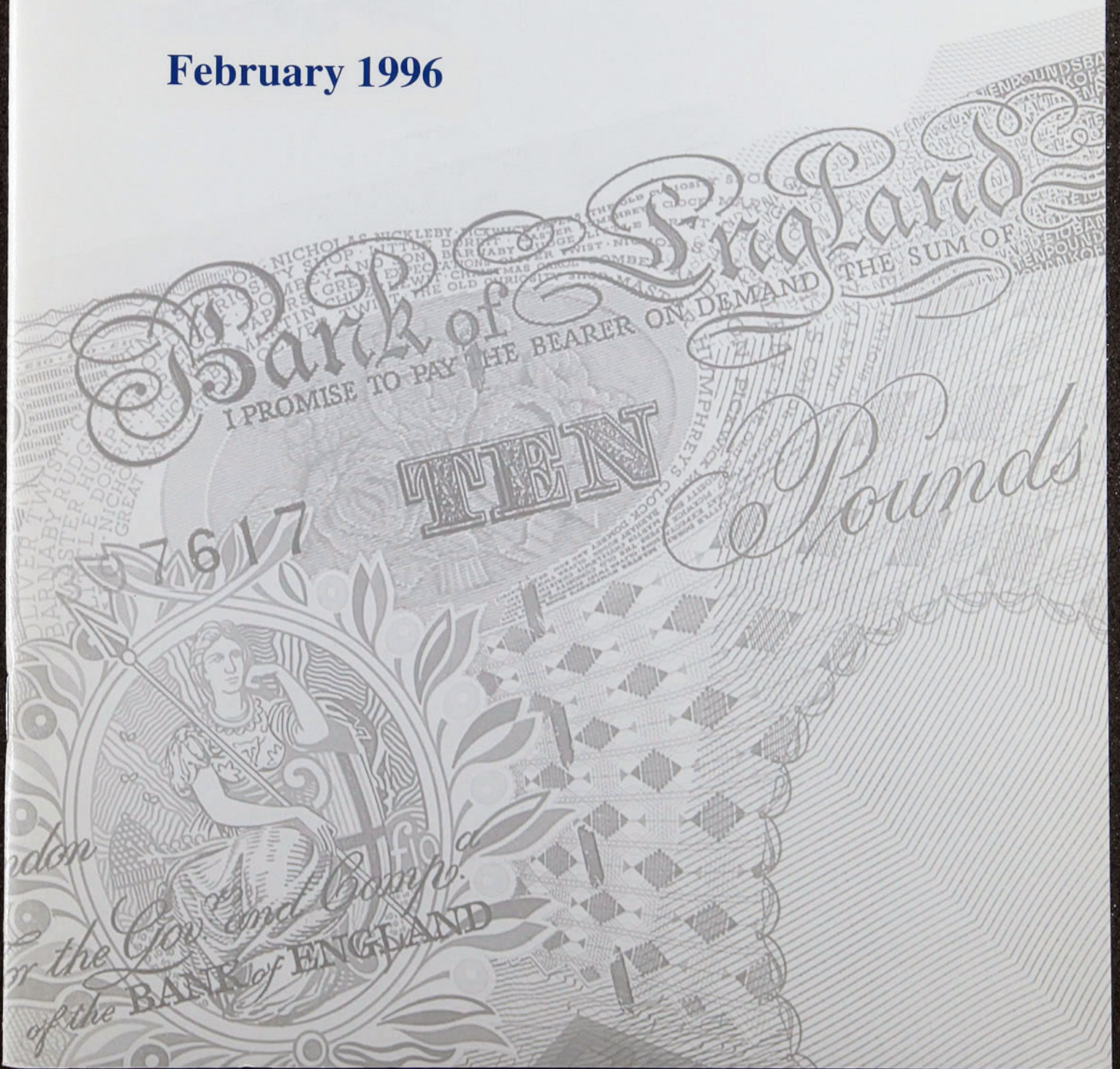
Bank of England

Inflation Report

February 1996



Inflation Report

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Summary

Underlying inflation has been stable since the November *Report*. Domestically generated inflation has remained low. **It is now clear that the pace of economic growth since the end of 1994 has been slower than first thought**.

Any further fall in the growth rate is likely to be temporary, reflecting an unwinding of involuntary stockbuilding. But a more protracted period of slow growth during 1996, as a result of significant downward revisions to growth prospects in the world economy (especially in France and Germany), cannot be ruled out.

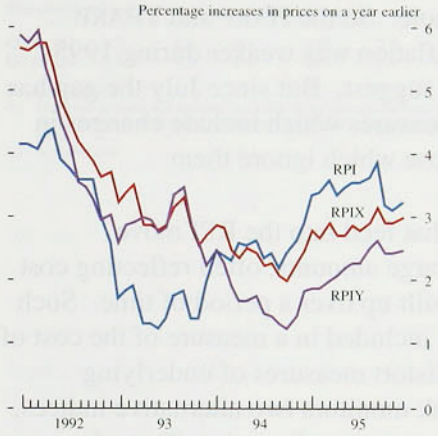
Looking further ahead, output growth is likely to pick up later this year and into next, led by accelerating consumption. Precisely when that might happen is unclear. Continuing rapid broad money growth implies a more buoyant medium-term outlook for domestic demand.

The Bank's central projection for inflation has fallen since the November *Report*, and by more in the short term than towards the end of the forecast period. A new chart of the Bank's medium-term inflation projection shows the relative likelihood of possible outcomes. **The Bank's judgment is that it is a little more likely than not that inflation will be somewhat below 2½% in two years' time**.

In the short term, the principal uncertainties concern activity, where the risks are more on the downside. Further out, however, the main uncertainties relate to the implications of broad money growth and the pace at which consumption will pick up. Here the risks are clearly more on the upside. **But it is too soon to tell if, and when, faster money and nominal demand growth will threaten achievement of the inflation target**.

Recent developments in inflation 1

Chart 1.1
Inflation (a)



RPIX = Retail prices index excluding mortgage interest payments.
RPIY = RPIX excluding VAT, local authority taxes and excise duties.

(a) Adjusted by the Bank of England for CSO error in underrecording RPI and RPIX inflation between February and May 1995. Other charts and tables in this *Report* that include measures of inflation are similarly adjusted.

Table 1.A
Headline inflation in the G7 (a)

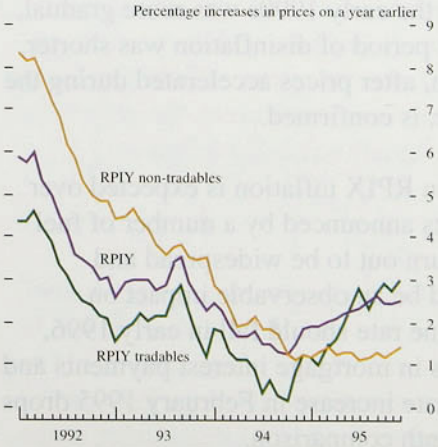
Annualised percentage changes over the period shown

	Canada	France	Germany (b)	Italy	Japan	United Kingdom	United States
1970s	7.6	9.1	5.0	13.3	8.9	13.1	7.4
1980s	6.2	6.9	2.8	10.5	2.3	6.9	5.1
1990s (c)	2.4	2.3	1.6	5.2	1.5	4.0	3.3
Dec. 1995/ Dec. 1994	1.7	2.1	1.8	5.8	-0.3	3.2	2.5

Sources: CSO and Bank for International Settlements.

(a) Group of Seven largest industrialised economies.
(b) Pan-German prices data used after January 1991.
(c) From December 1989 to December 1995.

Chart 1.2
RPIY inflation by sector



Sources: CSO and Bank calculations.

Note: RPIY inflation can be greater than both non-tradables and tradables inflation since it includes seasonal food, rents and water charges, which are excluded from both the sub-indices.

1.1 Retail prices measures

Underlying inflation has been stable since the November *Report*. The Government's target measure—the twelve-month change in retail prices excluding mortgage interest payments (RPIX)—was 3.0% in December, down from 3.1% in September. RPIY inflation, which excludes the effect of indirect tax changes as well, dropped from 2.6% to 2.5% over the same period. The headline rate fell sharply in October, following a cut in mortgage rates (see Chart 1.1).

Since the current framework for monetary policy was introduced in October 1992, RPIX inflation has remained below 4% for the longest period in more than 50 years.(1) This achievement needs to be seen in the perspective of a global trend in which inflation has recently been reduced in all the major economies (see Table 1.A). While the improvement in the United Kingdom has been particularly marked, the rate of inflation has nevertheless remained above that in France, Germany, Japan, Canada and the United States.

Goods and services can be separated into two broad categories—those which are commonly traded internationally, and those which are not. Exchange rate movements will affect the price of tradable goods directly. The price of tradables rose last year, following sterling's depreciation over the first quarter. The cost of non-tradables is determined, to a greater extent, by domestic labour market conditions. Chart 1.2 shows that non-tradables prices (based on components of RPIY) have been subdued, rising at an annual rate a little over 1% since the fourth quarter of 1994. This has coincided with a period of low earnings growth (see Section 4).

By focusing exclusively on twelve-month percentage changes, recent price developments can be obscured. Table 1.B shows short-run inflation measures, which are both seasonally adjusted and annualised. These show a fall in RPIY inflation during 1995. Adjusted RPI and

(1) Mortgage interest payments were not measured in the retail prices index until January 1975, so RPIX inflation is equivalent to the headline rate before this period.

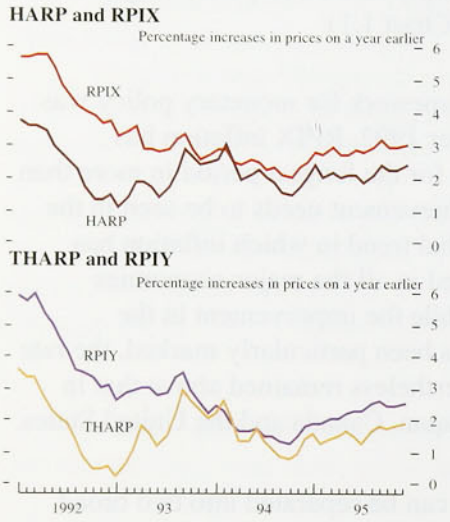
Table 1.B
Short-run measures of inflation[a]

	1994 Nov.	1995 Feb.	May	Aug.	Oct.	Nov.	Dec.
RPI	2.7	5.1	3.8	2.6	1.1	1.1	3.0
RPIX	1.6	4.5	2.7	2.6	2.0	1.9	3.8
RPIY	1.6	2.9	2.6	2.6	2.0	1.7	1.9
Tradables	0.9	2.5	3.9	2.4	1.8	2.3	2.7
Non-tradables	0.7	1.6	1.1	1.2	1.2	1.3	1.7
HARP	1.4	4.1	1.2	1.5	2.2	2.3	3.8
THARP	1.2	2.7	1.2	1.4	2.4	2.1	2.2

Sources: CSO and Bank calculations.

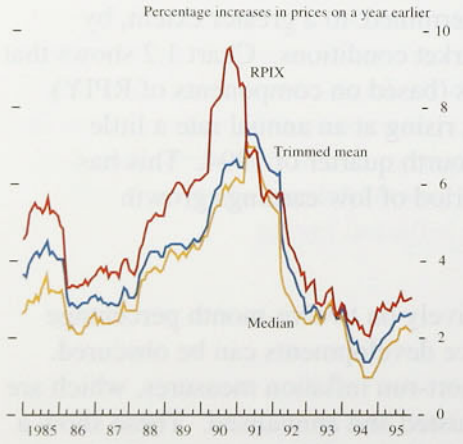
(a) The change between latest month and three months earlier, seasonally adjusted and annualised. The natural logarithms of RPIY were seasonally adjusted using a Kalman filter to decompose the series into trend, cyclical, irregular and seasonal components. The seasonal adjustment of RPI and RPIX excludes taxes by multiplying the ratios of RPI and RPIX to RPIY by seasonally adjusted RPIY. Seasonally adjusted house price data from the Halifax Building Society are then used to derive seasonally adjusted HARP and THARP from seasonally adjusted RPIX and RPIY.

Chart 1.3
Housing-adjusted inflation



Sources: CSO and Bank of England.

Chart 1.4
Measures of core inflation



Sources: CSO and Bank of England.

RPIX indices accelerated in December, but this reflected duty changes in the November Budget.

The Bank has constructed housing-adjusted retail price indices which include a measure of owner-occupied housing costs (HARP is derived from RPIX, and THARP from RPIY). These are shown in Chart 1.3. House prices rose slightly in the second half of 1995, but fell over the year as a whole. So the HARP and THARP indices record that inflation was weaker during 1995 than unadjusted data suggest. But since July the gap has narrowed between measures which include changes in housing costs and those which ignore them.

A number of prices that feed into the RPI move infrequently and by large amounts, often reflecting cost increases that have built up over a period of time. Such changes are properly included in a measure of the cost of living, yet they can distort measures of underlying inflation. So the Bank monitors two alternative indices, constructed in such a way as to limit the effect of outlying price movements. The monthly changes in all the components of RPIX are weighted according to their importance in the expenditure of a 'typical household'. They are then ranked by size.(1) The median is the rate above which one half of the resulting distribution lies, while the trimmed mean removes only the largest and smallest 15% of price changes. As Chart 1.4 shows, the implied twelve-month increase in these restricted indices—sometimes called core inflation—is often below the published RPIX measure. The reason is that price changes over time exhibit positive skewness—a few large price rises are, on balance, offset by many smaller ones. But changes in core inflation can still help to monitor the timing of shifts in underlying inflationary pressures. According to these core measures, the build-up to a peak in the early 1990s was more gradual, while the subsequent period of disinflation was shorter. The recent slowdown, after prices accelerated during the early part of last year, is confirmed.

A modest reduction in RPIX inflation is expected over 1996 Q1. If discounts announced by a number of fuel retailers in January turn out to be widespread and sustained, there could be an observable impact on inflation. The headline rate should fall in early 1996, because of reductions in mortgage interest payments and because the interest rate increase in February 1995 drops out of the twelve-month comparison.

(1) This method improves on the approach used in *Inflation Reports* up to August 1995, which compared twelve-month rather than monthly percentage changes.

Table 1.C
Changes in expenditure deflators (market prices)

Percentage changes on a year earlier

	Consumption	Investment	Government (a)	Domestic demand (b)	Exports	Imports	GDP (c)
1993	3.5	0.5	4.3	3.3	8.8	8.4	3.5
1994	2.5	2.6	2.6	2.6	0.7	3.0	1.7
1995 Q1	2.7	3.7	3.0	3.0	5.4	8.2	1.6
Q2	3.0	2.9	3.0	2.9	6.8	6.9	2.4
Q3	2.8	2.9	3.0	2.7	6.6	6.8	2.0

Seasonally adjusted quarterly percentage changes

Q2 on Q1	0.8	1.6	0.8	1.0	2.2	2.2	0.9
Q3 on Q2	0.4	0.5	0.4	0.3	1.1	1.3	0.1

(a) Consumption.
(b) Domestic demand also includes the value of the physical increase in stocks and work in progress, which does not appear separately in this table.
(c) At factor cost.

1.2 Expenditure deflators

In principle, the GDP deflator and its components (see Table 1.C) capture the price of domestic value added and so provide a more comprehensive view of economy-wide inflation than do RPI-based measures. But they are both less timely than retail price measures, and subject to substantial revision up to 18 months after initial publication. For example, at the time of the previous *Report*, the GDP deflator was estimated to have risen just 1.0% in the year to 1995 Q2. This figure has since been revised to show an increase of 2.0%. Import and export deflators both rose sharply after sterling's depreciation in 1995 Q1, consistent with the price of traded goods being set on world markets over which UK producers have little influence. The consumers' expenditure deflator rose by 0.4% in Q3, the smallest increase for more than five years. All components of domestic demand were subject to lower inflation than in the previous quarter. And the GDP deflator was extremely subdued, rising by just 0.1% in Q3.

1.3 Summary

Retail price inflation stabilised in the fourth quarter of last year. Non-tradables prices rose at an annualised rate close to 1% over most of the second half of 1995, adding to the evidence that domestically generated inflation has remained low.

2 Money and interest rates

2.1 Money and credit aggregates

Monetary growth, particularly on the broad measure, remains high. Annual growth rates of both M0 and M4 are outside their respective monitoring ranges. This section reviews the possible implications for nominal spending and future inflation.

Narrow money

In the twelve months to January, notes and coin in circulation grew by 5.7%, a rate comparable with those in the second half of 1995, but a little lower than earlier in that year. As shown in Table 2.A, shorter-run measures suggest some further modest deceleration. The three-month annualised rate was 5.1% in January, compared with 5.5% in October.

In the past, narrow money—in particular, notes and coin—was a good statistical leading indicator of inflation. But the relationship has not been particularly close over the past two years. And during 1994 and 1995, narrow money growth, at an annual rate of 6%–7%, exceeded the growth rate of nominal income by around one percentage point. In other words, narrow money velocity—the number of times the stock of cash is used in a given period—has fallen over the past two years, after a period of steady growth (see Chart 2.1). The significance of the current behaviour of narrow money for future inflation depends on whether the recent shock to velocity persists—an issue analysed in the February 1996 *Quarterly Bulletin*. Other countries' experience shows that periods of flat or falling velocity can persist for several years. At present, the growth in M0 is unlikely to be signalling higher inflation.

Broad money

Broad money accelerated in the fourth quarter of 1995, when it increased by 2.7%, compared with 2.4% in Q3. As a result, the twelve-month rate of increase of M4 rose to 9.9% in December, its highest rate since February 1991 and above the upper limit of its monitoring range of 3%–9%. Shorter-run growth rates also increased significantly: in the three months to December, M4

Table 2.A
Growth rates of monetary aggregates[a]

Per cent

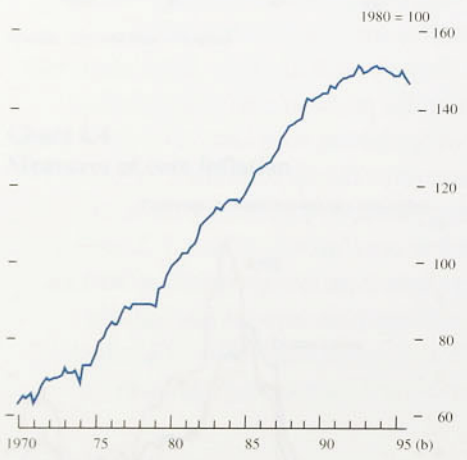
		1 month	3 months [b]	6 months [b]	12 months
Notes and coin	Oct.	0.5	5.5	6.1	5.6
	Nov.	0.4	5.2	5.2	5.6
	Dec.	0.5	5.6	5.7	5.8
	Jan.	0.3	5.1	5.3	5.7
M0	Oct.	0.3	5.8	4.3	5.2
	Nov.	0.5	5.4	5.8	5.5
	Dec.	0.9	7.2	7.3	5.7
	Jan.	-0.2	5.1	5.4	5.3
M4	Sept.	0.4	9.9	8.9	8.3
	Oct.	0.8	7.9	9.8	9.0
	Nov.	1.1	9.5	10.1	9.4
	Dec.	0.9	11.4	10.7	9.9
M4 lending	Sept.	0.6	8.4	7.7	8.3
	Oct.	0.8	7.2	8.0	8.8
	Nov.	0.5	8.1	7.5	8.4
	Dec.	0.8	9.3	8.8	8.8

			1 quarter [b]	2 quarters [b]	4 quarters
Divisia	1995	Q1	8.6	5.2	3.7
		Q2	6.9	7.7	5.3
		Q3	7.9	7.4	6.3
		Q4	8.4	8.2	7.9

Source: Bank of England.

(a) Seasonally adjusted.
(b) Annualised.

Chart 2.1
Velocity of M0[a]



(a) Calculated using GDP at market prices.
(b) Observation for 1995 Q4 is a Bank estimate.

Table 2.B
Changes in bank and building society lending[a]

£ billions

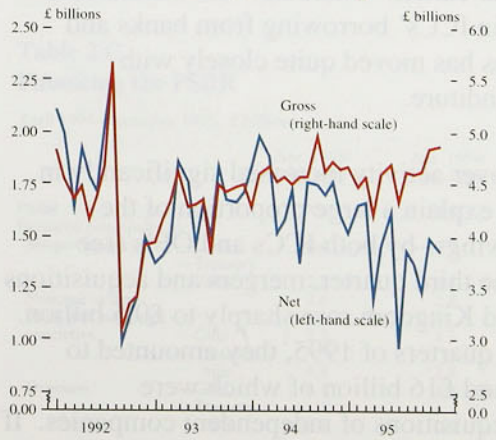
	Persons			ICCs [b]	OFIs [c]	Total
	Secured	Unsecured	Unincorporated businesses			
1994	20.9	4.3	-0.2	-1.5	9.1	32.6
1995 Q1	4.8	1.5	0.5	6.1	4.4	17.3
Q2	4.3	1.3	0.3	2.1	3.0	11.0
Q3	3.9	1.5	0.3	3.3	3.9	12.8
Q4	4.0	1.8	0.4	5.8	3.5	15.5

Contributions to annual growth in bank and building society lending (percentage points) [d]

	Persons	ICCs	OFIs	Total
1994 Q4	3.8	-0.3	1.4	4.9
1995 Q1	3.9	0.9	2.1	6.8
Q2	3.8	1.5	2.3	7.7
Q3	3.7	2.0	2.6	8.3
Q4	3.6	2.6	2.5	8.8

(a) Rows may not sum to totals because of rounding.
(b) ICCs—industrial and commercial companies.
(c) OFIs—other financial institutions.
(d) Includes securitisations and loan transfers.

Chart 2.2
Gross and net lending for house purchase[a]



(a) Personal sector borrowing from banks and building societies.

grew at an annualised rate of 11.4%, up from 9.9% in September.

The significance of strong broad money growth depends on its causes. It is helpful to distinguish between changes in the demand for and supply of broad money. On the demand side, broad money is held as both a store of wealth and a medium of exchange. The amount people wish to hold will depend not only on the level of desired spending but also on the rate of interest paid on deposits relative to other assets, agents' wealth, and other factors. An increase in the demand for broad money need not imply increased future nominal expenditure.

On the supply side, broad money is created by the banking system. Banks and building societies typically increase their assets by making loans to their customers. Since the liability side of their balance sheets—which is dominated by sterling-deposit liabilities—must also expand, broad money is likely to be created by the extension of credit. Shocks to the supply of money reflect either changes in the demand for credit or the willingness of banks and building societies to supply credit. A positive shock to the supply of money will increase nominal demand, and eventually the price level.

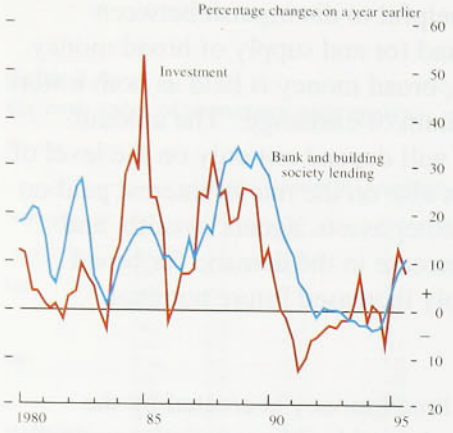
Empirical evidence suggests that the determinants of the demand for both money and credit vary from sector to sector, so it is helpful to review the sectoral breakdown of M4 and bank and building society lending.

Credit demand

Bank and building society lending to the private sector continued to grow strongly in the final months of last year. Taking the fourth quarter as a whole, lending grew by 2.2%, up from 2.0% in Q3 and 1.7% in Q2. In the twelve months to December, it grew by 8.8%, compared with 8.3% in September. Table 2.B shows the contributions to the flow of bank and building society lending by sector during 1995.

In the fourth quarter, lending to the personal sector picked up a little from the weak outturn in Q3. Lending for house purchase remained subdued, having weakened since the beginning of 1995. Furthermore, it has increased significantly more in gross than in net terms since the summer, as Chart 2.2 shows, indicating that a growing share of new mortgages has probably been used to refinance existing mortgages. Lending for

Chart 2.3
Growth in bank and building society borrowing and nominal investment expenditure by ICCs



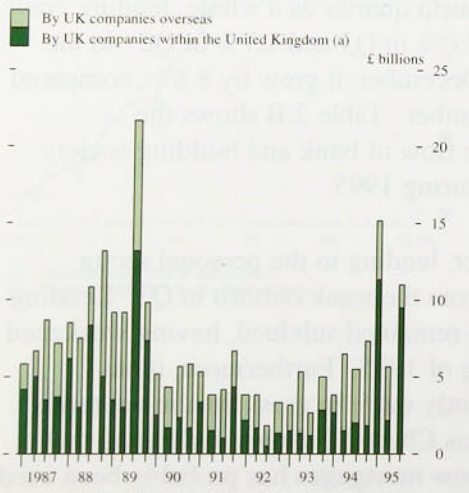
Sources: CSO and Bank of England.

consumption strengthened further in the fourth quarter. It rose by £1.8 billion in Q4, the largest quarterly increase since 1989 Q2. Total consumer credit, which includes lending for consumption by specialist lenders as well as banks and building societies, also grew more strongly; in the three months to December, it increased at an annualised rate of 14.9%, compared with 13.3% in September and 11.7% in June. Consumer credit consists largely of credit-card borrowing and personal loans, and it is likely to be related to spending on durable goods. Nominal consumer expenditure on durables has been robust; it grew by around 6.0% in the year to Q3. However, total lending to the personal sector did not grow particularly fast last year, because of the brake provided by low turnover in the housing market.

Most of the increase in bank and building society lending in 1995 was to the corporate sector—both industrial and commercial companies (ICCs) and other financial institutions (OFIs). In the fourth quarter, ICCs' borrowing increased by £5.8 billion, higher than the average increase of £3.8 billion in the previous three quarters. The stock of lending to ICCs stood at £142 billion in Q4, 13.6% higher than a year earlier. OFIs' borrowing was strong too; it increased by £14.7 billion over 1995. The stock of lending to OFIs stood at £127.1 billion in Q4, 13.5% higher than a year earlier.

Taken together, borrowing by ICCs and OFIs accounted for almost all of the acceleration in bank and building society lending in 1995. Part of the increased borrowing may be related to investment in fixed capital. Nominal investment expenditure by ICCs, though erratic from quarter to quarter, increased in 1995; in Q3 it was 7.6% higher than a year earlier. Chart 2.3 shows that in the past the growth in ICCs' borrowing from banks and building societies has moved quite closely with investment expenditure.

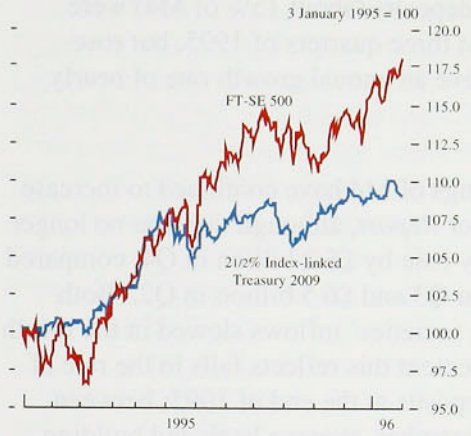
Chart 2.4
Acquisitions and mergers in the corporate sector



(a) Includes financial institutions from 1995 Q1.

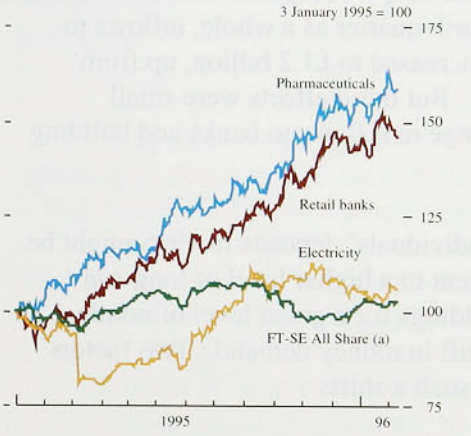
Corporate take-over activity increased significantly in 1995, and could explain a large proportion of the increased borrowing—by both ICCs and OFIs (see Chart 2.4). In the third quarter, mergers and acquisitions within the United Kingdom rose sharply to £9.5 billion. In the first three quarters of 1995, they amounted to £23 billion, around £16 billion of which were cash-financed acquisitions of independent companies. If all this had been financed by borrowing from banks and building societies, it would have accounted for around two thirds of the increase in bank and building society

Chart 2.5
Share and gilt prices



Sources: Bank of England and Financial Times.

Chart 2.6
FT-SE price indices



Sources: Datastream and Bank calculations.

(a) Excluding electricity, pharmaceuticals and retail banks. Calculation used the fixed weights implied by relative market capitalisation at close of business on 8 February 1996.

Table 2.C
Financing the PSBR

April 1994–December 1995; £ billions

		Apr. 1995/ Dec. 1995	Apr. 1994/ Dec. 1994
PSBR		23.6	23.8
Financed principally by:			
M4 private sector (a)	—Gilts	10.4	17.9
	—Treasury bills	2.3	0.8
National savings		2.6	2.8
Bank and building societies	—Gilts	2.3	1.3
	—Treasury bills	6.8	2.8
Overseas	—Gilts	4.1	-2.8
	—Treasury bills	-0.1	-0.4

(a) Non-bank, non-building society private sector.

lending to ICCs and OFIs, although it includes Glaxo's take-over of Wellcome, the debt finance for which was repaid in Q2 and Q3. Acquisitions and mergers in the United Kingdom by overseas companies also increased in 1995; in the first three quarters they were £7.0 billion, almost £2.0 billion greater than in the whole of 1994. Some overseas firms may also have set up UK companies for the purposes of acquisition, which might have led to additional lending to the UK private sector. If firms pay back bank borrowing once current merger and acquisition activity subsides, the supply of M4 to the corporate sector will fall back.

The significance of increased take-over activity depends on its causes. Equity prices rose sharply in 1995, and this may have reflected higher profit expectations or lower perceived risks. To some extent, it will also have reflected lower real interest rates, but this cannot be a complete explanation as equity prices rose by more than index-linked gilt prices (see Chart 2.5). As Chart 2.6 shows, the rise in the market was especially marked in a few categories of stocks where take-over activity had been most prominent, in particular, electricity distribution, financial services and pharmaceuticals. These developments led to a rise in private-sector wealth, which is likely to cause both consumer spending and investment to increase. That possibility is discussed in Section 3.

The government, too, borrowed significantly from the banking system in 1995. The profile of the PSBR over the financial year to December was similar to the profile to December 1994, but the pattern of financing was different. A larger proportion was financed by borrowing from the banking sector (including building societies), particularly by means of Treasury bill sales (see Table 2.C). This led to an increase in the assets of the banking sector, enabling it to expand its liabilities and thus M4. It is expected that net gilt sales in the first quarter of 1996 will reduce the outstanding stock of Treasury bills. That would, at the same time, reduce the public sector's stock of borrowing from the banking sector and help to bring down the growth of M4, unless there were a significant increase in the banks' demand for gilts following the introduction in January of the new open gilt-repo market.

Money demand

Table 2.D shows the sectoral breakdown of M4 growth during 1995. The deposits of OFIs (accounting for about

Table 2.D
Changes to M4[a]

£ billions

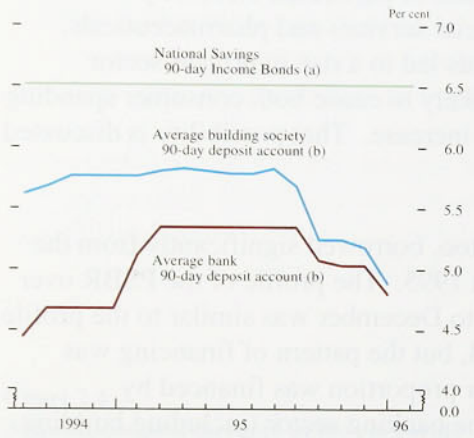
	Persons	*of which: Individuals*	ICCs	OFIs	Total
1994	12.3	9.9	6.2	6.2	24.7
1995 Q1	7.9	4.6	0.8	5.5	14.3
Q2	5.5	6.5	-0.1	5.7	11.1
Q3	7.7	7.5	0.5	5.7	14.0
Q4	7.0	6.2	3.5	6.0	16.5

Percentage changes on a year earlier

	Persons	*of which: Individuals*	ICCs	OFIs	Total
1994 Q4	3.2	2.9	8.2	7.2	4.6
1995 Q1	4.3	3.4	4.6	11.3	5.5
Q2	5.5	5.1	2.8	15.6	6.8
Q3	6.4	6.4	2.1	21.2	8.3
Q4	7.2	7.0	5.9	24.5	9.9

(a) Columns may not sum to totals because of rounding.

Chart 2.7
Gross savings rates



Sources: Department for National Savings and Bank of England.

(a) Interest rate payable on holdings of less than £25,000.
(b) Interest rate payable on deposits of £10,000.

a fifth of M4) grew most rapidly—at an annual rate of nearly 25% in 1995 Q4. Deposits of persons, which represent around two thirds of the stock of M4, grew by about 7%. ICCs' deposits (about 15% of M4) were subdued in the first three quarters of 1995, but rose sharply in Q4 to give an annual growth rate of nearly 6%.

Individuals' holdings of M4 have continued to increase since the November *Report*, although they are no longer accelerating. They rose by £6.2 billion in Q4, compared with £7.5 billion in Q3 and £6.5 billion in Q2. Both bank and building societies' inflows slowed in the fourth quarter. To some extent this reflects falls in the rate of interest paid on deposits at the end of 1995; between September and December, average bank and building society 90-day saving account rates fell by 32 basis points and 45 basis points respectively (see Chart 2.7). The relative attractiveness of other financial assets may have increased. Retail inflows into unit trusts were around £900 million in Q4, compared with £740 million in Q3. For the fourth quarter as a whole, inflows to national savings increased to £1.2 billion, up from £0.8 billion in Q3. But these effects were small relative to the change in inflows to banks and building societies.

The build-up in individuals' deposits in 1995 might be part of an adjustment to a higher level of long-run desired money holdings for a given level of nominal expenditure—a shift in money demand. Two factors might have led to such a shift:

(i) People may want to hold more of their wealth in bank and building society deposits, because they remain uncertain about their employment prospects and the outlook for the housing market—a shift in the willingness to hold deposits arising from an increase in precautionary saving. But with the personal sector saving ratio in 1995 Q3 below its level at the end of 1994, and with unemployment continuing to fall, this increase in precautionary saving is unlikely to account for all of the rise in individuals' deposits during 1995. And the acceleration of consumer credit in recent months suggests that the precautionary motive did not apply to everyone.

(ii) Some investors have increased their holdings in building society accounts so as to qualify for bonus payments in the event of future take-overs.

Individuals' building society deposits rose by £3.2 billion in Q4, lower than the £3.8 billion increase in Q3, but broadly similar to rises in Q1 and Q2. Some societies have tightened the criteria for qualifying for bonuses, which may explain some of the slowdown in Q4. But banks also saw an increased demand for deposits during 1995, without the prospective bonus incentive.

So the argument that personal sector deposits have simply been adjusting towards higher equilibrium balances is not wholly convincing. But the slowdown in the growth of individuals' deposits in Q4 offers some reassurance that planned spending is not accelerating.

OFIs' deposits with bank and building societies increased further in the fourth quarter. They rose by £6.0 billion in Q4, compared with increases of £5.7 billion in each of Q2 and Q3. Since OFIs are the main marginal source of funds for the banking system in the short term, it seems likely that banks and building societies have bid for these deposits in wholesale markets to fund their increased lending. And OFIs will have had additional funds available, having sold shares in companies which were taken over for cash. The rates paid on wholesale transactions are not typically recorded for statistical purposes, but data collected by the Bank on representative interest rates paid on OFIs' deposits suggest some increase relative to market rates in the second and third quarters. The change is small, but because wholesale deposits are very close substitutes for other money market instruments, small changes in the relative interest rate are likely to have large effects on the demand for M4 by OFIs.

After modest increases in the first three quarters of 1995, ICCs' M4 deposits rose sharply by £3.5 billion in the fourth quarter The largest comparable quarterly increase in deposits occurred in 1994 Q1, but then deposits of utility companies were inflated by the prepayment of fuel bills ahead of changes to VAT. Part of the strength in Q4 could have been related to take-over activity, with some firms building up liquidity before making a bid. Other firms that sold shares in companies are likely to hold higher deposits until they have reallocated their portfolios. Increases in ICCs' deposits have in the past been associated with higher planned investment; firms may often set aside deposits well in advance of 'lumpy' investment expenditure.(1)

(1) See Haldane, A G and Astley, M S (1995), 'Money as an indicator', *Bank of England Working Paper No 35*, July.

Bringing the evidence together, it appears that the demand for money may have shifted relative to desired spending. But it is doubtful that this can explain more than part of the continued strong growth in M4 in the second half of last year. Stronger M4 growth reflects, therefore, an increase in the supply of money, resulting from the increased credit extended by the banking sector. In turn, this seems most likely to be related to increased cash-financed mergers and acquisitions activity and stronger equity prices. As and when mergers and acquisitions activity subsides, the supply of broad money may fall back, as firms readjust their balance sheets by issuing new equity, using the proceeds to repay the debt relatively quickly. If, in such circumstances, broad money were not to decline, that would be a cause for concern.

In conclusion, it is likely that M4 is signalling higher planned spending in the future, although it is too soon to tell whether recent growth rates of broad money will persist.

Divisia money

The Bank has constructed a monetary aggregate—Divisia money—which is related as closely as possible to the use of money in transactions. The Divisia measure of money attempts to allow for the varying transactions properties of the different monetary assets within M4 by weighting them according to their 'user cost'—the difference between the rate of interest the component asset offers and the return on a benchmark asset that is assumed to offer no transactions services. If these weights reflect differences in the transactions services provided by the various monetary assets, then the resulting Divisia index will provide a better measure than other aggregates of the total quantity of money held for transactions purposes.

The Bank's Divisia measure accelerated through 1995. It rose by 7.9% in the year to Q4, up from 6.3% in Q3 and 5.3% in Q2. This compares with annual growth of less than 5% during most of 1993 and 1994. Personal sector Divisia continues to grow quite strongly, although it is no longer accelerating. In 1995 Q4, it rose by 1.4% compared with 1.7% in Q3. In contrast, corporate Divisia rose sharply by 4.5% in Q4. As a result the annual rate increased to 14.1%, up from 9.6% in Q3. This is likely to imply an acceleration in nominal expenditure by ICCs. But similarly strong annual growth of over 12% was recorded in the first half of

Table 2.E
Changes in official and key interest rates[a][b]

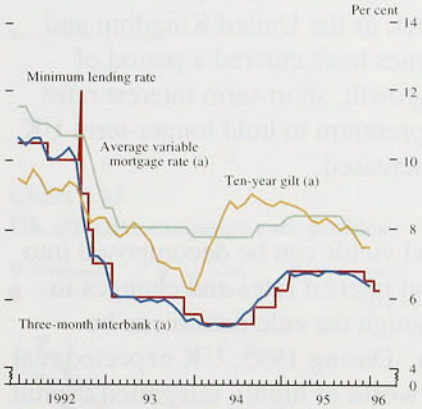
In chronological order; per cent per annum

Country	Interest rate	Date	Change (basis points)	Change to:
France [c]	5–10 day repo rate	9 Nov.		6.35
France	5–10 day repo rate	16 Nov.	-25	6.10
	Intervention rate	16 Nov.	-20	4.80
France	Intervention rate	7 Dec.	-10	4.70
United Kingdom	Base rate	13 Dec.	-25	6.50
Canada	Bank rate	13 Dec.	+15	6.22
Germany	Lombard rate	14 Dec.	-50	5.00
	Discount rate	14 Dec.	-50	3.00
France	Intervention rate	15 Dec.	-25	4.45
United States	Federal funds rate	19 Dec.	-25	5.50
Canada	Bank rate	20 Dec.	-16	6.06
Germany	14-day repo rate	20 Dec.	-23	3.75
France	5–10 day repo rate	21 Dec.	-25	5.85
Canada	Bank rate	3 Jan.	-33	5.73
France	5–10 day repo rate	18 Jan.	-25	5.60
	Intervention rate	18 Jan.	-25	4.20
United Kingdom	Base rate	18 Jan.	-25	6.25
Germany	14-day repo rate	24 Jan.	-10	3.55
Canada	Bank rate	31 Jan.	-37	5.37
Germany	14-day repo rate	31 Jan.	-15	3.40
United States	Federal funds rate	31 Jan.	-25	5.25
	Discount rate	31 Jan.	-25	5.00
France	Intervention rate	1 Feb.	-15	4.05
Germany	14-day repo rate	7 Feb.	-10	3.30
France	Intervention rate	8 Feb.	-15	3.90

Sources: Datastream and Telerate.

(a) Changes greater than or equal to ten basis points since the November *Inflation Report*.
(b) In the G7 countries.
(c) The 24-hour repo rate (previously 6.60%) was suspended and replaced with the 5–10 day rate.

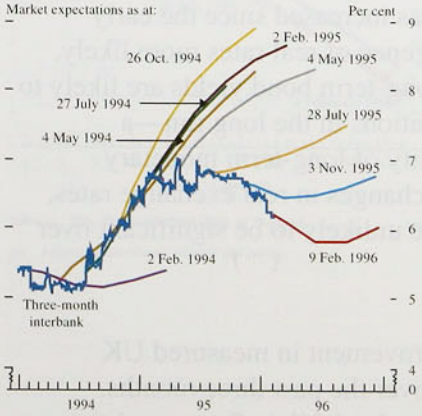
Chart 2.8
Interest rates



Source: Bank of England.

(a) Calendar-month average.

Chart 2.9
Sterling interest rate expectations[a]



Sources: Bank of England and LIFFE.

(a) Based on a combination of sterling interest rate futures contracts.

1994 and ICCs' capital expenditure grew by only 4¼% in that year as a whole.

2.2 Interest rates and exchange rates

Since the November *Report*, official UK interest rates have been reduced in two successive 25 basis-point steps and now stand at 6.25%. Other countries have also cut their official rates; in particular the US authorities cut the federal funds rate by 50 basis points to 5.25% and in Germany the Lombard and Discount rates were reduced by 50 basis points to 5.0% and 3.0% respectively (see Table 2.E). The German repo rate has also been reduced in successive steps and stood at 3.30% on 9 February compared with 4.02% on 3 November.

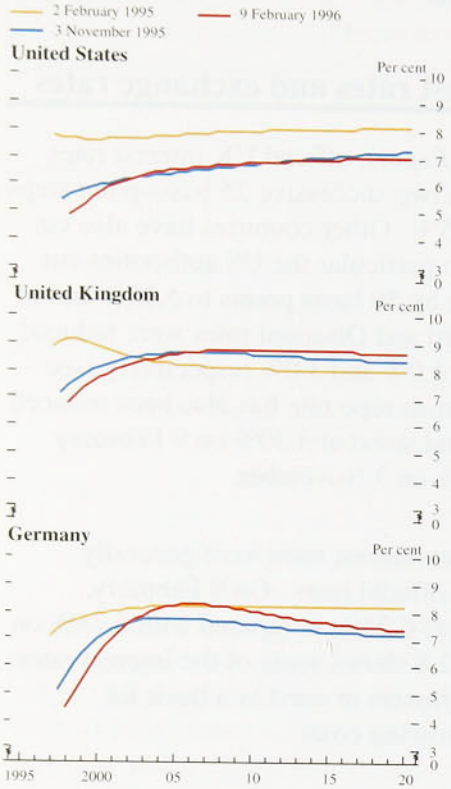
UK short-term market interest rates have generally fallen by as much as official rates. On 9 February, three-month Libor was 6.25%, compared with 6.75% on 3 November. Chart 2.8 shows some of the interest rates paid by different borrowers or used as a basis for calculating their borrowing costs.

Following the first reduction in UK short-term official interest rates in December, mortgage lenders reduced rates by a further 25 basis points. This was the third move in recent months; most lenders had cut their variable rates by around 35 basis points in September and by between 20 and 40 basis points in December. Most of these cuts will be effective by the beginning of February, bringing the average bank and building society variable mortgage rate down to around 7½%, the lowest rate since 1966.

Futures markets have revised down their expectation of UK short-term interest rates since the November *Report*. The current structure of short-sterling futures prices suggests that markets expect interest rates to fall further during the next six months before picking up a little thereafter. The rate on LIFFE's June 1996 contract fell from 6.51% on 3 November to 5.82% on 9 February. By December 1996, interest rates are expected to be around 6%.

As Chart 2.9 shows, short-term interest rate expectations in the United Kingdom have been falling since the end of 1994; at the time of the November 1994 *Report*, futures markets expected interest rates of around 9% by December 1995. The rise in interest rate expectations in 1994 and early 1995 may provide an

Chart 2.10
Implied forward interest rates



Source: Bank of England.

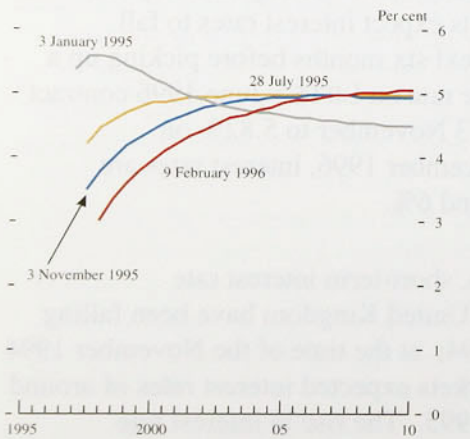
Table 2.F
Changes in ten-year government bond yields[a]

Basis points

	3 January—29 December 1995
Canada	-218
France	-160
Germany	-155
Italy	-144
Japan	-148
United Kingdom	-134
United States	-230

(a) In the G7 countries.

Chart 2.11
Implied forward inflation rates



Source: Bank of England.

explanation of the slowdown in demand and output through 1995. Monetary policy was more restrictive than movements in official rates suggested.

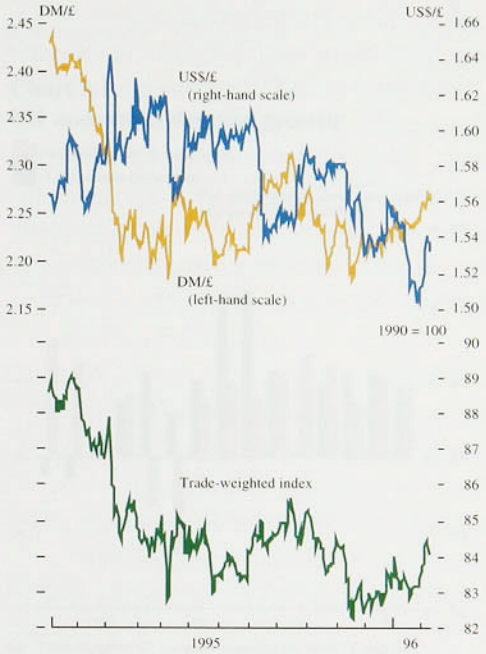
Yields have also fallen on longer-maturity bonds since the November *Report*; UK ten-year redemption yields fell by 30 basis points between 3 November and 9 February. But as Chart 2.10 shows, the implied forward interest rate curves for the United States, United Kingdom, and Germany have moved differently since the November *Report*. In the United States, implied forward rates fell at both the short and long end of the curve. In the United Kingdom and Germany, all of the movement occurred at shorter horizons; expected yields at longer horizons rose.

Over 1995 as a whole, the 134 basis-point decline in UK ten-year bond yields was the smallest in the G7 (see Table 2.F). In Germany, France, Japan and the United States, implied forward rates fell at all maturities. UK implied forward rates, on the other hand, fell at shorter maturities, but increased at maturities beyond twelve years. This suggests that, as the United Kingdom and the other major economies have entered a period of slower-than-expected growth, short-term interest rates have been cut, but the premium to hold longer-term UK government debt has increased.

Movements in UK bond yields can be decomposed into changes in expected real interest rates and changes in expected inflation, although the calculation can be affected by risk premia. During 1995, UK expected real interest rates fell. In a world of highly integrated capital markets, the long-term real interest rate is likely to be similar across countries. Bank research for the G10 Deputies' study on saving and investment, reported in the February 1996 *Quarterly Bulletin*, suggests that the degree of integration has increased since the early 1980s, making convergence of real rates more likely. Hence differences in long-term bond yields are likely to reflect inflation expectations in the long run—a function of the credibility of long-term monetary policy—and expected changes in real exchange rates, which in most cases are unlikely to be significant over long periods.

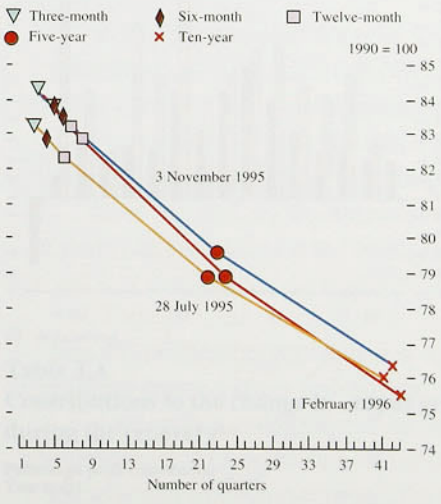
There has been an improvement in measured UK inflation expectations over the past three months. Inflation was expected to be 4.2% in five years' time on 9 February compared with 4.5% on 3 November. But,

Chart 2.12
Sterling exchange rates



Source: Bank of England.

Chart 2.13
UK effective exchange rate profiles(a)



Sources: BIS, Datastream and Bank of England.

(a) Assuming uncovered interest rate parity.

as Chart 2.11 shows, inflation expectations at horizons beyond ten years are now generally higher than at the beginning of last year.

On 9 February, sterling's effective index was 84.1, virtually unchanged from the time of the November *Report*. Within this period, sterling fell to a low of 82.2 on 20 November, before strengthening during December and at the beginning of February.

In the past, sterling and the dollar have often moved together, suggesting that they typically respond to common factors. In the three months since the November *Report*, the dollar's effective index has appreciated by nearly 3%. In spite of this, sterling's effective index has remained almost unchanged.

Chart 2.13 shows the expected ten-year path for the exchange rate implied by interest rate differentials on 9 February and at the time of the previous two *Inflation Reports*. It shows that, compared with three months ago, the future level of sterling is now expected to be lower. The rate of depreciation is also expected to be slightly faster—the latest figures suggest sterling is expected to fall by around 10% over a ten-year period, compared with a fall of 9% at the time of the November *Report*.

2.3 Summary

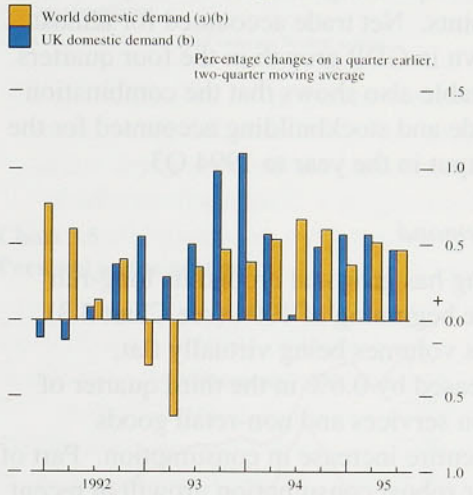
There are some signs of a modest slowdown in narrow money growth. Broad money continues to grow rapidly; in December, annual M4 growth was 9.9%, above the ceiling of its monitoring range. The demand for money may have risen relative to desired spending, but this is unlikely to explain the continued strength of M4 in the second half of last year. Instead, this seems to have reflected an increase in the supply of money, related to increased bank and building society lending to the private sector for take-over purposes. This would have few direct implications for future nominal spending if the higher money supply were only temporary, but that is far from certain.

Official interest rates have been reduced in the United Kingdom and overseas since the November *Report*. Futures markets expect UK short-term rates to fall further over the next six months. Yields at longer maturities have also fallen in the United Kingdom, though, in contrast to some other countries, by much less

than rates at shorter maturities. This could be related to an increase in UK inflation expectations in the longer term.

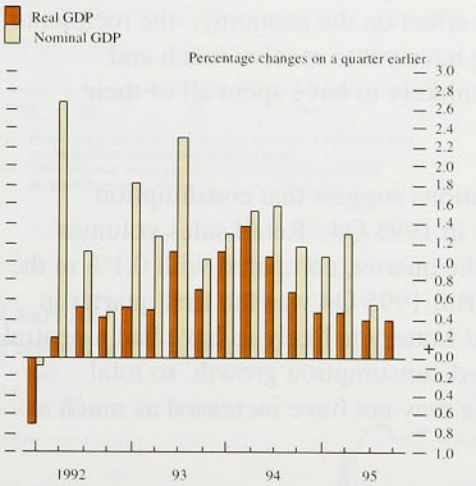
Demand and supply 3

Chart 3.1
UK and world demand growth



(a) Trade-weighted G7 countries excluding the United Kingdom.
(b) Excludes stockbuilding.

Chart 3.2
Real and nominal GDP growth(a)



(a) At factor cost.

Table 3.A
Contributions to the change in output growth during the recovery(a)

Percentage-point contribution
Year to Q3

	1993 Q3	1994 Q3	1995 Q3
Consumption	1.4	-0.2	0.1
Investment	0.3	0.3	-0.2
Government	0.5	0.1	-0.2
Net exports	1.9	0.9	-1.9
Stockbuilding	-1.6	0.5	—
GDP growth	**2.5**	**1.5**	**-2.0**

Contributions may not sum due to rounding and the inclusion of the statistical discrepancy in the measure of GDP at market prices.

(a) At market prices.

3.1 Overview

Domestic demand, excluding stockbuilding, increased by 0.2% in 1995 Q3, after rising by 0.7% in Q2 and 0.4% in Q1. Such volatility is evident in all components of GDP, so it is useful to look at a moving average of growth rates. Chart 3.1, which uses a two-quarter moving average, shows there has been little sign of any underlying change in the quarterly growth rate of domestic demand excluding stockbuilding over the past year. Data for domestic demand in 1995 Q4 will be released with the second estimate of fourth-quarter GDP, which will include a preliminary estimate of its composition.

Domestic demand, excluding stockbuilding, in the major six overseas industrialised economies(1)—which account for around one half of UK exports—increased by 0.3% in 1995 Q3, after rising by 0.7% in Q2. It was up 1.7% over the year to Q3.

UK GDP growth has slowed steadily since the middle of 1994. It was 0.4% in the fourth quarter of 1995—less than most estimates of its long-run trend rate (see Chart 3.2). The estimated rate of GDP growth in the third quarter was revised down slightly from 0.5% to 0.4%. Non-oil GDP is currently estimated to have increased by 0.4% in 1995 Q4, after growing by 0.3% in the third quarter.

Nominal GDP has also decelerated. It increased by 0.6% in the third quarter—the most recent quarter for which data are available—compared with 1.3% in the second. The annual growth rate fell to 4.1%. But, as a result of a sharp upward revision in the estimated GDP deflator in the second quarter, nominal GDP is now estimated to have expanded by 5.2% in the year to 1995 Q2. This compares with the 3.8% estimated at the time of the November *Report*.

3.2 Domestic demand

Domestic demand increased by 0.5% in the third quarter of 1995. Table 3.A shows how the various expenditure

(1) Canada, France, Germany, Italy, Japan and the United States—that is, the G7 countries, excluding the United Kingdom.

components of GDP contributed to *changes* in the growth of output during the recovery. It is possible to examine which components were responsible for the recent slowdown in output growth, as well as those which caused the initial move from recession to recovery. GDP was 2.1% higher in 1995 Q3 than it was in 1994 Q3, but 4.1% higher in the latter period than in 1993 Q3, so the four-quarter growth rate fell by two percentage points. Net trade accounted for almost the entire slowdown in GDP growth in the four quarters to 1995 Q3. The table also shows that the combination of stronger net trade and stockbuilding accounted for the acceleration of output in the year to 1994 Q3.

Personal sector demand

Consumer spending has grown at around its long-run trend rate since the beginning of 1994 (see Chart 3.3). Despite retail sales volumes being virtually flat, consumption increased by 0.6% in the third quarter of 1995. Spending on services and non-retail goods accounted for the entire increase in consumption. Part of the explanation for robust consumption growth in recent quarters was the National Lottery, half of the gross spending on which is included in consumption—that is, spending after prizes are paid out. So far, the Lottery has had a deflationary effect on the economy: the recipients of Lottery funding have yet to receive much and prizewinners are unlikely to have spent all of their winnings.

Preliminary indications suggest that consumption increased robustly in 1995 Q4. Retail sales volumes were up 0.8% on the quarter, compared with 0.1% in the previous quarter. But 1995 Q4 was the first quarter in which the National Lottery is likely to have had a neutral impact on measured consumption growth, so total consumer spending may not have increased as much as retail sales.

Despite the increase in personal taxes in 1994/95 and 1995/96, consumer spending has grown more strongly in the current upturn than in the previous recovery. Between the trough of GDP and 1995 Q3, consumption increased by almost 10%, compared with 7% over the corresponding period in the previous cycle. It fell by 3.7% during the recession, more than the 2.8% drop in consumer spending recorded during the previous downturn. Consumption fell as a proportion of GDP in 1994, after reaching a historic high in 1992 Q4. The ratio was still high by historical standards when it started to rise again in the middle of 1994 (see Chart 3.4).

Chart 3.3
Growth in consumer spending

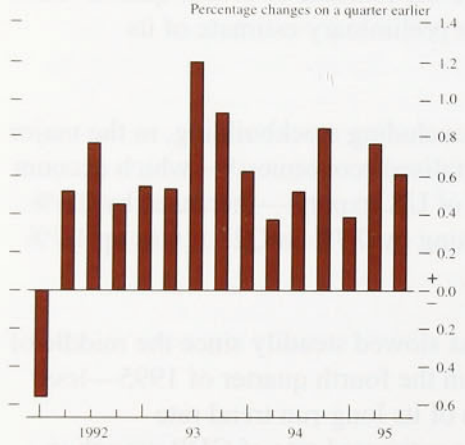
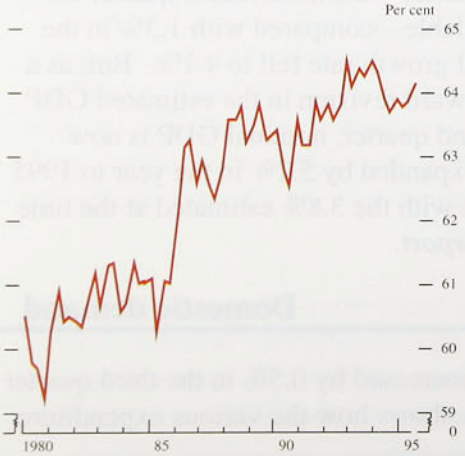


Chart 3.4
Consumption as a percentage of GDP(a)



(a) At current market prices.

Table 3.B
Housing market activity

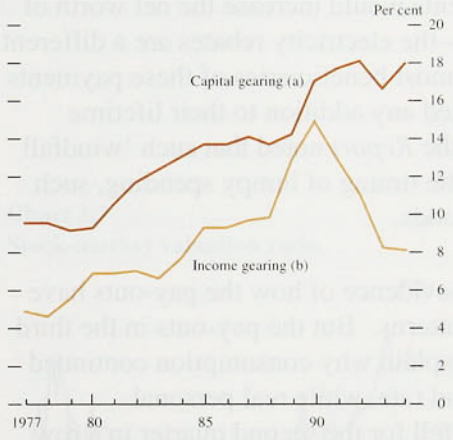
Percentage changes on previous period, *levels in italics*

	1994 Year	1995 Year	Q1	Q2	Q3	Q4
Private sector starts	11.4	-13.6	-8.9	1.1	-8.8	-8.8
Turnover (a)	8.0	-10.7	-1.6	-6.1	-5.1	-2.9
Price (b)	0.6	-1.6	0.1	-1.3	-1.0	0.7
Mortgage interest rate (c)	*7.83*	*8.25*	*8.24*	*8.37*	*8.38*	*8.02*

Sources: Bank of England, CSO, and Halifax Building Society.

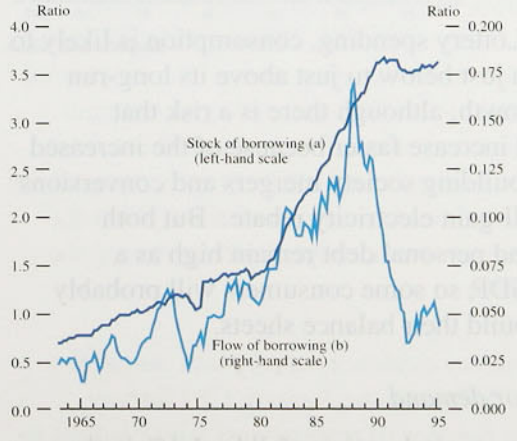
(a) Particulars delivered.
(b) Halifax index.
(c) Average variable rate at major banks and building societies.

Chart 3.5
Personal sector gearing



(a) Borrowing from banks and building societies as a proportion of personal sector financial and physical assets.
(b) Gross personal sector interest payments as a proportion of personal disposable income.

Chart 3.6
Personal sector debt-to-income ratio



Sources: Bank of England and CSO.

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

Consumption tends to grow at around its long-run trend rate unless there is unexpected news about consumers' future incomes, there are unusually high or low real interest rates, or some groups of consumers are attempting to increase their wealth relative to their income. One of the uncertainties for consumption is whether the willingness of some consumers to borrow more will be affected by a desire to build up precautionary savings.

The number of consumers willing to borrow more will be affected by the amount of debt held in relation to total net personal wealth—that is, capital gearing. If capital gearing remains high, some consumers may wish to pay back debt, so they are better able to accommodate temporary changes to their real incomes without changing their consumption.

Housing accounts for just under half of total net wealth of the personal sector and individual holdings of shares and other securities around 10%, with the remainder consisting largely of claims on life assurance and pension funds, and bank and building society deposits. According to the Halifax house price index, house prices fell by 2.7% between February and July, before rising by 1.2% during the remainder of 1995. The Bank's estimates show that the number of people affected by negative equity rose from 0.9 million to 1.1 million in the second half of 1995, while the total value of negative equity increased from £4.2 billion to £4.8 billion (see pages 266–67 of the August 1995 *Quarterly Bulletin*). Table 3.B summarises developments in the housing market.

Other groups of consumers, however, may increase their spending because the rise in equity prices has increased their overall wealth. Chart 3.5 shows that, in aggregate, capital gearing was higher in 1994 than in 1993; but it probably fell a little in 1995 as the decline in house prices was offset by a 20% increase in equity prices, so lessening one constraint on spending. The ratio of the flow of borrowing to income supports that interpretation. Chart 3.6 shows that, in the 1980s, after direct controls on financial intermediation were withdrawn, personal debt as a proportion of income rose sharply. Although the debt-income ratio fell slightly during the recession, it resumed its upward climb in 1993. This suggests that many individuals' incomes had risen far enough to bring their debt-income ratios down to desired levels, and so they were prepared to take on new debt.

The cost of servicing debt depends on both the stock of debt and the level of nominal interest rates. Interest payments fell sharply as a proportion of disposable income after 1990 (also shown on Chart 3.5), as the stock of debt was reduced slightly in relation to income and nominal interest rates fell. However, the ratio has not yet returned to pre-1980s levels, and some consumers may remain cautious about spending in the future.

The path of consumption during 1996 will depend partly on how much is spent out of the 'windfall gains' from building society mergers and conversions to plc status. Table 3.C lists those mergers and acquisitions which have taken place recently or been announced for a later date. The November *Report* noted, first, that few of these one-off payments would increase the net worth of the personal sector—the electricity rebates are a different case—and, second, most beneficiaries of these payments could have anticipated any addition to their lifetime income. However, the *Report* noted that such 'windfall gains' could affect the timing of lumpy spending, such as that on durable goods.

Table 3.C
Building society mergers and conversions

Date effective	Event	Estimated size	
		£ billion (a)	Percentage of personal disposable income (b)
1995 H2	Lloyds bank joining with Cheltenham and Gloucester building society	1.8	0.4
1995 H2	Lloyds bank merger with TSB	1.0	0.2
1996 H2	Abbey National take-over of National and Provincial building society	1.4	0.3
1997 H1	Halifax building society merger with Leeds Permanent building society and conversion to plc status	9.0	1.9
1997 H1	Alliance and Leicester building society conversion to plc status	2.5(c)	0.5
1997 H2	Woolwich building society conversion to plc status	2.5–3.0	0.5–0.6

Source: Public announcements.

(a) At current prices.
(b) As a percentage of annual disposable income in 1994.
(c) Actual payout not known.

So far, there is little evidence of how the pay-outs have affected spending patterns. But the pay-outs in the third quarter could help explain why consumption continued to increase at its trend rate, while real personal disposable incomes fell for the second quarter in a row. A survey of 2,086 consumers, conducted by the Harris Research Centre in October 1995 on behalf of Nikko Europe plc, found that, of people who had received, or were expecting, a 'windfall gain' from a building society pay-out, 62% intended to save most of it, while 36% said they would spend most or all of the gain.

So, excluding Lottery spending, consumption is likely to accelerate from just below to just above its long-run trend rate of growth, although there is a risk that spending could increase faster because of the increased liquidity from building society mergers and conversions and the windfall-gain electricity rebate. But both consumption and personal debt remain high as a proportion of GDP, so some consumers will probably still wish to rebuild their balance sheets.

Corporate sector demand

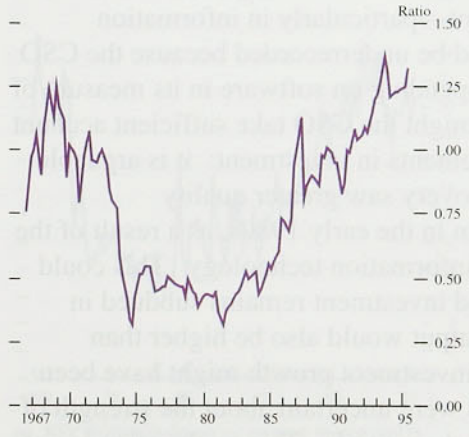
Real spending on capital projects fell by 1.1% in the third quarter, and was up only 1.6% on the same quarter a year earlier. Much of the weakness in the third quarter was in residential investment—a possibility highlighted

Table 3.D
Investment by asset

Percentage changes on previous period

	1993 Year	1994 Year	1995 Q1	Q2	Q3
New building work	-3.6	-0.1	0.9	-1.9	2.6
Vehicles, ships and aircraft	8.4	7.1	-10.6	20.7	-13.4
Plant and machinery	-0.5	4.3	2.6	1.4	0.6
Dwellings	5.8	3.9	4.2	-2.0	-2.3
Transfer costs of land and existing buildings	5.9	6.9	6.7	-14.8	-8.6
Total gross domestic fixed capital formation	**0.6**	**3.1**	**1.3**	**0.6**	**-1.1**

Chart 3.7
Stock-market valuation ratio



Source: Bank of England.

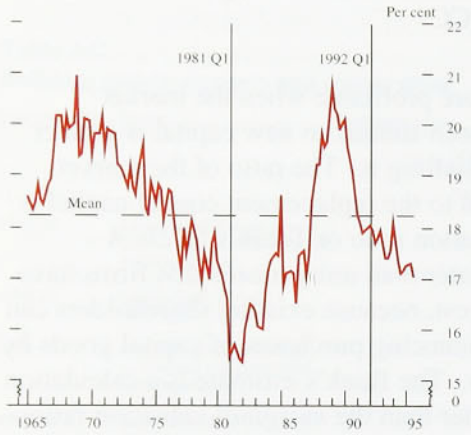
in the November *Report* (see Table 3.D). Plant and machinery investment rose more strongly. Aggregate investment growth might remain low this year if investment in plant and machinery fails to offset slower growth in construction investment. The latest British Chambers of Commerce (BCC) Survey noted a marked downward shift in the number of firms planning to invest in buildings—particularly in the service sector. Overall, the balance of firms revising their building investment plans upwards was the lowest since 1993 Q4. The number intending to invest in plant and machinery was stable—if low—in both manufacturing and services, according to the BCC.

New investments are profitable when the market valuation of the profit stream on new capital is greater than the cost of installing it. The ratio of the market valuation of capital to the replacement cost of capital is known as the valuation ratio or Tobin's '*q*'.(1) A valuation ratio greater than unity means that firms have an incentive to invest, because existing shareholders can make a profit by financing purchases of capital goods by issuing new equity. The Bank's estimate is a calculation of the *average* rather than the *marginal* valuation ratio; the latter is, in theory, the appropriate measure. It is also affected by changes in the value of overseas assets of UK-quoted companies, and so does not give an unambiguous signal of the incentive to invest in the United Kingdom. Nevertheless, the Bank's measure has been above unity since the end of 1991. It peaked in 1993 Q4—in the next quarter, investment rose by 4.3%. Excluding this period, the valuation ratio is estimated to have reached its highest level for more than 25 years in the third quarter of last year (see Chart 3.7). That makes the low growth of investment surprising. It may reflect the sharply differing fortunes of different industries. One indication of the incentive to invest in different sectors of the economy is given by differential movements in share prices. Over the whole of 1995, the share prices of construction companies fell sharply relative to the FT-SE All-share index, mirroring the weakness of construction investment relative to total capital spending, although the relative price of construction shares started to rise towards the end of last year.

It is also difficult to reconcile the weakness of investment with the fact that equity prices have risen more strongly over the past year than index-linked

(1) See 'Saving, investment and real interest rates' on pages 51–62 of the February 1996 Bank of England *Quarterly Bulletin*.

Chart 3.8
Investment as a proportion of GDP(a)



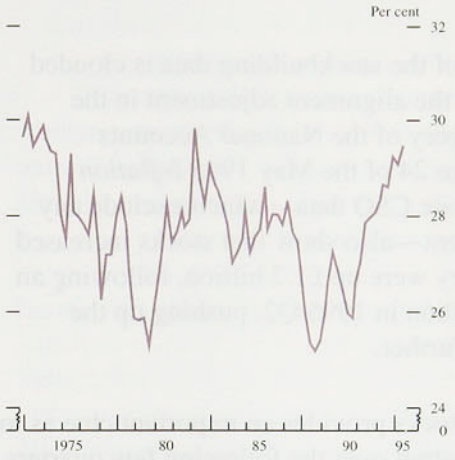
(a) At constant market prices.

gilts—the prices of which were pushed up by lower real interest rates. Section 2 noted how the buoyancy of equity prices has been associated with greater mergers and acquisitions activity. Either investors' expectations of corporate profitability have risen—in the United Kingdom or overseas—or the risk of holding equities has fallen relative to holding bonds. If confidence in the outlook for corporate profits relative to the cost of capital had increased in the United Kingdom, investment would be expected to rise.

Why, then, has investment growth been so sluggish? There are several possibilities, none of which is entirely convincing. First, in contrast to the previous recovery, the investment-output ratio may already have been close to its long-run average, with less ground to 'catch up' after the recession. But Chart 3.8 shows that, even when measured as a proportion of GDP, investment fell in 1995 Q3, and has been on a downward trend since the trough in output. The recent decline could be a temporary phenomenon, if some firms postponed their investment plans in response to the slowdown in output growth. This explanation sits oddly with strong equity prices and the valuation ratio being greater than unity. Second, investment—particularly in information technology—could be underrecorded because the CSO does not include spending on software in its measure of investment. Nor might the CSO take sufficient account of quality improvements in investment: it is arguable that the recent recovery saw greater quality improvements than in the early 1980s, as a result of the increasing use of information technology. This could mean that recorded investment remains subdued in 1996; potential output would also be higher than expected. Third, investment growth might have been low because firms were uncertain about the strength of future demand for their goods. This explanation is not supported for the manufacturing sector: the proportion of firms recorded by the CBI as limiting investment because of uncertainty about future demand has been falling since the beginning of 1992. Fourth, demand for construction output has been subdued throughout the recovery, reflecting excess supply built up during the boom of the 1980s.

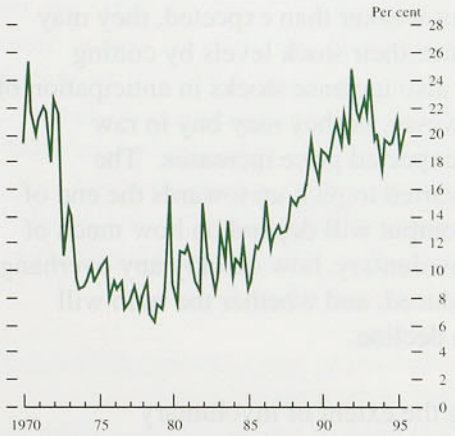
According to survey evidence, investment intentions remain strong. Although the January CBI Survey showed that the balance of respondents who planned to invest in plant and machinery over the following year fell from +12% in the third quarter to +10% in the fourth quarter, the balance remained significantly above its

Chart 3.9
Investment goods as a share of imported finished manufactures(a)



(a) Excluding the erratic items.

Chart 3.10
Dividend payout ratio(a)



(a) ICCs' dividends on ordinary and preference shares divided by ICCs' total income less ICCs' UK taxes on income.

long-run average. Also, in 1995 Q3, the share of capital goods in the total value of finished manufactured imports was at its highest since 1984 Q2 (see Chart 3.9). In the past, increases in imports of capital goods appear to have preceded pick-ups in domestic investment in plant and machinery.

Industrial and commercial companies' (ICCs) gross trading profits fell in 1995 Q3, after rising in the previous quarter. Profit figures have been relatively volatile over recent quarters, however, and were still 5.8% higher in 1995 Q3 than in the same quarter a year earlier, and dividend payments continued to rise. The ratio of dividends to post-tax income—the 'dividend pay-out ratio'—was 20.4% in 1995 Q3, up from 19.2% a year earlier (see Chart 3.10).

ICCs' net borrowing rose from £5.2 billion in the second quarter to £7.4 billion in the third. This borrowing could be funding stockbuilding, fixed investment, or mergers and acquisitions (see Section 2). The value of mergers and acquisitions by UK companies—both at home and abroad—increased sharply in the first three quarters of 1995 to an average of £10.7 billion a quarter, compared with a quarterly average of £5.9 billion in 1994. It was close to the all-time high recorded in 1989.

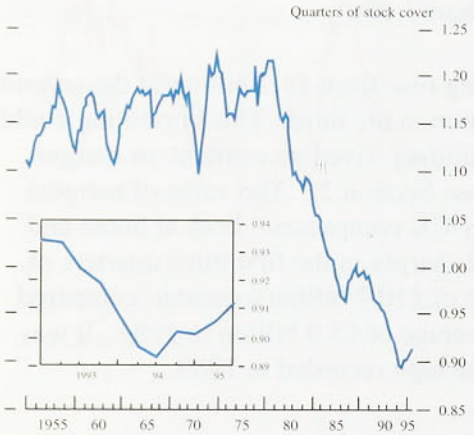
In the November Budget, public investment was projected to increase slightly to £21.7 billion in 1995/96 from £20.9 billion in 1994/95. This implied that it would remain broadly constant as a proportion of money GDP. But public investment was projected to fall—both in absolute terms and as a proportion of money GDP—over the following three years. The Private Finance Initiative (PFI) contributed only £0.3 billion to investment in 1994/95, and is expected to add £0.6 billion in 1995/96.

Stockbuilding(1)

Stockbuilding has boosted GDP in five out of the past six quarters. The August and November *Reports* discussed the risk that companies would run down stocks in the second half of 1995 and the first half of 1996. There is no evidence that this occurred in the third quarter. According to the latest National Accounts, stocks increased by £1.4 billion in 1995 Q3, after rising by £1 billion in Q2. Successive data revisions have changed the recorded profile of stockbuilding. In particular, the 1994 Q4 estimate of stockbuilding has

(1) All money amounts in this section are quoted in 1990 prices.

Chart 3.11
UK stock-output ratio(a)



(a) Levels of stocks outstanding relative to quarterly GDP in 1990 prices; includes alignment adjustment.

been revised up from an initial £0.8 billion to £1.9 billion, while the figures for the first two quarters of 1995 have been revised down.

The interpretation of the stockbuilding data is clouded by the inclusion of the alignment adjustment in the stockbuilding category of the National Accounts (see the box on page 24 of the May 1995 *Inflation Report*). But separate CSO data—which exclude any alignment adjustment—also show that stocks increased sharply in Q3. They were up £1.2 billion, following an increase of £0.8 billion in 1995 Q2, pushing up the stock-output ratio further.

The behaviour of stocks provides an important clue as to the likely path of output over the following few quarters, because output is sensitive to changes in stock levels. The overall stock-output ratio has been on a declining trend since the early 1980s, falling by around a quarter in that time. The downward trend has been interrupted periodically, when stocks have built up involuntarily in times of weaker-than-expected demand (see Chart 3.11). If firms build up stocks when demand—either at home or abroad—turns out weaker than expected, they may later attempt to reduce their stock levels by cutting output. Firms may also increase stocks in anticipation of strong demand, however, or they may buy in raw materials ahead of expected price increases. The stock-output ratio started to pick up towards the end of 1994. The path of output will depend on how much of this increase was involuntary, how quickly any overhang of stocks will be reduced, and whether the ratio will resume its long-run decline.

One way of judging the extent of involuntary stockbuilding is to consider a breakdown of stock data by sector. Most of the additional stockbuilding in the third quarter was in manufacturing—the largest quarterly real increase since 1988 Q4; the ratio of manufacturing stocks to production rose for the fourth quarter in a row, suggesting that companies will attempt to reduce stocks.

Three of the main components of total stocks—work-in-progress, materials and fuels, and finished goods—fell more or less continuously as a proportion of total output throughout the 1980s. The fourth major component of total stocks—wholesale and retail stocks—has been roughly stable as a proportion of output since the early 1980s. The retail stock-output ratio has risen in eight out of the past ten quarters: retail

superstores could be holding more stocks, blurring the distinction between retailers and wholesalers.

According to the January CBI Quarterly Industrial Trends survey, the balance of firms reporting a rise in stocks over the fourth quarter was negative for all sectors—raw materials, work-in-progress and finished goods—for the first time since July 1994. The Bank's Agents reported that firms were reducing stocks towards the end of the fourth quarter—particularly stocks of raw materials. This could help explain the slight fall in manufacturing output in the fourth quarter, as firms met demand from stocks.

In conclusion, stocks probably fell as a proportion of output in 1995 Q4, but the reduction in stockbuilding was not sufficient to lead to a fall in total output in the quarter. Experience in the United States suggests that any run-down in stockbuilding may be gradual: stocks made a small negative contribution to US growth in each of the five quarters to 1995 Q3, without causing overall US GDP growth to fall in any quarter. But there is a risk of a sharper reduction in stocks in the United Kingdom, which would hit output harder in the first half of 1996.

Public sector demand

In the third quarter, general government spending—including both consumption and investment—rose by 1.0%, after falling by 0.9% in the second. The November Budget reaffirmed a planned tightening of fiscal policy over the next three years. The General Government Financial Deficit was projected to fall from 6¼% of GDP in 1994/95 to 4¾% in 1995/96, 3½% in 1996/97 and 2% in the following financial year. Under the terms of the Maastricht Treaty, a criterion for judging the suitability of countries to join European Monetary Union is whether their deficits represent less than 3% of GDP.

The new measures announced in the Budget were broadly neutral. The cuts in taxation were almost entirely financed by additional cuts in planned real spending. Fiscal policy, however, was projected to be looser than planned in the 1994 Budget. The Treasury revised up its projected Public Sector Borrowing Requirement for the current financial year from £21.5 billion to £29.0 billion. The PSBR is projected to return to balance in the financial year 1999/2000, a year later than expected in the November 1994 Budget.

3.3 Net external demand

The current account deficit widened over the year to 1995 Q3,(1) reaching 0.9% of GDP. After falling off sharply in the first half of 1995, export volumes—excluding oil and erratics—rebounded in the third quarter, increasing by 3.4%. Import volumes—again excluding oil and erratics—also fell in the first quarter and increased by just 0.2% in Q2; they then recovered strongly and were up 3.2% in Q3.

Despite stronger growth in export volumes, the January CBI Survey noted a sharp drop in the balance of firms' export orders in Q3 and Q4. And in Q4 manufacturers became much less confident about future export orders. The balance of respondents confident about orders fell from +13% to +6%. This compared with a quarterly average of around +29% in the first half of the year.

Since the November *Report*, prospects for domestic demand growth in the major overseas economies have deteriorated sharply in the light of weaker-than-expected activity (see Table 3.E and the article on the international environment in the *Quarterly Bulletin*). In particular, the estimate of four-quarter GDP growth in the United States in 1995 Q3 was revised down from 2.3% to 1.9% and, in Japan, GDP is estimated to have fallen by 0.2% in the year to 1995 Q3. French and German four-quarter GDP growth also declined between the second and third quarters of 1995. As a result, forecasters scaled down their projections of growth in the major industrialised countries in 1996 and 1997.

UK exports have tended in the past to grow a little faster than domestic demand in the major industrialised economies, for a given level of competitiveness. The US economy appears to be on course to grow at around its long-run trend rate in 1996, but the course of French and German output and demand is less certain. The future path of UK exports will partly depend, therefore, on why domestic demand growth in European economies slowed. The fall in German and French growth could have some common causes. The article on international saving and investment in the *Quarterly Bulletin* notes that long-term real interest rates in the G10 rose significantly during 1994, reaching historically high levels, before falling back a little in 1995. This rise in real interest rates during 1994 could have contributed to the downturn in Europe in 1995. Conversely, the drop in real rates last year could help to stimulate demand

(1) Data for 1995 Q4 are not yet available.

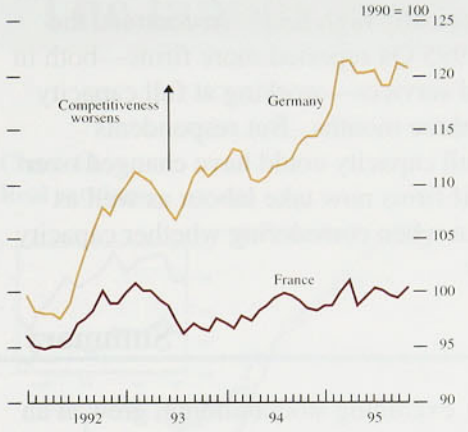
Table 3.E
International growth

Percentage changes on previous period

	Year 1994 H1	Year 1994 H2	1994 1995 H1	1995 Q4	Q1	Q2	Q3
Germany							
GDP	1.7	1.6	1.1	0.6	0.2	1.1	—
Imports	4.1	4.4	-0.4	1.8	-2.1	1.8	0.6
Domestic demand	1.3	1.9	0.7	0.7	—	0.6	0.3
Consumption	-0.4	0.7	0.9	—	0.5	0.8	-0.1
Stockbuilding (a)	0.6	0.7	-0.1	0.3	-0.2	-0.1	0.5
France							
GDP	1.6	2.2	1.2	1.0	0.7	0.2	0.2
Imports	4.2	4.0	1.9	2.3	0.8	-0.3	1.8
Domestic demand	2.6	2.0	0.7	0.9	0.2	0.2	0.8
Consumption	0.6	1.2	1.2	0.3	0.3	1.3	-0.1
Stockbuilding (a)	1.9	0.6	-0.3	0.4	-0.3	-0.5	0.4
Italy							
GDP	1.3	2.1	1.5	—	1.5	-0.1	2.0
Imports	5.9	6.8	5.1	3.3	2.1	2.6	1.6
Domestic demand	1.4	2.5	0.1	0.9	-0.1	-0.6	2.6
Consumption	1.2	0.9	0.4	0.3	—	0.5	0.4
Stockbuilding (a)	0.4	1.7	-1.0	0.4	-0.5	-1.3	2.2
United States							
GDP	1.8	1.9	0.6	0.8	0.2	0.1	0.8
Imports	6.1	6.1	4.2	2.2	2.1	1.9	0.3
Domestic demand	2.1	1.9	0.8	0.7	0.3	0.2	0.6
Consumption	1.4	1.5	1.0	0.8	0.2	0.8	0.7
Stockbuilding (a)	0.6	0.1	-0.3	-0.1	-0.1	-0.4	-0.1

(a) Contribution to growth.

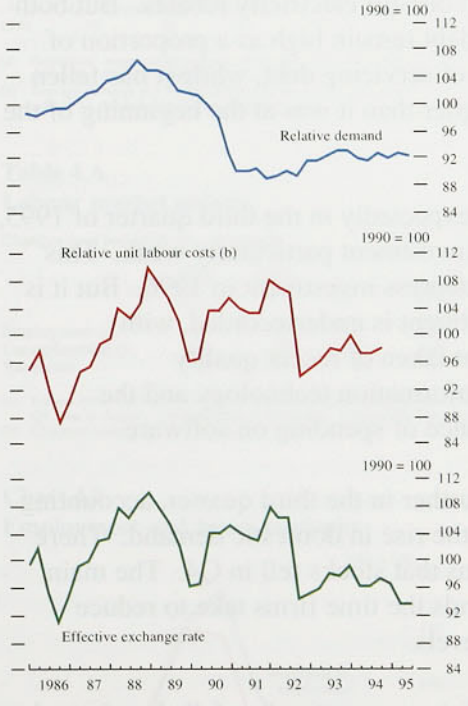
Chart 3.12
Real effective exchange rates[a]



Source: *International Financial Statistics*, IMF.

(a) Nominal effective rates adjusted for changes in relative consumer prices.

Chart 3.13
Relative demand and costs[a]



Sources: Bank of England, CSO, Datastream and *International Financial Statistics*, IMF.

(a) Relative to trade-weighted G7 excluding the United Kingdom.
(b) In manufacturing industry.

growth in 1996, although the changes in interest rates themselves could have partly been determined by changing expectations of future growth. Other possible explanations for the Europe-wide slowdown include fiscal tightening and an appreciation of real exchange rates. But country-specific factors cannot be excluded. In 1995, France's fiscal policy was tightened, while the social security reforms led to strikes and a drop in consumer spending in the third quarter. In Germany, a sharp appreciation of the real exchange rate in 1994 and 1995 (see Chart 3.12) exacerbated the downturn. So the prospects for UK export growth in 1996 will partly depend on the success of the French and German authorities' measures to stimulate demand.

One factor helping UK exports will be increased export profitability, resulting from sterling's depreciation during the first quarter of 1995 (see Chart 3.13). This has provided an incentive for firms to shift resources from the domestic market into the export sector. Nevertheless, growth in UK export volumes is likely to be lower than envisaged in November, and the risk to activity in 1996 from this source is probably on the downside.

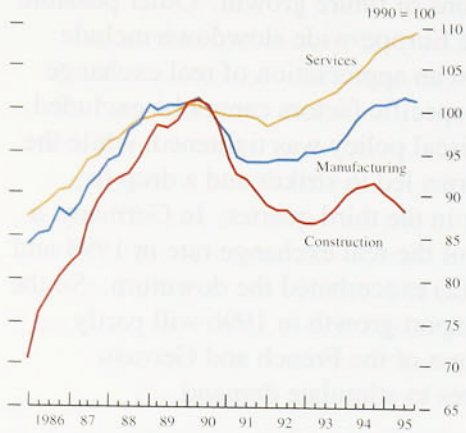
3.4 Output

UK output is estimated to have increased by 0.4% in 1995 Q4. Estimated GDP growth was revised down from 0.5% to 0.4% in 1995 Q3 and non-oil GDP growth from 0.5% to 0.3%. The estimated profile of output over the past two years has been changed by successive revisions to the GDP data (see Section 6).

The shape of the recovery changed in 1995, as GDP growth slowed (see Chart 3.14). In the previous year, recovery was skewed towards manufacturing—with growth in the manufacturing sector of around 1½% a quarter, compared with 1% in the service sector. After slowing towards the end of 1994, manufacturing output growth paused in 1995 Q1, before recovering slightly in the following two quarters; it rose by 0.4% in Q3. In the fourth quarter, manufacturing output fell by 0.2%. Service-sector growth slowed only slightly in 1995; it increased by an average of 0.7% a quarter.

The rate at which the economy can grow over the short term, without putting upward pressure on inflation, is influenced by the degree of spare capacity in the economy. CBI surveys suggest that the number of firms working below capacity in the manufacturing sector rose

Chart 3.14
Manufacturing and services output



from around the middle of 1995, after falling during 1994 and the first half of 1995. But capacity utilisation remained at a historically high level. In contrast, the BCC Survey for 1995 Q4 reported more firms—both in manufacturing and services—working at full capacity over the previous three months. But respondents' interpretation of full capacity could have changed over the past ten years if firms now take labour as well as capital into account when considering whether capacity is being used fully.

3.5 Summary

Domestic demand, excluding stockbuilding, grew at an average of 0.4% a quarter in the first three quarters of 1995. Consumption grew around its trend, as it has done since the beginning of 1994. Consumers' net wealth will become more liquid after more building societies merge and convert to plc status over the next two years; they will also gain from one-off electricity rebates. But both consumption and debt remain high as a proportion of GDP, and the cost of servicing debt, while it has fallen recently, is still higher than it was at the beginning of the 1980s.

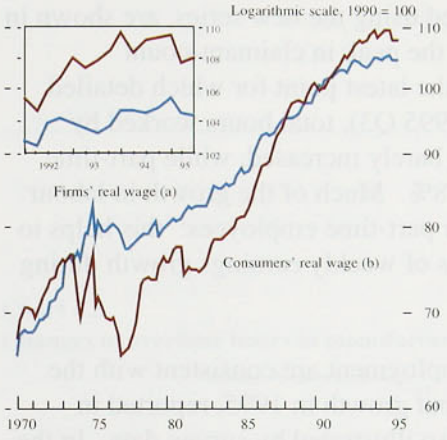
Investment fell unexpectedly in the third quarter of 1995, with construction investment particularly weak. This could continue to depress investment in 1996. But it is possible that investment is underrecorded, with insufficient account taken of recent quality improvements in information technology and the increasing importance of spending on software.

Stocks increased further in the third quarter, accounting for just under half the rise in domestic demand. There are some indications that stocks fell in Q4. The main uncertainty surrounds the time firms take to reduce stocks to desired levels.

Confidence about future export orders fell sharply in the fourth quarter, as European demand contracted. A rebound in European consumption growth in 1996 could lead to a sharp rise in the demand for UK goods. But there is a risk of the growth in export orders falling further.

The labour market 4

Chart 4.1
Real earnings



(a) Employers' wage and non-wage employment costs per worker deflated by the GDP deflator.
(b) Average earnings per worker deflated by the retail prices index until 1973, thereafter by the tax and prices index.

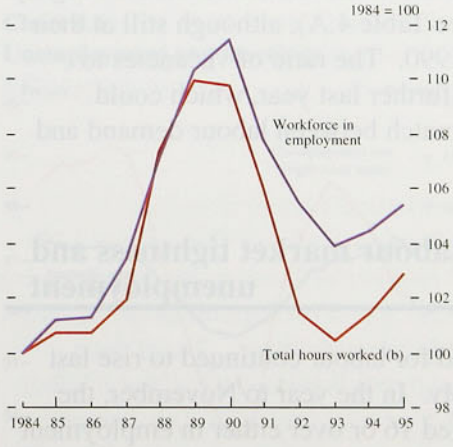
Table 4.A
Labour market activity

Changes over period shown; thousands

	1994	1995			
	Q4	Q1	Q2	Q3	Q4
Employment (a)	84	89	25	107	38
Unemployment (b)	-144	-72	-33	-48	-28
Vacancies	12	-5	6	13	-4

(a) Labour Force Survey; Q1 refers to December to February; Q2 March to May; Q3 June to August; Q4 September to November. Data are for Great Britain.
(b) Claimant count.

Chart 4.2
Employment and hours worked(a)



(a) Data are for Q2 each year.
(b) New measure.

Unemployment fell in 1995, as in 1994. But the demand for labour increased at a slower rate in the second half of 1995. The growth of average underlying earnings(1) remained unchanged between July and November, although wage settlements edged up a little in December and January. Real earnings growth continued to be weak. Average real earnings per worker (net of tax) were no higher in 1995 Q3 than two years earlier, and earnings growth was thus at its most subdued since the early 1980s. This measure of the real consumption wage is shown in Chart 4.1. The chart also shows how the path of the consumption wage contrasts with the real wage faced by producers, which includes firms' wage and non-wage employment costs, such as national insurance contributions.

4.1 Demand for labour

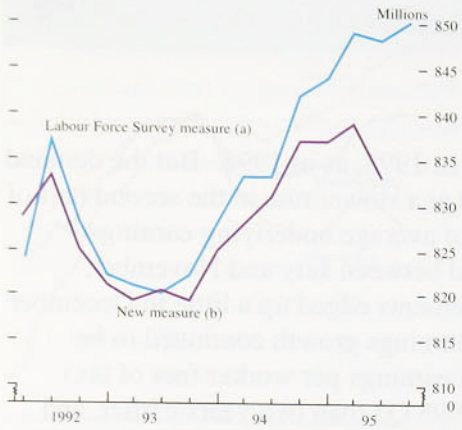
The demand for labour has probably increased further since the November *Report*. Employment in Great Britain, measured by the Labour Force Survey (LFS), rose by 0.1% in 1995 Q4—a less rapid rise than for most of the previous year (see Table 4.A).

Because of the growth in part-time and flexible working, the total number of employed workers is not the best measure of labour demand. Total hours worked in the economy is a more comprehensive measure, and the CSO published a new measure of total hours worked in December. It combines average hours data from the LFS with employment data from the workforce-in-employment (WIE) survey.(2) Chart 4.2 shows that, during the recent recession, hours worked fell more sharply than employment. Since 1993, total hours worked have risen more rapidly than employment despite a rise in part-time work because, in the short term, firms adjust hours worked per employee as well as employment in response to changes in demand for their products.

The new series for hours worked is not yet available beyond 1995 Q3, but the LFS provides a more up-to-date estimate of total hours worked. The two

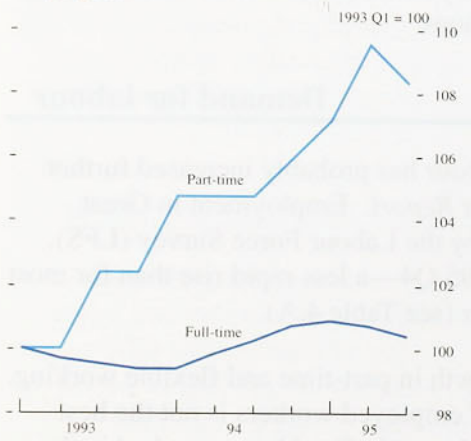
(1) Measured per worker per week for Great Britain.
(2) The new series is described in more detail on pages 467–76 of *Labour Market Trends*, December 1995.

Chart 4.3
Total hours worked per week



(a) Great Britain.
(b) United Kingdom.

Chart 4.4
Hours worked by full-time and part-time employees(a)



(a) New measure, total hours worked per week by employees in employment.

series follow broadly similar trends, as Chart 4.3 shows; both measures confirm that growth in the demand for labour slowed last year, with a sharp fall in the new measure in Q3. According to the LFS, total hours worked rose by 1% between autumn 1994 and autumn 1995, the same as the rise in employment.

Total hours worked by part-time and full-time employees, calculated using the new series, are shown in Chart 4.4. Between the peak in claimant-count unemployment and the latest point for which detailed data are available (1995 Q3), total hours worked by full-time employees barely increased, while part-time hours rose by about 8%. Much of the growth in labour demand has been for part-time employees: this helps to explain the weakness of weekly earnings growth during the recovery.

These changes in employment are consistent with the broad pattern of output growth in 1995, reported in Section 3, and are also illustrated by survey data. In the January 1996 CBI Quarterly Industrial Trends Survey, a balance of 17% of manufacturers expected to cut employment in the following four months. The CIPS employment index,(1) which had been around 50 in the second half of last year, fell sharply in January, perhaps indicating that the rise in manufacturing employment was coming to an end. By contrast, the January BCC Survey reported a net positive balance of service companies still anticipating a rise in employment in Q1, although fewer than in Q4.

Other indicators also suggested slower growth in labour demand. For example, vacancies at Jobcentres—which account for about a third of all vacancies—were roughly unchanged in Q4 (see Table 4.A), although still at their highest since early 1990. The ratio of vacancies to unemployment rose further last year, which could indicate greater mismatch between labour demand and supply.

4.2 Labour market tightness and unemployment

Although the demand for labour continued to rise last year, so did the supply. In the year to November, the number of people aged 16 or over either in employment or seeking work rose by 0.5%. This was less than the

(1) The CIPS employment index compares employment with its level in the previous month. The index is the sum of those reporting a rise in employment and half those reporting employment unchanged. An index level below 50 indicates a fall in overall employment.

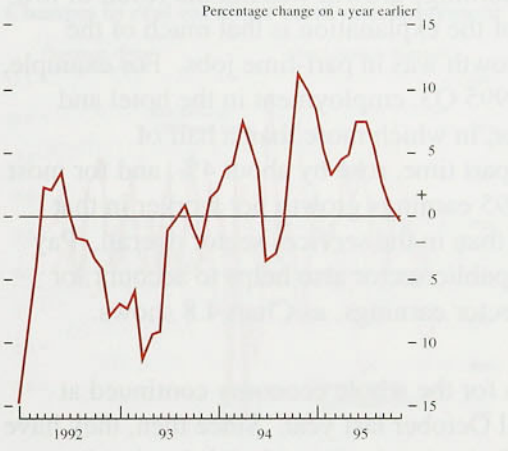
rise in employment over the same period, but the gap between employment growth and labour force growth was not as large as in 1994. Labour market tightness reflects the balance between labour demand and supply. One measure of this tightness is unemployment.

Measured by the claimant count, unemployment fell further in the fourth quarter. The fall of 28,000 was less than in the previous quarter, and compares with about 140,000 a year earlier. The outflow from the claimant count fell in Q4, supporting other evidence of a slowdown in labour market activity. By December, unemployment was 8%, its lowest since early 1991; at the same point in the previous recovery, it was 10.9% and still rising. The LFS measure of unemployment, which increased in the early part of 1995, fell during the summer and autumn. Apart from the divergence a year ago, the two measures of unemployment have followed similar trends since unemployment started to fall.

Continued falls in unemployment last year, even though they were smaller than a year earlier, were a little surprising given the slowdown in output growth. But changes in employment depend on both current and past changes in output. Initially, firms probably responded to the sharp rise in output in 1994 by increasing overtime and shift work, because they were unsure whether higher demand would persist, especially if much of it came from new markets overseas. For example, overtime work in manufacturing increased sharply toward the end of 1994, as Chart 4.5 shows, but stabilised toward the end of 1995, and hours worked rose by more than employment in the early part of the recovery, as reported earlier. Despite the slowdown in output growth in 1995, firms seem to have taken the view that higher output was not transitory and so increased employment. In the past, employment has adjusted to output over the course of about a year.

The inactivity rate, defined as the percentage of people aged 16 or over neither in work nor actively seeking work, is another measure of labour market tightness. And, as Chart 4.6 shows, the proportion of the population defined as economically inactive fell a little last year. Overall, however, the inactivity rate has fallen very little during the recovery, because of increases in the numbers of students and of those claiming invalidity and long-term sickness benefit. This helps to explain the divergence between inactivity and unemployment rates in the chart—the inactivity rate probably understates the tightening of the labour market.

Chart 4.5
Changes in overtime hours in manufacturing(a)



(a) Great Britain, three-month moving average.

Chart 4.6
Unemployment and inactivity

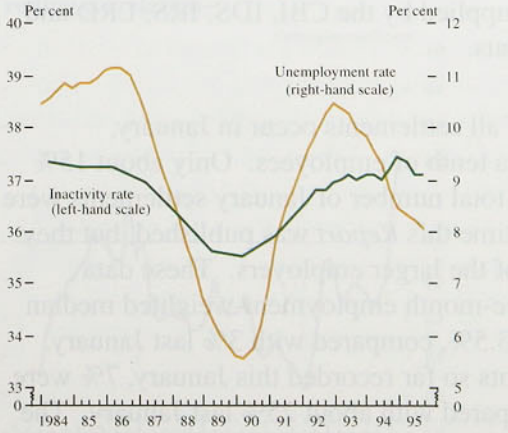
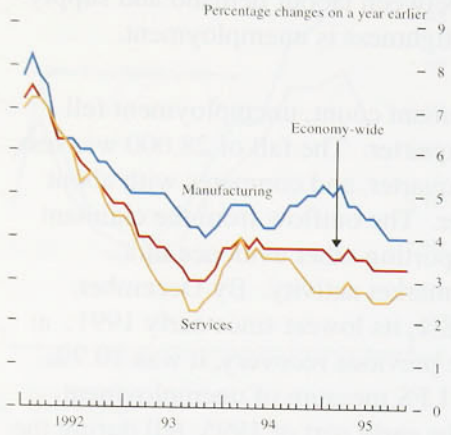
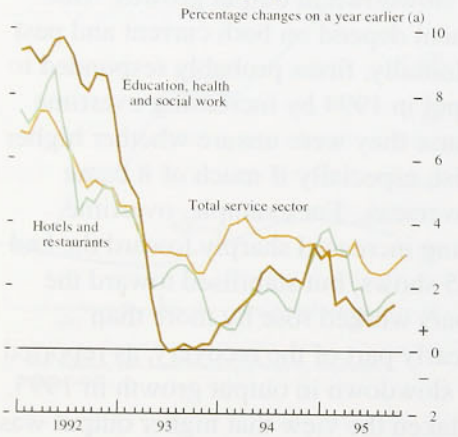


Chart 4.7
'Underlying' earnings growth[a]



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

Chart 4.8
Service-sector earnings growth



(a) Three-month moving averages, for Great Britain.

Table 4.B
Wage settlements

Percentages

Whole-economy median for three months ending:

	1995				1996
	Mar.	June	Sept.	Dec.	Jan.
CBI (a)	3.0	3.4	3.5	3.5	
IDS (b)	3.0–3.9	3.0–3.9	3.0–3.9	3.0–3.9	3.0–3.9
IRS (c)	3.0	3.0	3.2	3.5	
LRD (d)	3.0	3.0	3.3	3.6	
Bank (e)	3.0	3.0	3.4	3.5	3.5

(a) Manufacturing firms.
(b) Incomes Data Services, the modal settlement range.
(c) Industrial Relations Services.
(d) Labour Research Department.
(e) An employment-weighted measure combining data from the CBI, IDS, IRS, LRD and the Bank's Agents. January figure provisional.

Skill shortages are also an indicator of labour market tightness. Surveys provide conflicting evidence. The BCC Survey reported greater recruitment difficulties in both manufacturing and service companies in the final quarter of last year. But in January the CBI's Quarterly Industrial Trends Survey reported that skilled labour shortages were unlikely to limit output much over the coming four months, with the outlook the same as during most of last year.

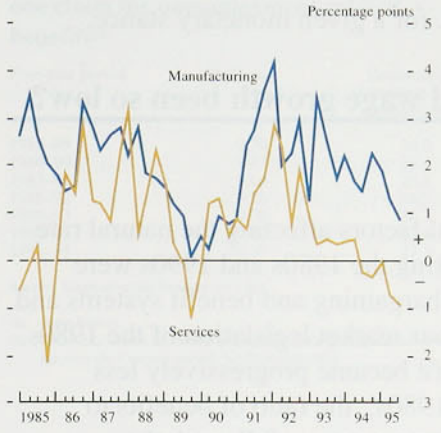
4.3 Earnings

The growth of nominal underlying average earnings per worker was 3¼% in November, unchanged from the November *Report*. Earnings growth started to fall in manufacturing in early 1995 and in the service sector in early 1994 (see Chart 4.7). Continued low service-sector earnings growth was not the result of low demand: part of the explanation is that much of the employment growth was in part-time jobs. For example, in the year to 1995 Q3, employment in the hotel and restaurant sector, in which more than a half of employees are part time, rose by about 4%, and for most of 1994 and 1995 earnings growth per worker in that sector was less than in the services sector overall. Pay restraint in the public sector also helps to account for weak service-sector earnings, as Chart 4.8 shows.

Pay settlements for the whole economy continued at around 3% until October last year. Since then, they have risen. Table 4.B shows a variety of settlement measures. About four fifths of pay reviews occur in the first seven months of the year, so settlement measures in the second half of the year can be influenced heavily by one or two outliers. The Bank's preferred measure of settlements, reported in the table, is weighted by employment and based on data supplied by the CBI, IDS, IRS, LRD and the Bank's Agents.

About a fifth of all settlements occur in January, covering about a tenth of employees. Only about 15% of the expected total number of January settlements were reached by the time this *Report* was published, but they included most of the larger employers. These data showed the three-month employment-weighted median settlement was 3.5%, compared with 3% last January. Of the settlements so far recorded this January, 7% were below 3%, compared with about 25% last January. The rise in settlements in December and January followed a rise in twelve-month inflation measures in Q3; an

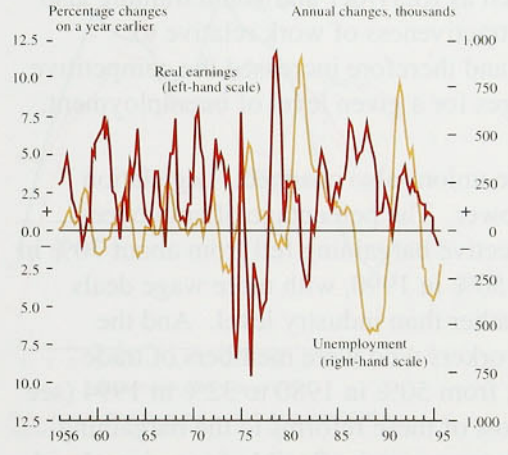
Chart 4.9
Wage drift[a]



Sources: CBI and CSO.

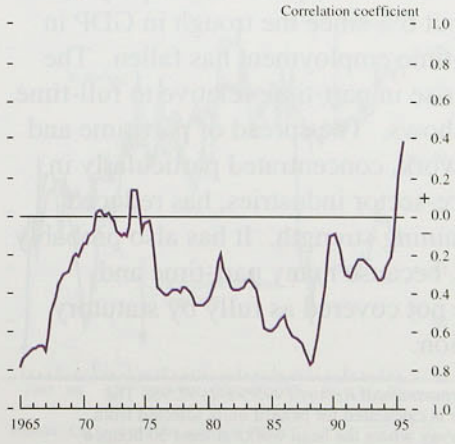
(a) Annual growth in average earnings less settlements.

Chart 4.10
Changes in real earnings[a] **and unemployment**



(a) Nominal whole-economy average earnings deflated by the retail prices index until 1973, thereafter by the tax and prices index.

Chart 4.11
Unemployment and real earnings: rolling correlation[a]



(a) Seven-year rolling correlation between annual changes in real earnings and unemployment.

easing in inflationary pressures in the coming months may help to reduce upward pressure on settlements.

Earnings generally grow more quickly than wage settlements because factors such as overtime, bonus payments and grading increases, rise faster—the difference is known as 'wage drift'. The November *Report* noted the fall in earnings growth during the summer and the disappearance of wage drift. Wage drift remained negligible in the three months to November. Between 1991 and 1995, wage drift in manufacturing and service sectors fell, as Chart 4.9 shows. Service-sector wage drift was negative from mid-1994 to the third quarter of 1995, though services earnings rose relative to settlements in October and November. Low wage drift in service industries over the past four years partly reflected growing part-time employment, which cut average weekly earnings per worker, as well as reducing overtime payments. Lower bonuses in the financial sector also accounted for low service-sector wage drift in the early part of last year, though bonuses were high in 1993 and 1994 and so cannot explain the fall in drift since 1992. In 1995, equity and bond markets were generally much stronger than in 1994, so financial-sector bonuses to be paid in the first quarter of this year could be much higher, leading to a temporary rise in wage drift in the service sector.

Real earnings growth was subdued last year, despite the continued tightening in the labour market. Chart 4.10 shows how, until about 1990, changes in unemployment were usually negatively correlated with real earnings growth (defined here as growth in the real consumption wage). Between 1956 and 1992 Q4—the previous peak in unemployment—the correlation between annual changes in unemployment and real earnings was about -0.3. One explanation for this might be that in the short run, as unemployment falls, workers have greater leverage to push for higher real wages, because the diminishing pool of unemployed puts less downward pressure on wages. Since the beginning of 1993, unemployment has fallen steadily, but real earnings have barely increased. It is too early to be certain, but it is possible that the relationship between real earnings and unemployment has changed. Chart 4.11 shows that the short-run correlation between changes in unemployment and real earnings has shifted around over the past 30 years or so. Between the mid-1970s and early-1990s the correlation was negative, but it has changed in the recent past. This might reflect the gradual impact of changes to labour market institutions and to the

composition of employment and unemployment, leading to a fall in the level of unemployment consistent with stable wage inflation, for a given monetary stance.

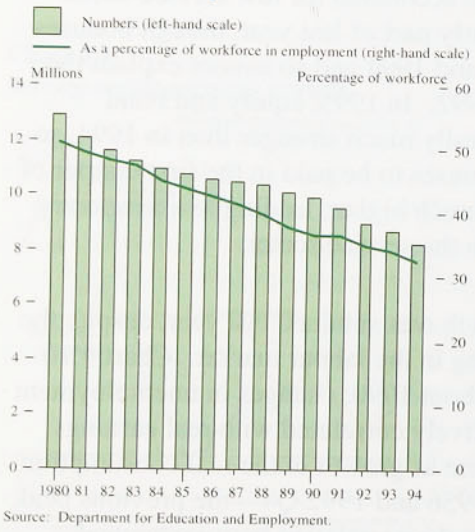
4.4 Why has real wage growth been so low?

Institutional factors

The main institutional factors affecting the natural rate of unemployment during the 1980s and 1990s were changes to the wage-bargaining and benefit systems and the effects of the labour market legislation of the 1980s. Unemployment benefit became progressively less generous during the 1980s; the ratio of benefits to earnings—the replacement ratio—fell, with the proportion of the working population whose replacement ratio was below 0.7 rising from about 85% in 1985 to 95% by 1995.(1) The tightening of benefit-eligibility criteria and the introduction of programmes such as RESTART and youth training also increased the attractiveness of work relative to unemployment and therefore increased the competitive pressure on wages for a given level of unemployment.

The role of trade unions also changed. Legislation reduced their power. The percentage of employees covered by collective bargaining fell from about 70% in 1984 to around 50% in 1990, with more wage deals struck at local rather than industry level. And the percentage of workers who were members of trade unions also fell, from 50% in 1980 to 32% in 1994 (see Chart 4.12). Most of these reforms to the bargaining framework made wages more flexible for a given level of unemployment.

Chart 4.12
Union membership



Source: Department for Education and Employment.

Table 4.C
Growth in full-time and part-time work over the recovery(a)

Labour Force Survey (b)		Workforce in Employment (c)	
Full-time	Part-time	Full-time	Part-time
—	6%	-3%	6%

(a) In Great Britain; figures are rounded to the nearest whole number.
(b) Changes between spring 1992, the first point at which data are available, and autumn 1995.
(c) Changes between 1992 Q1 and 1995 Q3.

Composition of employment and unemployment

According to the WIE measure, part-time employment has increased by about 6% since the trough in GDP in 1992 Q1, while full-time employment has fallen. The LFS also reported a rise in part-time relative to full-time work, as Table 4.C shows. The spread of part-time and short-term contract work, concentrated particularly in less unionised service-sector industries, has reduced workers' wage-bargaining strength. It has also probably reduced job security, because many part-time and contract workers are not covered as fully by statutory employment protection.

(1) Source: *Social Security Departmental Report 1995/96–1997/98*. The replacement ratio used here is calculated for benefit units selected from the Family Expenditure Survey where the head works at least 30 hours a week. Estimates assume full receipt of benefit entitlement and are based on net income from all sources after housing costs.

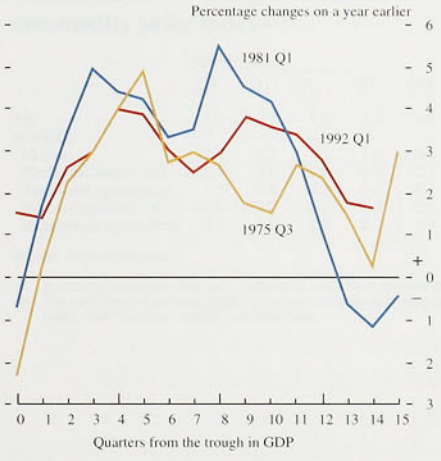
Table 4.D
Number of people making at least one claim for unemployment-related benefits[a]

Five-year period	Millions	Percentage of working-age population [b]
1985–89	9.70	26.0
1986–90	9.47	25.3
1987–91	9.64	25.8
1988–92	9.76	26.2
1989–93	9.79	26.3
1990–94	10.22	27.4
1991–95	10.39	27.3

Source: Supplied to the Bank by the CSO.

(a) Great Britain.
(b) These data should be treated as estimates since the population of working age over the five-year periods has been estimated.

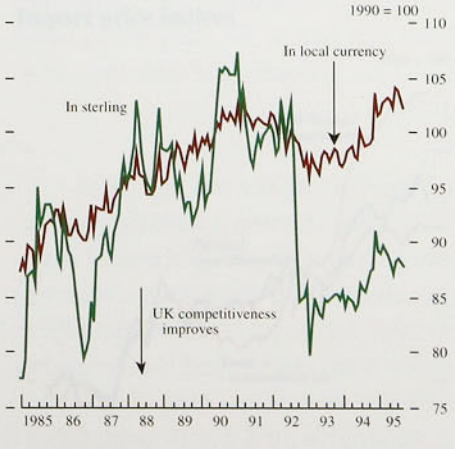
Chart 4.13
Productivity growth over the cycle[a]



Dates shown indicate the quarter in which the trough in GDP was reached.

(a) Whole-economy output per head.

Chart 4.14
Relative unit wage costs[a]



Sources: CSO and overseas statistical offices.

(a) UK manufacturing unit wage costs relative to those in the rest of the G7 countries. Data for 1995 exclude Germany.

The distribution and duration of unemployment also affect bargaining. Unemployment became more widespread across occupations during the 1990s, with historically relatively high redundancy rates among non-manual workers. So job insecurity may have become more widespread. But the proportion of the population with some recent experience of unemployment has not changed much, as Table 4.D shows. The average duration of unemployment, however, rose sharply in the 1980s, with the proportion of those unemployed for more than a year rising from about 30% in 1980 to a peak of nearly 45% in 1987. The share fell in the early 1990s, but was back up to 38% in 1995. The long-term unemployed are likely to exert less downward pressure on wages, since in some cases their skills have deteriorated, making them less attractive to potential employers. So the increase in the proportion of long-term unemployment is one of the few developments likely to have put upward pressure on the natural rate of unemployment in the recent past.

In all probability, the natural rate has fallen over the past decade, although estimates of it vary widely. Institutional changes have reduced rigidities in the wage-bargaining framework, and the changing nature of employment has reduced the willingness of workers to push for higher wages for a given level of unemployment. The weakness of earnings growth during the recent recovery is consistent with unemployment being above its natural rate.

4.5 Productivity and unit wage costs

The growth in productivity per head slowed down in the second half of last year and unit wage costs accelerated. A lot of this change was cyclical, as employment growth 'caught up' with the sharp rise in output in 1994. Chart 4.13 shows how productivity growth also fell a few years into the previous two recoveries; the fall in this recovery has so far been less sharp. Last year's rise in unit wage costs needs to be seen in this context.

Chart 4.14 shows that, measured in local currency terms, manufacturing unit wage costs in the United Kingdom have increased over the past two years relative to those of its major competitors. This reduction in underlying labour-cost competitiveness eroded only some of the fall in the real exchange rate which occurred at the end of 1992.

4.6 Summary

The labour market continued to tighten, despite the slowdown in output growth in the second half of last year. Employment was probably 'catching up' with high output growth earlier in the recovery. Most of the growth in employment continued to be in part-time work. Earnings growth remained subdued. Unemployment is currently above its natural rate. That rate has probably fallen over the past ten years.

Pricing behaviour 5

In the long run, the rate of monetary expansion determines the rate of inflation. But in the short run, firms' price-setting behaviour is affected by supply and demand conditions in individual markets. In particular, it may respond to changes in the costs of production and the degree of competition firms experience. So it is useful to review movements in costs and profits.

5.1 Raw material and commodity prices

The Bank's commodity price index rose by 1.1% in Q4, after falling by 2.1% in Q3. In the twelve months to December, the index increased by 2.7%, compared with annual rates of over 10% in the first quarter of 1995. The increase in the year to December was entirely accounted for by higher prices for oil and indigenous agricultural products such as cereals, milk and livestock (see Table 5.A). Tight supply conditions in world cereals markets may continue to put upward pressure on agricultural prices, at least in the short term.

Table 5.A
Contributions to changes in the Bank's commodity price index(a)(b)

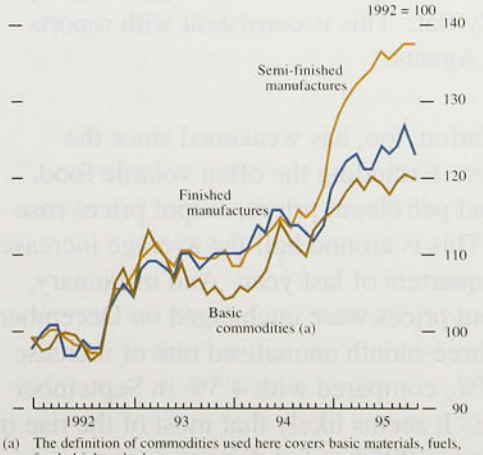
	1994	1995					
	Q4	Q1	Q2	Q3	Oct.	Nov.	Dec.
All	6.3	10.7	5.5	2.1	3.6	2.0	2.7
of which:							
Metals	2.9	2.2	1.3	1.0	0.2	-0.1	-0.3
Fuels (including oil)	-0.5	2.2	1.0	-1.2	-0.1	—	2.7
Non-food agriculture	1.1	0.8	0.3	0.1	-0.1	-0.2	-0.2
Non-indigenous food	0.6	0.2	0.1	-0.2	-0.1	—	-0.3
Indigenous agriculture	2.3	5.0	2.5	2.2	3.5	2.2	1.4

Source: Bank of England.

(a) Percentage point contribution to increase in index over previous year.
(b) The contributions are calculated from an approximate decomposition of the price index; they therefore contain a residual error.

Oil prices rose in the final quarter of last year. The price of Brent crude increased from a monthly average of around $16 per barrel in October to around $17¾ per barrel in December. Temporary factors have been important, such as the increased demand resulting from cold weather in Europe and North America at the end of last year. The upward momentum has not continued into 1996: by 9 February, the price of Brent crude had fallen back close to $16¾ per barrel.

Chart 5.1
Import price indices



(a) The definition of commodities used here covers basic materials, fuels, food, drink and tobacco.

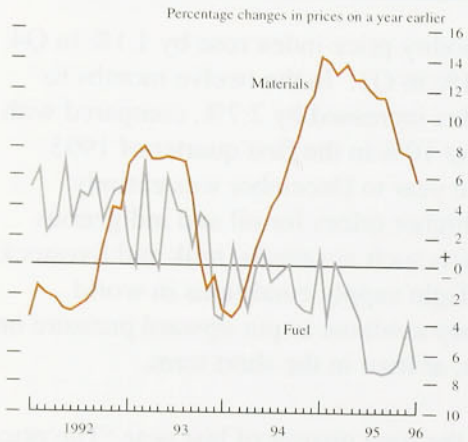
5.2 Import prices

Import prices continued to rise in the third and into the fourth quarter of 1995, but more slowly than earlier in the year. In the three months to November, non-oil import prices rose by 1.3%, compared with the previous three months. This followed increases of 6.7%, 2.5%, and 1.4% in Q1, Q2 and Q3 respectively. The more timely statistics for import prices from non-EU countries show a pattern similar to that of the overall index, though the price increases have been smaller. Non-oil import prices from non-EU countries rose by 0.2% in Q4, after rising by 0.9% in both Q3 and Q2. As shown in Chart 5.1, the slowdown occurred for all three major

categories of imports. The relative stability of the sterling effective exchange rate in the second half of 1995 was a factor; almost all of the 6¼% fall in sterling in 1995 occurred in the first half of the year. Softer commodity prices and slower demand growth overseas also led to a modest slowdown in producer price inflation in the rest of the G7 countries. In the year to November, average producer prices in the G7 excluding the United Kingdom increased by 2.0%, compared with 2.8% in the year to June.

5.3 Input and output prices

Chart 5.2
Producer input price inflation

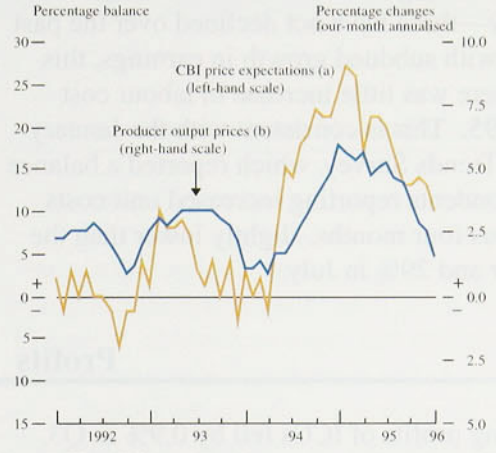


Producer input price inflation has moderated further since the November *Report*. In Q4, the prices paid by manufacturers for fuel and materials rose by 0.3%, compared with 1.1% in Q3. And in January input prices fell by 0.3%, bringing the twelve-month growth rate down to 4.0%, the lowest rate since July 1994. Oil prices fed through quickly to the materials prices included in the producer input price index, after rising towards the end of last year: the crude oil component of the index, which reflects movements in Brent crude prices, rose by 7.3% in December and by 5.5% in January. But, offsetting this, other material costs have continued to increase more slowly, reflecting weaker commodity prices and import costs. In the twelve months to January, material prices as a whole rose by 5.6%, compared with a rate of 11.4% in September. Fuel costs—principally electricity and gas (and excluding crude oil)—have fallen fairly steadily for well over a year, and have also contributed to slower input price inflation (see Chart 5.2).

Survey evidence also indicates that input cost pressures have eased. The CIPS Survey's price index of purchases fell for seven consecutive months during 1995 and since December has stabilised just below 50, suggesting input prices are broadly flat. This is consistent with reports from the Bank's Agents.

Output price inflation, too, has weakened since the November *Report*. Excluding the often volatile food, drink, tobacco and petroleum prices, output prices rose by 0.6% in Q4. This is around half the average increase in the first three quarters of last year. And in January, these 'core' output prices were unchanged on December. As a result, the three-month annualised rate of increase fell further to 1.7%, compared with 4.5% in September and 4.9% in June. It seems likely that most of the rise in input costs earlier in 1995 has fed through to output

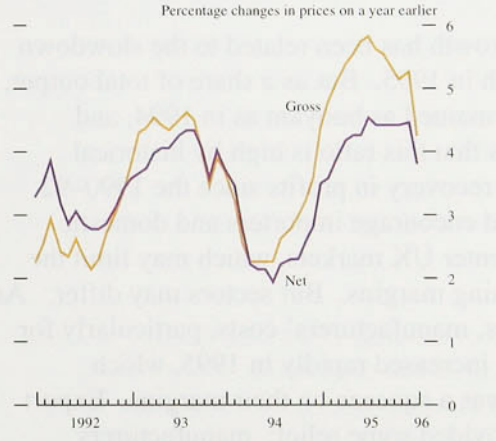
Chart 5.3
Producer output price inflation and CBI price expectations



Sources: CBI and CSO.

(a) Balance of manufacturers expecting to increase prices over the following four months less those expecting a reduction, seasonally adjusted.
(b) Excluding food, drink, tobacco and petroleum; four-month increase, seasonally adjusted and annualised.

Chart 5.4
Producer output price inflation



prices. And although the January CBI Quarterly Trends Survey reported an increased balance of manufacturers expecting to raise prices over the next four months, this probably mainly reflects seasonal revisions to list prices: the largest changes in output prices occur each January in most manufacturing industries. The seasonally adjusted balance has fallen for two consecutive quarters to its lowest level since April 1994. Chart 5.3 shows that, over the recent past, the CBI's measure of price expectations has tended to move in line with recorded output price inflation.

Against the background of subdued demand, which has probably contributed to the build-up of stocks in the manufacturing sector, the ability of firms to pass on cost increases seems to have weakened. As Chart 5.4 shows, the gross(1) measure of annual output price inflation has generally fallen by more than the net measure since the middle of last year, suggesting that cost pressures are to some extent being absorbed within the manufacturing sector. The Bank's Agents reported continued, and in some cases intensifying, customer resistance to price rises, and not only in those sectors close to final consumer demand.

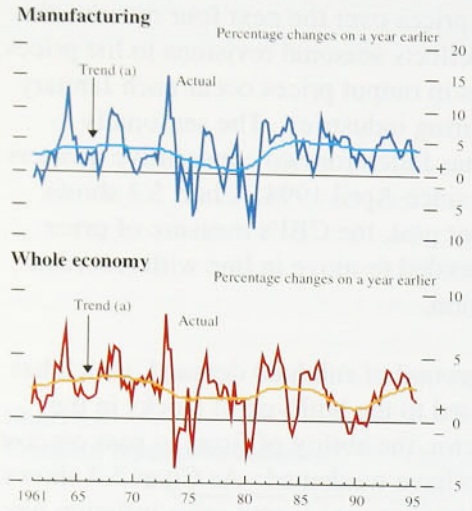
5.4 Labour costs

As discussed in Section 4, earnings growth has so far remained surprisingly low. Despite this, unit wage costs continued to increase more rapidly: in manufacturing they rose by 4.1% in the year to November, and for the economy as a whole by 0.8% in the year to Q3. This reflects a rise in employment at a time of slower output growth; in manufacturing, productivity even fell by 0.5% in the twelve months to November.

Actual unit labour costs may be a poor guide to pressures on firms to increase output prices because of cyclical movements in productivity. For example, a downward shock to demand is likely to raise unit labour costs given the fixed cost of plant, but firms' price response may be to reduce prices to attract demand from competitors. More generally, firms' output, employment and pricing decisions are determined jointly in order to achieve a desired level of profitability. But in the short run, there are costs to adjusting employment and plant. In the long run, firms are able to adjust fully all factors of production. So it is useful to look at movements in

(1) Gross output prices include the price of transactions between manufacturing firms as well as those between manufacturing and other sectors.

Chart 5.5
Actual and trend productivity growth



Sources: Bank of England and CSO.

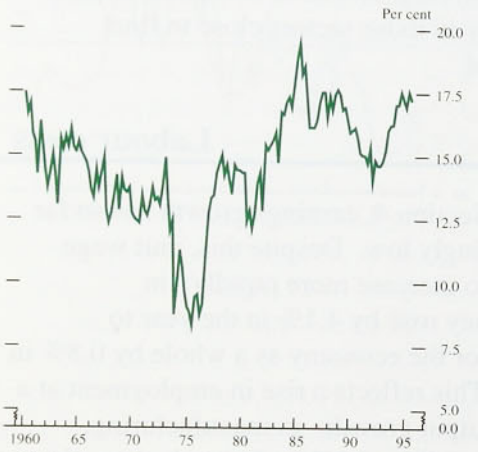
(a) Trend estimated using Hodrick-Prescott filter.

productivity trends in order to interpret movements in firms' labour costs. Chart 5.5 shows estimates of the trends in productivity growth for manufacturing and the whole economy—these have not declined over the past year. Coupled with subdued growth in earnings, this suggests that there was little increase in labour cost pressures in 1995. This is consistent with the January CBI Industrial Trends Survey, which reported a balance of 25% of respondents reporting increased unit costs over the previous four months, slightly lower than the 26% in October and 29% in July.

5.5 Profits

The gross trading profits of ICCs fell by 0.9% in Q3. This largely reflected a sharp fall in North Sea oil and gas companies' profits, which tend to be particularly volatile. Non North Sea companies' profits fell by 0.2% in the third quarter, but were still 5.6% higher than a year earlier. This contrasts with the rates of profit growth of over 10% in 1993 and 1994.

Chart 5.6
ICCs' profits as a share of output(a)



(a) GDP at current prices.

Slower profit growth has been related to the slowdown in output growth in 1995. But as a share of total output, ICCs' profits remained as buoyant as in 1994, and Chart 5.6 shows that this ratio is high by historical standards. The recovery in profits since the 1990–92 recession should encourage importers and domestic competitors to enter UK markets, which may limit the scope for widening margins. But sectors may differ. As Table 5.B shows, manufacturers' costs, particularly for material inputs, increased rapidly in 1995, which suggests there was a squeeze on their margins. Export business has provided some relief: manufacturers' export prices rose by 13.3% in the year to November, compared with an increase of 5.8% in the year to January 1995.

Table 5.B
Rates of change of manufacturers' costs

Year-on-year percentage changes

	1993	1994	1995
Costs			
Unit wage costs	-0.2	—	3.0 (a)
Materials and fuels (including semi-finished manufactured imports)	4.5	2.6	9.6
Imports of finished manufactures	8.5	3.9	8.4 (a)
Services	2.9	3.5	1.9
Output prices (b)	**3.9**	**2.5**	**4.2**

Sources: Bank of England and CSO.

(a) 1995 is the average of eleven months' data.
(b) Domestic sales.

The extent to which higher costs are passed on to final consumer prices will depend on the degree of competition. There have been significant structural changes which have intensified competition in the retail sector. In particular, large food retailers have shifted business into higher margin goods such as pharmaceuticals, speciality foods, DIY and petrol. More recently, retailers have begun to expand their product range further to include markets where margins were previously covered by price agreements—such as books, newspapers, magazines and non-prescription medicines. These developments are unlikely to be temporary, and so

may limit the degree to which past rises in retailers' input costs can be passed to the consumer.

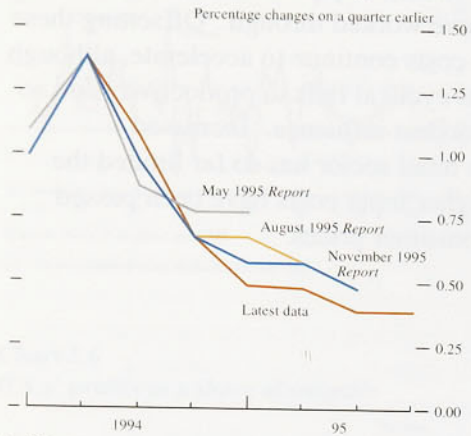
5.6 Summary

Inflation rates for both inputs and outputs in the manufacturing sector have fallen since the November *Report*. And import prices are rising more slowly than earlier in the year, as the effects of the large fall in sterling and sharp commodity price rises in the first half of 1995 seem to have worked through. Offsetting these factors, unit wage costs continue to accelerate, although this largely reflects cyclical falls in productivity and so may have only a modest influence. Increased competition in the retail sector has so far limited the extent to which higher input costs have been passed through to final consumer prices.

6 Prospects for inflation

6.1 The Bank's medium-term projection

Chart 6.1
Revisions to the profile of GDP growth(a)(b)



(a) Output measure.
(b) Each line shows the growth rates implied by the data available at the time the relevant *Report* was published.

It is now clear that economic growth since the end of 1994 has been slower than first thought. Chart 6.1 shows how the latest data reveal a slowdown that was much less evident at the time of the November *Inflation Report*. Three main factors were responsible. First, net exports were weaker than expected. UK export markets were affected by the slowdown, first in the United States, and later in Germany and France. Second, investment growth was not as fast as projected, even relative to output. The conditions for more rapid investment growth had looked favourable, judging by surveys of business intentions, the high profitability and liquidity of the corporate sector, and the rise in the stock market relative to the cost of investment goods. These indicators gave disproportionate weight to demand for investment goods by manufacturers, and demand in other sectors, especially for construction output, turned out to be much weaker. Third, although consumption was robust, much of the increase was in spending on the National Lottery which in 1995 did not translate into demand for UK goods and services.

The depreciation of sterling in the first quarter of 1995, and the continuing rise in commodity prices, had a first-round impact during last year on the prices of imports, and tradable goods and services more generally. The May *Inflation Report* explained that there need be no second-round impact of these developments on domestically set prices and wages. The slowdown in demand last year, combined with the monetary policy stance, ensured that this was indeed the outcome.

The short-term outlook for aggregate demand is clouded by the prospects for stockbuilding and net exports. Firms probably started to try to wind down their stocks in 1995 Q4, but not fast enough to threaten a sharp fall in the overall rate of growth (see Section 3). It seems likely that excessive stocks will continue to restrain output growth during 1996, unwinding slowly as underlying demand picks up. The prospects for growth in the United Kingdom's major export

markets have worsened in recent months—particularly in Germany and France—despite their cuts in interest rates. The downside risk to activity is of more rapid destocking, exacerbated by a decline in export demand.

The medium-term prospects for aggregate demand depend less on stocks and more on consumption, investment, and net exports. Section 3 pointed out that consumption has increased at around its long-run trend rate since the beginning of 1994. It is more likely to speed up than slow down. Personal sector wealth will have begun to increase with the rise in the value of the stock market and the stabilisation of house prices. Personal holdings of M4 have been rising relative to incomes, and real disposable incomes are likely to increase. The 'windfall gains' discussed in Section 3 present an upside risk but total consumption could still be held back by the precautionary saving of those households still affected by high levels of debt.

The conditions necessary for more rapid investment growth still exist. In particular, rising investment has in the past been preceded by increased mergers and acquisitions activity, and by increases in ICCs' borrowing and deposits, all of which were seen in 1995. For these reasons, our central projection is for investment growth to pick up, but there are substantial risks on both sides.

The prospects for net exports depend on the duration of the current slowdown elsewhere in Europe. Most of the gain in competitiveness in autumn 1992, as measured by relative unit labour costs, has been maintained, so the UK share of world markets should hold up.

Turning to the supply side, there are two main issues. First, unemployment is almost certainly above its natural rate, but how far is unknown. The Bank's projection allows for some pick-up in real earnings growth, in line with the experience of the 1980s. But, if the natural rate were lower, disinflationary pressures throughout the forecast period would be stronger. Second, the central projection assumes that retail margins remain at around their current levels. The risks are probably on the upside.

The implications of the above factors for the inflation outlook over the next two years are summed up in the Bank's new projection for twelve-month RPIX inflation,

The Bank's inflation forecasting record

There can be no escape from forecasting in the conduct of monetary policy. The reason is that it takes about two years for changes in interest rates to have their maximum impact on inflation, so it is necessary to form a judgment about inflation two years ahead in order to guide policy. But in the past inflation forecasts have rarely coincided with the subsequent outcome.

A simple way of assessing the Bank's forecasting record is to compare its central projection of inflation two years ahead with the actual inflation outturn. This is done in Charts A, B and C.

Chart A
RPIX inflation projections made in 1993 and subsequent outturns

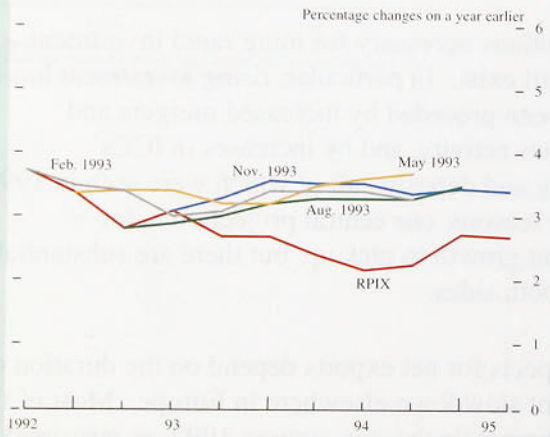


Chart B
RPIX inflation projections made in 1994 and subsequent outturns

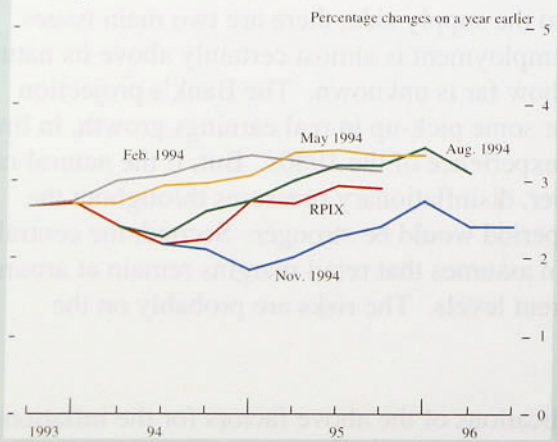
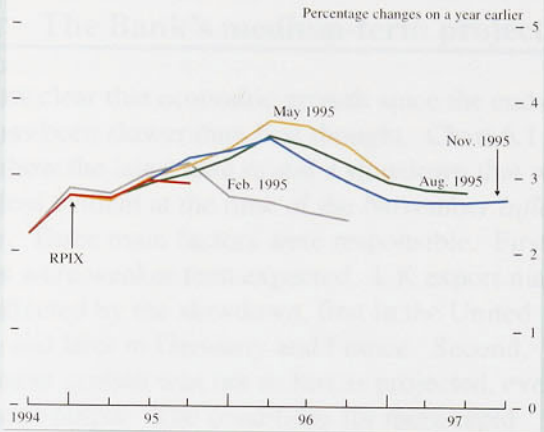


Chart C
RPIX inflation projections made in 1995 and subsequent outturns



These show that most of the inflation projections made by the Bank in 1993 and 1994 proved too high, while those made in 1995, appear, so far, to be closer to the path of actual inflation. But this is not a sufficient criterion against which to judge the Bank's track record. Why is this so?

Inflation, like other economic phenomena, is inherently uncertain. The uncertainty arises from two sources. First, the economy is too complex and too rapidly changing for its behaviour to be captured in any fixed set of equations or 'model' of the economy. Nevertheless, past experience is the only available guide to the quantitative relationships between the key economic variables; and data are available for only a limited number of past business cycles. So modelling inflation involves a continuous process of learning-by-doing.

Second, inflation is subject to unpredictable shocks, which can vary greatly in size. Examples are changes in retail margins arising from greater competition and changes in oil and other commodity prices. So even if economists did completely understand economic behaviour, forecasts would never be precisely accurate.

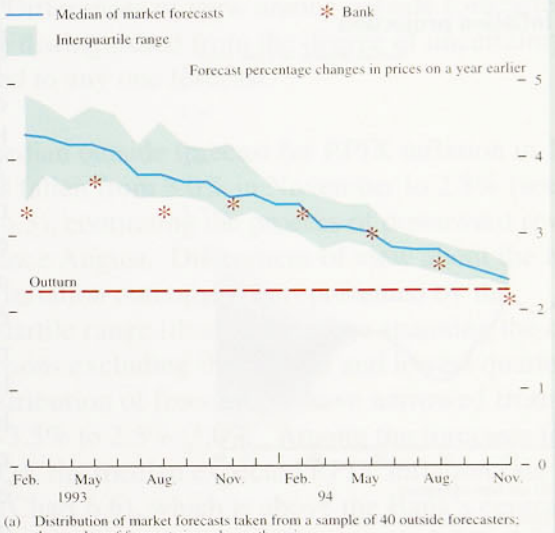
Since future inflation cannot be known with certainty, any coherent projection is a probability distribution and not a point estimate. Despite that, many, though not all, forecasts are published as single numbers. So the Bank has obtained from 38 outside forecasters the probabilities which they attach to inflation falling within certain ranges. These are published for the first time in this *Report*. As the first *Inflation Report* in February 1993 emphasised, it would 'be unwise to base policy on the wholly spurious precision of a point forecast'. In presenting its projections, the Bank has always discussed the risks—both in size and direction—to the central projection. A new way of illustrating the probability distribution as a whole is introduced in the *Report* in Chart 6.2.

These considerations complicate the assessment of inflation forecasts. A simple comparison between the central projection and the actual inflation outturn will show that the forecast is almost always 'wrong'. More sophisticated would be a comparison between the distribution of inflation outturns over a period, and the probability distribution which described the earlier projection. Over time, forecasts based on the true probability distribution should not be biased in one direction or another, but it may take many years, or economic cycles, before an appraisal can be made. More relevant is the fact that the risks to any central projection of inflation derive from economic factors identified in the *Inflation Report*.

So how were the uncertainties identified in the earlier *Inflation Reports* resolved with the passage of time? There are some clues. The central projection of inflation in the February 1993 *Report*, for example, proved too high, even though output growth was stronger than expected. Moreover, the projected probability distribution was asymmetric on the upside, following sterling's depreciation in 1992. In retrospect, it could be argued that the effect of slower demand growth on inflation was underestimated. Had this been recognised, either the central projection would have been lower or the probability distribution around the central projection would have been more nearly symmetric.

Similar comments could be made about central projections of inflation published later in 1993, although the differences between the central projections and the subsequent inflation outturns were smaller. Despite this, the Bank's projections from this period were closer to the eventual outturns than those of most other forecasters, as Chart D shows, suggesting that the probability distribution for inflation used by the Bank was closer to reality.

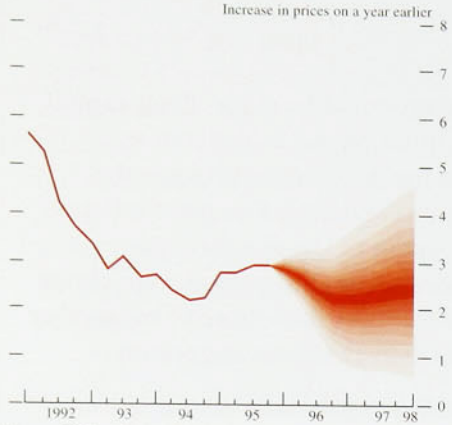
Chart D
Distribution of RPIX inflation forecasts for 1994 Q4(a)



(a) Distribution of market forecasts taken from a sample of 40 outside forecasters; the number of forecasts in each month varies.

And this comparison with outside forecasters does not adjust for differences in assumptions about interest rates over the period. The Bank assumed unchanged interest rates throughout the forecast period, while the majority of outside forecasts assumed that interest rates would be increased. The Bank was even more optimistic relative to outsiders about inflation than Chart D suggests. In fact, allowing for the different interest rate assumptions, the Bank's central projection for 1994 Q4 was in the bottom quarter of forecasts in six quarters and the bottom third in the other two.

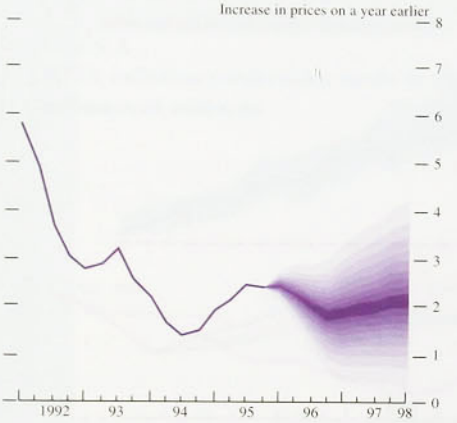
Chart 6.2
RPIX inflation projection



Sources: CSO and Bank of England.

See text for explanation of the coloured bands.

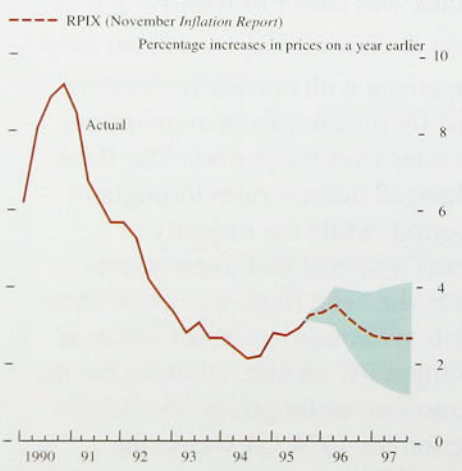
Chart 6.3
RPIY inflation projection



Sources: CSO and Bank of England.

See text for explanation of the coloured bands.

Chart 6.4
RPIX inflation projection, November 1995



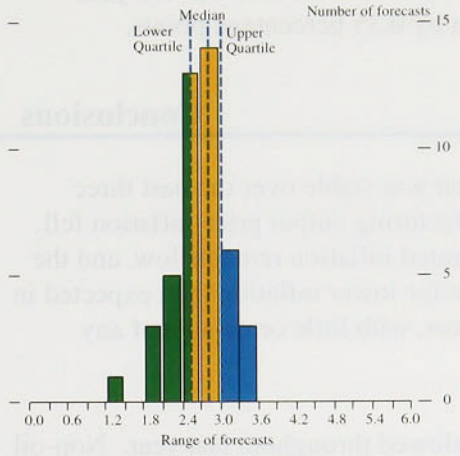
Sources: CSO and Bank of England.

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.

shown in Chart 6.2. Chart 6.3 shows the corresponding projection for twelve-month RPIY inflation. Both are in a new style, designed to illustrate the distribution of possible outcomes of inflation over the next two years. The old style of chart—the November projection is shown in Chart 6.4—focused too much attention on the central projection, whereas, as the box on pages 46–47 makes clear, any coherent projection is a probability distribution and not a point estimate. The new chart shows the relative likelihood of possible outcomes. The central band, coloured deep red, includes the central projection: there is judged to be about a 10% chance that inflation will be within that central band at any date. The next deepest shade, on both sides of the central band, takes the distribution out to 20%; and so on, in steps of ten percentage points. Of course, it is impossible to assess the probabilities with any precision, but this represents the Bank's best estimate. The more uncertainty there is about the inflation outcome at any particular time horizon, the wider he bands, and the more gradually the colour fades. And, if the risks are more on one side than the other, then the remaining bands will be wider on that side of the central band. In contrast, in the old-style chart, a single band was shown corresponding to average errors in past projections, which did not necessarily reflect the Bank's judgment about the magnitude and bias of the risks at the time. Charts 6.2 and 6.3 are based on the assumption of unchanged official interest rates, and the effective exchange rate is assumed to evolve according to differences in interest rates across countries.

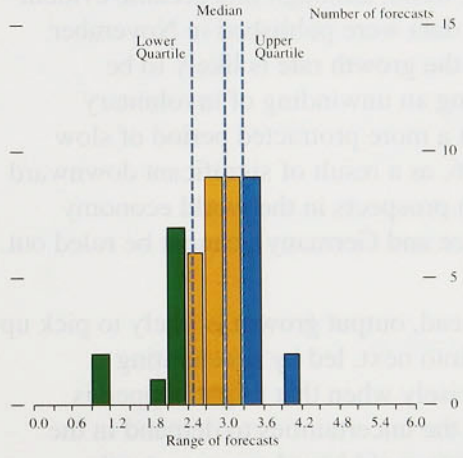
The Bank's judgment is that it is a little more likely than not that inflation will be somewhat below 2½% in two years' time. The central projection declines steadily for a while, reflecting the slowdown in activity last year. It rises gently during the latter part of the forecast period in a lagged response to the projected pick-up in nominal demand this year. The main downside risk is of a longer delay than assumed before activity picks up. The main upside risk is that the upturn will be stronger than assumed. It is not clear which of these risks to inflation is the greater at the two-year horizon, and the Bank judges that the risks to the two-year projection are roughly evenly balanced. Chart 6.3 shows that the projection for RPIY inflation is similar, although a little below that for RPIX inflation, because the projection assumes overindexation of some taxes (in line with past Budget statements) and Council Tax increases in excess of annual RPIY inflation rates.

Chart 6.5
Distribution of RPIX inflation forecasts for 1996 Q4



Source: Forecasts of 45 outside forecasters as of January 1996.

Chart 6.6
Distribution of RPIX inflation forecasts for 1997 Q4



Source: Forecasts of 45 outside forecasters as of January 1996.

Table 6.A
The average of forecasters' frequency distributions of expected inflation[a]

	Range				
	Less than 1.0%	1.0% to 2.5%	2.5% to 4.0%	4.0% to 5.5%	More than 5.5%
12-month RPIX inflation expected in:					
1996 Q4	4	35	48	10	3
1997 Q4	4	28	47	16	5

(a) 38 outside forecasters provided the Bank with their assessments of the likelihood at two time horizons of twelve-month RPIX inflation falling in the ranges shown above. This table presents the means of the responses for each range, eg on average, forecasters assign a probability of 4% to inflation turning out to be less than 1% in 1996 Q4.

Compared with the November projection shown in Chart 6.4, the new projection represents a downward reappraisal of inflationary pressures in the short run. The main reason for the change in the profile is the extent of the slowdown in activity last year, which has become evident in the revised data released since November.

6.2 Outside forecasters

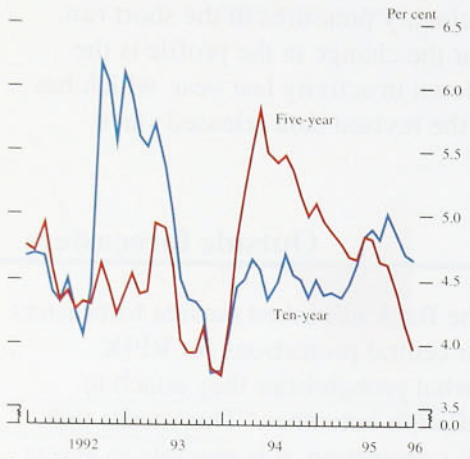
For the first time the Bank has asked outside forecasters not only about their central projections for RPIX inflation, but also what probabilities they attach to various possible inflation outcomes. This means that, just as for the Bank's projection, it is possible to assess for the outside forecasts the size and direction of the risks. Differences of view among outside forecasters can thus be distinguished from the degree of uncertainty attached to any one forecast.

The median outside forecast for RPIX inflation in 1996 Q4 has fallen from 3.0% in November to 2.8% (see Chart 6.5), continuing the process of downward revision seen since August. Differences of view about the most likely inflation outcome—as represented by the interquartile range (that is, the range spanning the central projections excluding the highest and lowest quarters of the distribution of forecasts)—have narrowed from 2.7%–3.5% to 2.5%–3.0%. Among the forecasts for 1997 Q4, the median expected RPIX inflation rate is 3.0% (Chart 6.6), which is above the Bank's central projection, and the interquartile range is 2.5%–3.3%. Differences of view among forecasters appear, as one might expect, to be greater the longer the time horizon.

Table 6.A shows the averages of the probabilities assigned by forecasters to inflation turning out to be in each of five ranges. The range of uncertainty around most forecasters' central projections is similar to that of the Bank. They see more upside risk than the Bank does, and, on average, think it less likely that inflation will turn out to be 2½% or less by 1997 Q4. That time horizon was chosen to coincide with most forecasters' practice—the Bank's projection goes out to 1998 Q1. Probability distributions differ widely. For example, the probability of inflation turning out to be 2.5% or less by 1997 Q4 was judged to be 10% by one forecaster and 70% by another.

Inflation expectations derived from the bond markets have fallen since November, particularly over shorter

Chart 6.7
Implied forward inflation rates(a)



Source: Bank of England.

(a) Calendar-month average.

horizons—see Chart 6.7, which shows calendar-month averages. This conceals the fact that since mid-January inflation expectations at both the five and ten-year horizons have risen by 0.35 percentage points.

6.3 Conclusions

Retail price inflation was stable over the past three months, and manufacturing output price inflation fell. Domestically generated inflation remains low, and the short-run outlook is for lower inflation than expected in the November *Report*, with little or no sign of any imminent rise.

Economic growth slowed throughout last year. Non-oil output in 1995 was about 2½% higher than in 1994. But the four-quarter growth rate fell throughout the year from 3½% at the beginning to about 1½% at the end. Since early 1995, output has been growing below almost any estimate of the trend, although this became evident only when revised data were published in November. Any further fall in the growth rate is likely to be temporary, reflecting an unwinding of involuntary stockbuilding. But a more protracted period of slow growth during 1996, as a result of significant downward revisions to growth prospects in the world economy (especially in France and Germany), cannot be ruled out.

Looking further ahead, output growth is likely to pick up later this year and into next, led by accelerating consumption. Precisely when that might happen is unclear because of the uncertainties to demand in the short run. Continuing rapid broad money growth implies a more buoyant medium-term outlook for domestic demand. Real broad money growth rose sharply from 1.7% during 1994 to 6.9% in 1995. Rising output growth would at some point eliminate spare capacity, and would, if unchecked, begin to lead to inflationary pressures.

The Bank's central projection for inflation has fallen since the November *Report*, and by more in the short term than towards the end of the forecast period, with the result that the profile has changed. At current interest rates, the balance of probabilities is that inflation will decline slowly during 1996, falling below 2½%, before starting to rise again towards the end of the forecast period. The Bank's judgment is that it is a little more likely than not that inflation will be somewhat below 2½% in two years' time.

Some of the uncertainties discussed in the November *Report* have subsequently been, at least partially, resolved. Input price pressures have ceased to put upward pressure on output and retail prices. There has been evidence of some rundown of stocks. In the short term, the principal uncertainties concern activity, where the risks are more on the downside. Further out, however, the main uncertainties relate to the implications of broad money growth and the pace at which consumption will pick up. Here the risks are clearly more on the upside. But it is too soon to tell if, and when, faster money and nominal demand growth will threaten achievement of the inflation target.

Glossary and other information

Glossary of selected terms

RPI inflation: inflation measured by the retail prices index.
RPIX inflation: inflation measured by the RPI excluding mortgage interest payments.
RPIY inflation: inflation measured by the RPI excluding mortgage interest payments and the following indirect taxes: council tax, VAT, duties, car purchase tax and vehicle excise duty, insurance tax and airport tax.
HARP index: a price index which replaces the mortgage interest payments in the RPI with a Bank estimate of the user-cost of housing.
THARP index: the HARP index excluding indirect taxes.

M0: notes and coin in circulation outside the Bank of England and bankers' operational deposits at the Bank.
M4: UK non-bank, non-building society private sector's holdings of notes and coin, together with all sterling deposits (including certificates of deposit) held with UK banks and building societies by the non-bank, non-building society private sector.
Divisia money: a measure of the money stock in which each component is weighted according to an estimate of how useful are the transaction services it provides.

ICCs: industrial and commercial companies.
OFIs: other financial institutions.

Three-month annualised: the percentage change in a series between one period and that three months earlier, expressed as an annual rate.

Symbols and conventions

Except where otherwise stated, the source for the data used in charts and tables is the Central Statistical Office (CSO).
The measures of inflation included in this *Report* have been adjusted by the Bank for a CSO error in underrecording RPI and RPIX inflation between February and May 1995.
. . 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.

Other information

Email: dh95@cityscape.co.uk
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