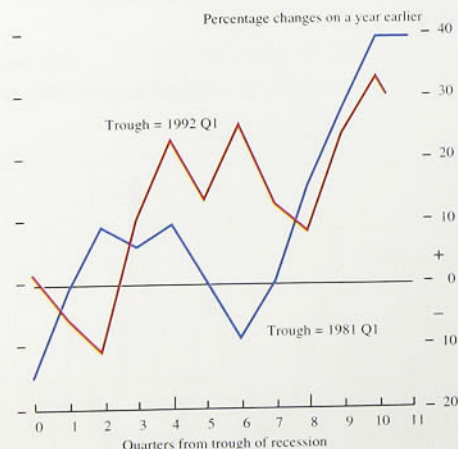
Commodities

Chart 5.1
Oil price^(a)



(a) Measured by price of Brent crude one month forward.

Chart 5.2
Sterling non-oil commodity prices



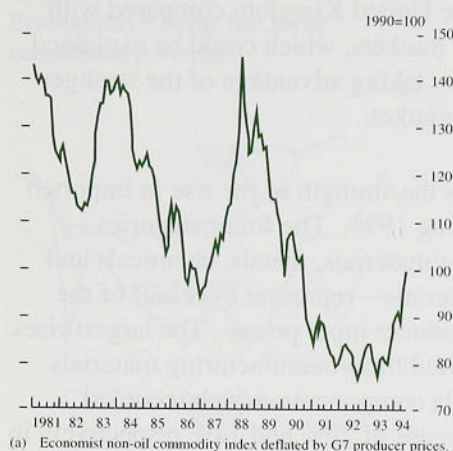
The August *Inflation Report* identified the increase in commodity prices as a risk to the inflation outlook. Non-oil commodity prices, measured by the Economist sterling index, fell during the three months to the middle of October, as several food and agricultural product prices weakened. In particular, timber prices fell by over 15% as a result of an industrial relations dispute during the period, and adverse weather conditions affected a number of food product prices. Metal prices, however, continued to increase. Looking at non-oil commodity prices over the year, the Economist index shows an annual increase of around 30% to mid-October. Using a UK trade-weighted sterling index, the Bank estimates that non-oil commodity prices increased by just over 17% in the year.

Because of the fall in oil prices from their recent peak in the second half of July, sterling commodity prices including oil fell by nearly 12% from the end of July, resulting in an annual rate of increase to mid-October of under 3%. Brent crude oil prices have fallen by around 13% in the past three months—reflecting supply developments such as the completion of maintenance work in the North Sea, the ending of the Nigerian oil workers' strike and an easing of tensions in the Gulf (see Chart 5.1).

Chart 5.2 shows the behaviour of non-oil commodity prices during the current recovery and the previous cycle, starting from the troughs in the level of real GDP in 1992 Q1 and 1981 Q1 respectively. Commodity prices are particularly volatile, so they can affect UK inflation in the short term despite the small share of commodities in total inputs. The recent behaviour of commodity prices is not substantially different from that seen during the early 1980s recovery.

Chart 5.3 deflates the Economist index using an index of G7 producer prices (all series are denominated in US dollars). From the trough in the third quarter of 1993, relative commodity prices have increased by around

Chart 5.3
Real^(a) commodity prices

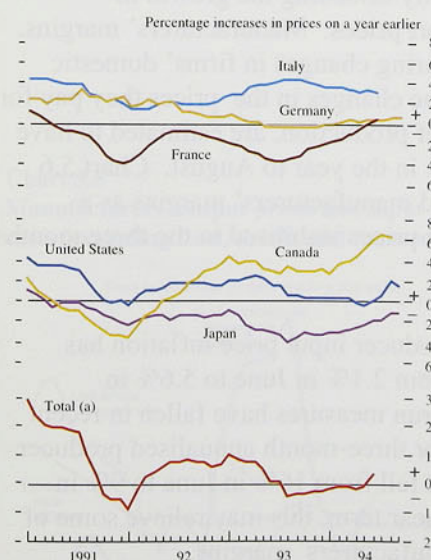


27%. Comparison with the previous recovery suggests that commodity prices could rise further as the world economy recovers. Real commodity prices, however, have fallen by around 30% since the early 1980s, suggesting that non-oil commodities have declined in importance as factors of production.

Anecdotal evidence, including reports from the Bank's Agents, suggests that the rises in primary commodity prices are beginning to feed through to intermediate stages of the supply chain. Material cost increases are feeding through in the metals, paper and board, chemicals and building materials industries in particular. But many firms are having to absorb or offset increased costs because price increases further along the supply chain are difficult to achieve. There is a risk that more of the increases in costs could be reflected in prices in the future.

Overseas inflation and import prices

Chart 5.4
Major six countries' producer prices

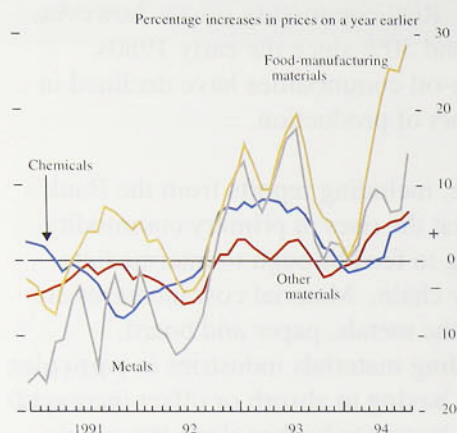


(a) Weighted according to share of GNP.

Chart 5.4 shows that the annual rise in producer prices in the major six economies remained subdued in the first six months of 1994, although recent data from some countries suggest that inflation has since picked up slightly. The latest IMF *World Economic Outlook* argues that, unless world output proves significantly stronger than now forecast (3.1% in 1994, 3.6% in 1995), there is little risk of a general pick-up in inflation in the near term, despite the significant rise in the prices of some primary goods. If expansion does prove stronger, however, concerns about rising inflation would be warranted. The extent to which foreign currency prices feed through to domestic inflation is determined by the exchange rate. If the exchange rate always moves to offset the difference between UK and foreign inflation, overseas price increases will not feed through to UK inflation.

Although import prices have not always responded fully to changes in the exchange rate, some increase in import prices was expected after sterling's fall in September 1992 when the United Kingdom left the ERM. In general, an exchange rate change is likely to pass through rapidly and fully into import prices if the imported goods are homogeneous in nature and traded in competitive markets, and if the exchange rate change is expected to be permanent. Prices of non-oil imports rose by just under 16% between 1992 Q3 and 1994 Q2. In the same period, the sterling effective exchange rate depreciated by 12%.

Chart 5.5
Import prices^(a)



(a) Import contribution to producers' input price index.

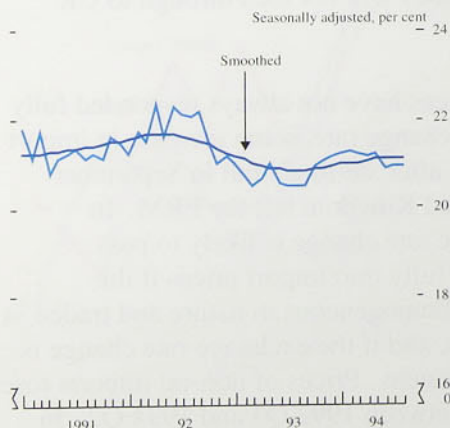
Table 5.A
Manufacturing input prices, margins and output prices

Percentage changes on a year earlier

	1993	1994		
		Q1	Q2	July
Unit labour costs	1.2	2.1	—	-0.9
Manufactured imports (a)	9.2	1.2	3.7	4.8
Materials and fuels (b)	3.6	-0.8	2.3	3.8
Bought-in services (c)	3.7	3.5	1.8	1.9
Weighted average costs (d)	3.9	1.9	1.5	1.5
Nominal margins (b) (e)	-2.2	4.8	4.2	4.0
Domestic output prices (b)	2.6	2.5	2.1	2.0

- (a) Latest month's trade prices are estimated using data for non-EU trade.
 (b) All manufacturing industry excluding food, drink, tobacco and petroleum.
 (c) Proxied by the services price deflator before 1994, and the price of non North Sea output from 1994 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 $P_t/P_0 \cdot \sum (\omega_i C_{it}/C_{i0})$, 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_i is the weight for factor i in the total value of output in 1989 (from the 1989 Input-Output Tables). The series is equivalent to the nominal increase in the value of profits per unit of output. Whenever it grows faster than output prices, margins as a percentage of the total value of output will increase.

Chart 5.6
Manufacturers' margins as a proportion of output prices



With world export prices (in domestic currencies) rising by around 1% in the first two quarters of 1994, there may have been an increase in foreign exporters' margins on goods sold to the United Kingdom compared with goods sold to other markets, which could be explained by foreign producers taking advantage of the stronger demand in the UK market.

Chart 5.5 illustrates the strength of the rise in imported material prices during 1994. The four categories—food-manufacturing materials, metals, chemicals and other imported materials—represent over half of the contributions to producer input prices. The largest rises have been in imported food-manufacturing materials and imported metals components, which recorded annual rates of increase of 29% and 14% respectively in September. This is consistent with the rise in commodity prices—both of agricultural products and metals—during the year.

5.2

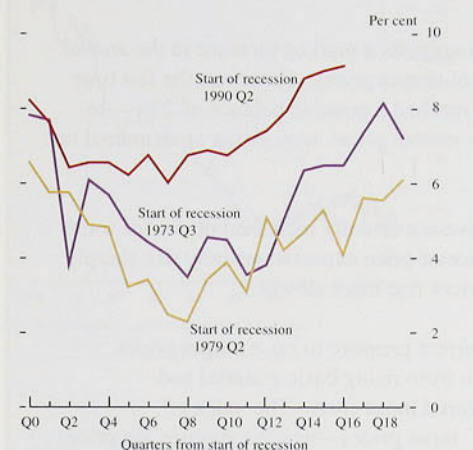
Margins

Table 5.A shows how movements in input prices have fed through to manufacturers' output prices. Costs have remained subdued—weighted average costs are estimated to have increased by 1.4% in the year to August. Unit labour costs have fallen (by 0.5% in the year to August), partly offsetting the growth in manufacturing import prices. Manufacturers' margins, calculated by comparing changes in firms' domestic output prices with the changes in the prices they pay for the various factors of production, are estimated to have grown by nearly 4% in the year to August. Chart 5.6 shows that estimated manufacturers' margins as a proportion of output prices stabilised in the three months to August.

Although annual producer input price inflation has continued to rise, from 2.1% in June to 5.6% in September, shorter-run measures have fallen in recent months. The rate for three-month annualised producer input price inflation fell from 16% in June to 9% in September. In the near term, this may relieve some of the pressure on manufacturers' margins.

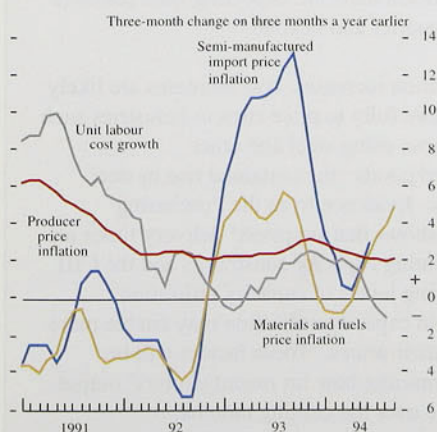
Bank estimates suggest that retailers' margins fell by around 10% in the year to the second quarter of 1994. As noted earlier, although cost pressures are emerging at intermediate stages of the supply chain, it does not yet appear that retailers are able to rebuild their margins. The pressure on retail margins has persisted for longer

Chart 5.7
Profitability^(a) in the last three
recessions/recoveries



(a) Non North Sea ICCs' pre-tax rate of return on capital stock at replacement cost (net of capital consumption).

Chart 5.8
Manufacturers' output prices and input
costs (excluding food, drink, and tobacco)



than expected. One consequence of the further discounting, particularly in the food and second-hand car markets, is that retailers might not be in a position to increase their margins over the next quarter.

The latest CBI Quarterly Industrial Trends Survey reported that a seasonally adjusted balance of 22% of manufacturing firms expected to raise prices over the following four months, compared with 20% reported in July and 12% reported as achieving higher prices during the past four months. And although prices fell slightly in September, the Chartered Institute of Purchasing Supply Purchasing Managers' Index remained at a high level. Prices rises were attributed to supply problems, as well as to commodity prices.

5.3

Profitability

Profitability is best measured by the returns firms earn on the capital they employ; these depend, in turn, on how prices move relative to costs and the extent to which capital is utilised. Chart 5.7 shows that the strong growth in profitability is in line with previous recoveries, although it started from a significantly higher level. Profitability has been less volatile in the latest cycle than in the previous two, largely reflecting cost control in this recovery so far.

Chart 5.8 shows changes in manufacturers' output prices and the costs of the manufacturing sector. On a seasonally adjusted basis, output prices (excluding food, beverages, tobacco and petroleum) rose by 0.3% in July and August, and 0.4% in September. The annual inflation rate rose slightly, from 2.0% in June to 2.1% in September.

The CSO output price data tend to understate emerging price pressures in the economy because they do not measure price increases paid by firms to companies in the same sector. Users of steel, paper, chemicals and building materials have faced significant cost increases which have not yet fed through to output prices. Output price inflation might therefore rise over the coming months, with firms seeking to pass on rising costs further down the supply chain.

The relationship between retail prices and producer prices runs in both directions. Producer prices clearly affect retail prices because of wholesale costs, but retail prices may affect producer prices through wages and

Producer output prices

The fall in annual output price inflation from mid-1993 to 1.9% in July this year—the lowest level since December 1986—was a marked feature of the economic recovery. This sharp fall appears to have been the product of intense competition facing firms, reflecting the amount of spare capacity in many product markets, as well as greater price sensitivity on the part of consumers, reflecting earlier tight monetary policy. These market conditions were accompanied by falls in unit labour costs for much of 1993, along with some fall in input costs.

More recently, however, there have been indications that output price inflation has reached a turning-point and is now on an upward trend. Survey evidence and intelligence from the Bank's Agents over recent months have pointed to some upturn in producer prices, which has now begun to be reflected in the official CSO data. Seasonally adjusted output prices (excluding food, drink, tobacco and petrol (FDTP)) rose by an annualised rate of 3.0% in the three months to September compared with the previous three months.

Evidence from the CBI Industrial Trends Survey reinforces these concerns. Recent Surveys have shown a sharp increase in manufacturers' price expectations—with a seasonally adjusted balance of 22% of firms in October expecting to increase prices over the next four months. The chart shows that there is a strong relationship

rate of 2.1% to around 3.0% by January next year. This would bring output price inflation back to its 1993 Q4 level.

The projection suggests a marked increase in the annual rate of growth of output prices. However, the last time the CBI series reached a positive balance of 20%—in October 1990—output prices were rising at an annual rate of over 6%.

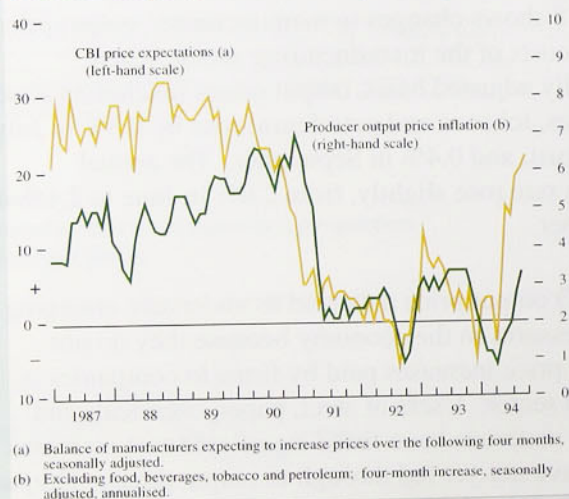
When firms have not actually increased prices for some time, the balance of price expectations may rise sharply while actual prices rise more slowly.

Much of the current pressure to raise output prices appears to stem from rising basic material and semi-manufactured input costs. The index of manufacturers' input prices—which measures the prices of fuels and basic materials—has risen sharply this year and in September stood 6.2% above its level a year earlier (unadjusted, excluding FDTP). Similar evidence is provided by the Purchasing Managers' Prices Index which has registered a balance in excess of 50% since October 1993.⁽¹⁾ This evidence has raised concerns about rising output and retail prices as the recovery advances, capacity utilisation rises and the output gap narrows.

Significant price increases appear to be restricted to intermediate stages in the supply chain at the moment. There are fewer signs that material cost increases are resulting in higher prices closer to final markets. The latest survey of trends in the printing industry, for instance, suggests that in Q3 more firms faced continuing pressures to reduce prices—particularly from the retail sector—than to raise prices, despite the large rise in paper and other material costs. A majority of firms in the survey do, however, expect to raise prices in Q4.⁽²⁾ Similarly, steel stockholders are expecting their prices to rise in the fourth quarter and beyond.

As capacity utilisation increases, cost increases are likely to feed through more fully to price rises in industries such as printing, and those using steel and other semi-manufactured goods: the sustained rise in steel prices reflects this. Evidence from the Purchasing Managers' Index shows that suppliers' delivery times are lengthening, indicating capacity constraints and the CBI Survey reveals rising levels of capacity utilisation. Further increases in capacity utilisation may enable more firms to increase their prices. These factors will be important in determining how far manufacturers' output prices actually rise over the coming months.

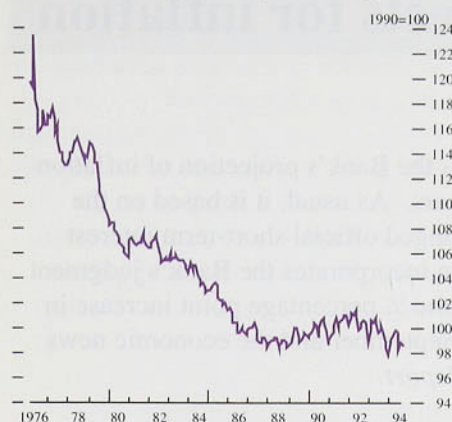
Producer output prices and CBI price expectations



between CBI price expectations and CSO output prices. Statistical estimation of this relationship suggests that the CBI series can be regarded as a good leading indicator of output prices. On the basis of this estimation, output price inflation is projected to rise from its current annual

(1) A balance in excess of 50% indicates that the prices of manufacturers' purchases are rising on a monthly basis.
(2) British Printing Industries Federation Survey of Trends, October 1994.

Chart 5.9

Ratio of RPIY goods to producer prices^(a)

(a) Excluding food, drink, tobacco and petroleum.

other costs. Chart 5.9 shows the historical behaviour of the ratio of RPIY goods prices to producer prices. The downward trend shows that it is possible for producer price inflation to be above RPIY goods inflation for long periods.

The extent to which higher input prices are passed through into higher output and retail prices will depend largely on competitive conditions in product markets, for example how far potential supply exceeds demand, and on trends in other components of manufacturers' costs. The impact of rising material costs may be offset to some extent by favourable movements in unit labour costs, which have been on a downward trend throughout this year. Firms can also maintain profitability by increasing volumes and by further productivity gains (see the box on page 38).

5.4

Summary

The rise in output price inflation is consistent with recent survey evidence from the manufacturing sector, which suggests that larger increases are in store. The strong increase in input prices seen earlier in the year has begun to feed through to manufacturing industries' customers. With the continuing rise in commodity prices pushing up manufacturers' input prices, output price inflation may well rise further in the near future.

6

Prospects for inflation

This section presents the Bank's projection of inflation over the next two years. As usual, it is based on the assumption of unchanged official short-term interest rates. The projection incorporates the Bank's judgment about the impact of the $\frac{1}{2}$ percentage point increase in official rates on 12 September and the economic news since the previous *Report*.

6.1

The news

It is desirable to use all the relevant information about the state of the economy to assess the future path of inflation. That is why the previous sections reviewed a wide range of data on monetary and real developments. But it is helpful to summarise the main pieces of news from the past three months to put the projection in context:

- Official short-term interest rates were increased by 50 basis points on 12 September.
- Retail price inflation has fallen further—and has been a little lower than the Bank's short-term projection of three months ago (by about 0.1 percentage points averaged over the quarter).
- The main monetary aggregates continue to give conflicting signals. Narrow money growth increased more than expected—and remains well above its 0%–4% monitoring range. But broad money growth fell, and remains comfortably inside its monitoring range.
- Revised data show that the level and growth of output in the past year were higher than thought, and the output gap was smaller.
- Unemployment continued to fall and employment probably increased during the spring and summer. Lower excess supply in the labour market has not yet led to more rapid growth of average earnings, although settlements have been edging up.
- Manufacturers' annual input price inflation—particularly for imports—has been high. Non-oil

commodity prices are much higher than a year ago. The increases have begun to feed through to output prices; factory-gate inflation has shown signs of increasing, and surveys of price expectations suggest this will continue.

6.2 The Bank's medium-term inflation projection

The economic news has led the Bank to lower its medium-term inflation projection. This section explains why.

The evidence about output growth—a narrower output gap closing more rapidly—would have led, on its own, to an upward revision of the projection. Moreover, European growth prospects are better than they were three months ago, and import growth has fallen. Hence a bigger contribution to growth from net external trade is in prospect.

This has been outweighed by:

- The impact of the interest rate increase: this will slow down the growth of demand, first by encouraging higher saving and reduced borrowing, and second by reducing the disposable income (after interest payments) of indebted households and companies. The effect will probably be greater than might have been expected on the basis of past episodes, because of the continuing high level of indebtedness of the personal sector. It is also possible that the signalling effect of an increase in rates earlier in the recovery than many had expected might lower inflation expectations.
- Recent price developments: inflation has again turned out a little lower than expected, despite the fact that the output gap in the past year or so was smaller than thought at the time. A given output gap now appears to have slightly more of a disinflationary impact than in previous cycles. There is evidence of further aggressive discounting by retailers, especially in the food sector, which may reflect a permanently higher degree of price competition and innovation in the sector. If so, there has been a favourable supply shock generating permanently higher output and lower prices than otherwise.
- Real average earnings have increased less rapidly than expected, in the light of past productivity

Chart 6.1
RPI inflation

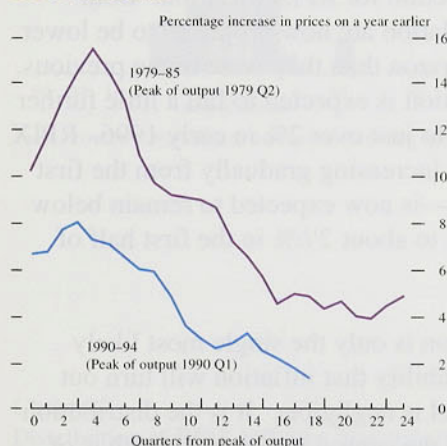


Chart 6.2
GDP deviation from trend

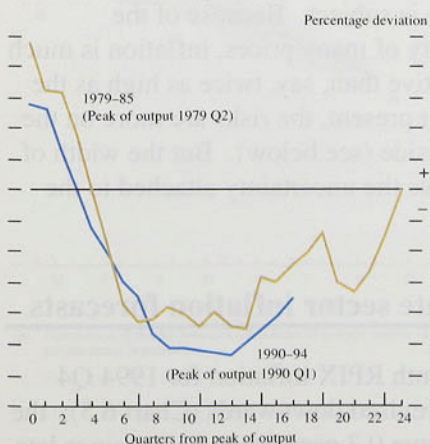
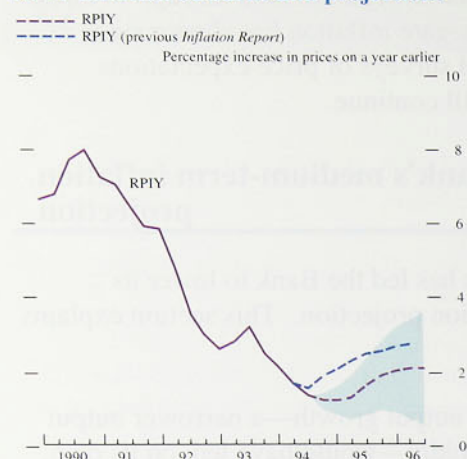
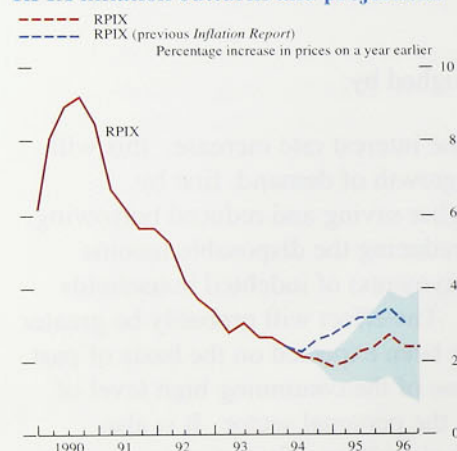


Chart 6.3
RPIY inflation outturns and projections



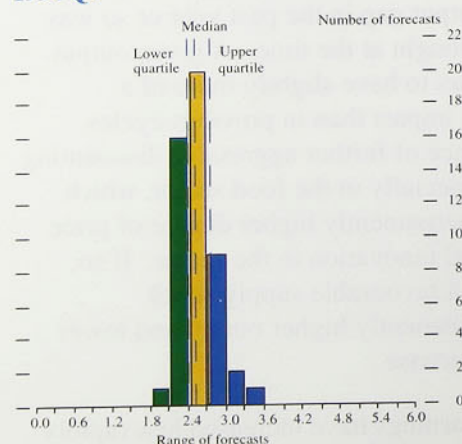
The range is defined as the central projection plus or minus the absolute average error on RPIY inflation projections since 1985. These projections have all been based on the assumption that short-term nominal interest rates are unchanged.

Chart 6.4
RPIX inflation outturns and projections



The range is defined as the central projection 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 6.5
Distribution of RPIX inflation forecasts for 1994 Q4



Source: Forecasts of 49 private sector organisations as of October 1994.

growth and the state of the labour market. Hence, given past inflation, unit labour costs and the GDP deflator have been lower than expected. The growth of real disposable income and consumption is likely to remain below GDP growth.

It is not unprecedented for inflation to remain steady while the output gap narrows. Charts 6.1 and 6.2 compare the evolution of inflation and deviations from trend GDP (a very rough proxy for the output gap) in similar stages of the two most recent business cycles, 1979–85 and 1990–94.

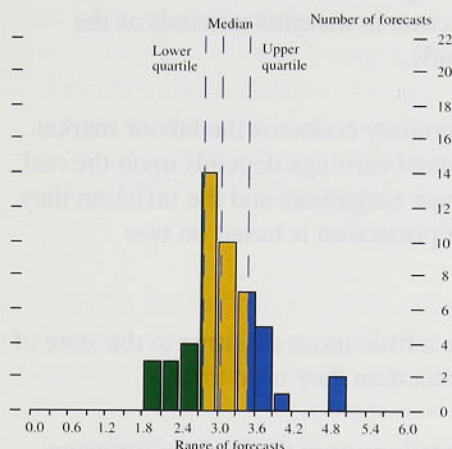
Chart 6.3 shows the Bank's central projection—the single most likely outcome—for the annual rate of RPIY inflation over the next two years, and Chart 6.4 the corresponding projection for RPIX inflation. Both RPIY and RPIX inflation are now projected to be lower over the forecast horizon than they were in the previous *Report*. RPIY inflation is expected to fall a little further and then to edge up to just over 2% in early 1996. RPIX inflation—although increasing gradually from the first quarter of next year—is now expected to remain below 3%, and to fall back to about 2½% in the first half of 1996.

The central projection is only the single most likely outcome. The probability that inflation will turn out precisely at that level is negligible. It is the distribution of outcomes around the central projection which is of greater importance. Charts 6.3 and 6.4 include a range around the central projections to show the degree of error in past projections. The range is the central projection plus or minus the absolute average error on RPIX inflation projections made since 1985. But it does not reflect the Bank's assessment of the risks to which the current projection is subject. Because of the downward inflexibility of many prices, inflation is much less likely to be negative than, say, twice as high as the central projection. At present, the risks are more on the upside than the downside (see below). But the width of the range demonstrates the uncertainty attached to the central projection.

6.3 Private sector inflation forecasts

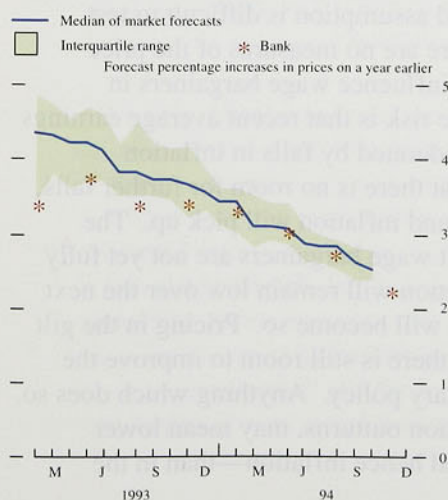
Projections of 12-month RPIX inflation for 1994 Q4 have generally been revised downwards (Chart 6.5); the median forecast is down 0.3 percentage points since late July (note that the sample of forecasts is larger than in earlier *Reports*). But the median forecast for 1995 Q4 is

Chart 6.6
Distribution of RPIX inflation forecasts for 1995 Q4



Source: Forecasts of 49 private sector organisations as of October 1994.

Chart 6.7
Distribution of RPIX inflation forecasts for 1994 Q4^(a)



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

down only 0.2 percentage points (Chart 6.6), despite interest rate forecasts having been increased by around half a percentage point. The Bank has tended to be more optimistic about inflation than the median outside forecaster. Charts 6.7 and 6.8 demonstrate this for expectations about inflation in 1994 Q4 and 1995 Q4 (fewer outside forecasters are reported in these charts than in Charts 6.5 and 6.6 in order to obtain a monthly instead of quarterly median).

Chart 6.9 shows that the inflation expectations implicit in gilt prices—which apply to the medium term, not the next two years—are very similar to those of three months ago, but peak at a slightly higher level. They had risen prior to the base rate increase, which, in turn, helped to bring them down again.

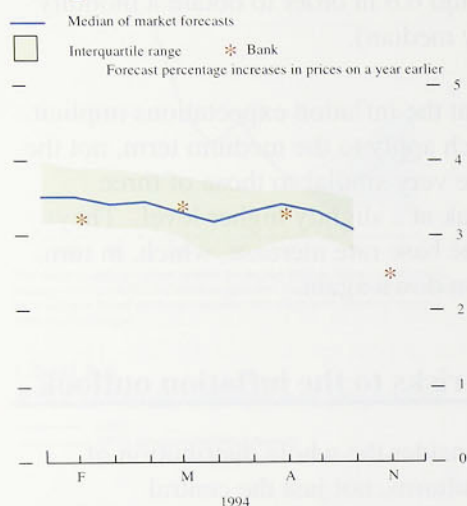
6.4 The risks to the inflation outlook

It is important to consider the whole distribution of possible inflation outcomes, not just the central projection. In present circumstances, the Bank's economic judgment is that this distribution is not symmetric. The risk of inflation being higher than the central projection is greater than the probability of it being lower. There is necessarily considerable uncertainty about what will happen to external factors (eg commodity prices, US monetary policy). But there is also uncertainty about key economic relationships at home. Some of the most important of those uncertainties are the following.

There is uncertainty about three aspects of pricing behaviour:

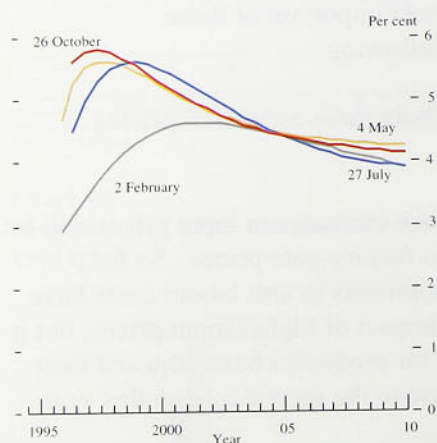
- The extent to which increases in input prices will be passed through to factory-gate prices. So far, favourable developments in unit labour costs have partly offset the impact of higher input prices, but it is uncertain how far producers have adjusted their pricing in response to the increases seen this year.
- Although producer output prices have started to accelerate, they have not done so by as much as firms' reported price expectations would have led one to expect. This may mean further increases are in the pipeline.
- Increased competition in the retail sector has reduced retail price inflation relative to producer

Chart 6.8
Distribution of RPIX inflation forecasts for 1995 Q4^(a)



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

Chart 6.9
Implied forward inflation rates



price inflation over the past year, to a greater extent than expected. This could reflect two factors, either: (i) a structural change in the sector, implying a benign supply shock to the economy with permanently lower retail margins; or (ii) a cyclical reduction in margins. If the second factor has been more important, then the risk to inflation is that the reduction in margins unwinds as the economy expands.

A fourth major uncertainty concerns the labour market. The outcome for nominal earnings depends upon the real wage targeted by wage bargainers and the inflation they expect. The current projection is based on two assumptions:

- Real wages are a little more sensitive to the state of the labour market than they used to be.
- Inflation expectations over the horizon for wage bargains have fallen, and will remain low, at least in the short run.

Neither assumption is certain. The first is important because real unit labour costs have fallen sharply (see Chart 4.9). In the past, such a situation has tended to lead to higher wage inflation, as employees have attempted to restore their real earnings. The Bank's projection allows for some increase in pre-tax real wages, but not as much as past behaviour would warrant. The second assumption is difficult to test directly because there are no measures of the price expectations which influence wage bargainers in practice. The upside risk is that recent average earnings growth has been moderated by falls in inflation expectations, but that there is no room for further falls, so earnings growth and inflation will pick up. The downside risk is that wage bargainers are not yet fully convinced that inflation will remain low over the next couple of years, but will become so. Pricing in the gilt markets shows that there is still room to improve the credibility of monetary policy. Anything which does so, including low inflation outcomes, may mean lower nominal wages—and hence inflation—than in the central projection.

A fifth uncertainty arises from the behaviour of narrow money. Some acceleration was to be expected this year as people adjusted to the lower opportunity cost of holding money after the substantial reduction in short-term interest rates between September 1992 and

February 1994. There is no sign of M4 growth increasing to any noticeable extent. Nevertheless, M0 growth has proved a good leading indicator of retail inflation in the past, so the fact that it remains higher than expected—and outside its monitoring range—is cause for concern.

Retail price inflation fell again over the past quarter. Underlying inflation, excluding indirect taxes, fell from 1.7% at the time of the August *Report* to 1.2% in September. The Government's measure of underlying inflation, which includes the effect of higher indirect taxes, fell from 2.4% to 2.0% over the same period, and has now been within the lower half of the 1%–4% target range each month since March.

Producer price inflation, however, has started to rise. Non-oil commodity prices are much higher than a year ago, and the 12-month rate of increase of producer *input* prices rose from 2.1% at the time of the August *Report* to 5.6% in September. Producer *output* price inflation rose from 2.1% to 2.4% over the same period. Excluding those components most affected by changes in excise duties—food, drink, tobacco and petroleum—the increase in the 12-month inflation rate was a little less. But, even on this definition, shorter-run measures of inflation have risen sharply from 1.4% to 3.6% between June and September. It is not clear that this yet fully reflects the rise in intermediate goods prices. The balance of firms intending to raise their prices, as reported in the CBI Survey, has remained at a high level, and the latest Survey reported that more firms had been able to achieve price increases.

This difference between retail and producer price inflation reflects the nature of the recovery. Market conditions at home remain tight, whereas exports have grown strongly. The growth rate of real domestic demand has fallen each quarter this year. Consumption growth has clearly slowed and, despite the strong financial position of the corporate sector, aggregate investment has not yet picked up to any significant extent. But export growth has been strong, manufacturing investment has risen and output growth has continued above trend.

The outlook for inflation remains favourable. Broad money growth continues at a moderate rate of around 5% with little sign of any increase. Narrow money has been growing at rates outside its monitoring range, but the impact of earlier interest rate reductions explains much of this. Nominal domestic demand growth has

slowed from around 6% at the end of last year to around 5%. None of these monetary developments suggests that a sharp rise in inflation is imminent. Retail price inflation is likely to remain low. The Bank's central projection is that RPIX inflation will bottom out in the coming months, and will rise gradually over the next two years to around 2½%, at the top of the lower half of the target range.

But the central projection is precisely that—the single most likely outcome. There are many risks to that outcome, and the Bank's economic judgment is that they are not, at present, symmetrically distributed around the central projection. It is not surprising that at very low rates of inflation the risks should be more on the upside. But there is particular uncertainty about the durability of the recent fall in retail price inflation. The greatest uncertainty concerns the continuing difference between retail and producer price inflation. It is not clear how far price pressures will be passed down the production and retail chain. The compression of retail margins, seen through most of this year, might come to a halt or even unwind. As output continues to grow above trend, it becomes more likely that rises in the prices of intermediate goods will feed through to retail prices. Higher earnings growth than is built into the central projection would make this more probable. It will be necessary to monitor these developments very carefully.

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