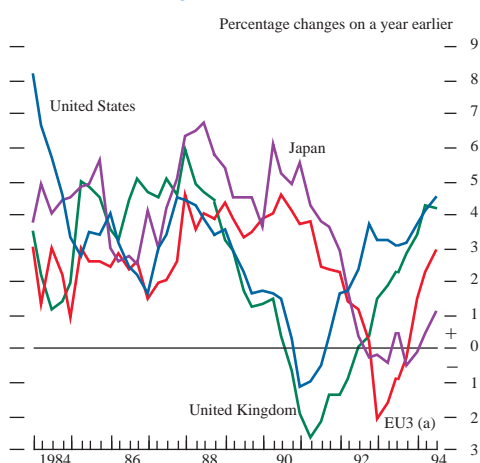


The international environment

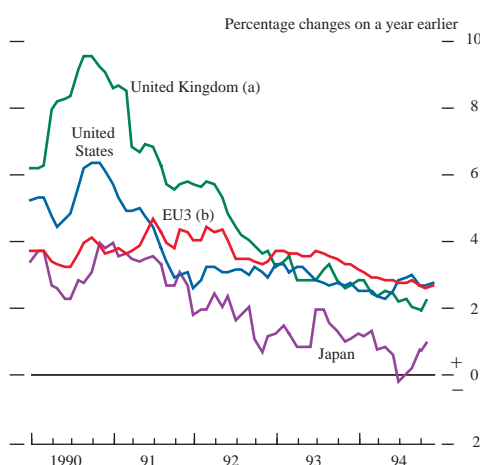
- Growth in the Group of Seven countries continued to be robust in the second half of 1994. The US economy grew strongly; in the third quarter, consumption strengthened in continental Europe—particularly in western Germany—and in Japan, the recovery broadened.
- Non-oil commodity prices rose by around 25% between 1993 and 1994; oil prices fell by 7%. Producer price inflation is rising in a number of OECD countries.
- Despite stronger growth and rising raw material prices, annual consumer price inflation in the G7 countries was lower towards the end of 1994 than at the beginning.
- In response to potential inflation pressures, official interest rates were increased further in a number of countries—mainly those which have been recovering longest.

Chart 1
GDP in the major economies



(a) A GDP-weighted average of France, Italy and western Germany.

Chart 2
Consumer prices in the major economies



(a) RPIX.

(b) A GDP-weighted average of France, Italy and western Germany.

Overview

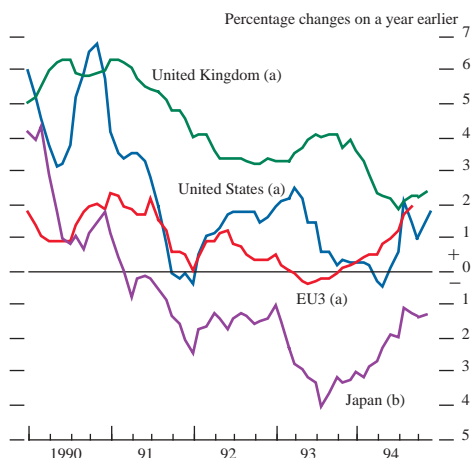
In the third and fourth quarters of last year, economic growth continued to be robust in the Group of Seven (G7) countries. In the United States, growth was strong despite higher interest rates and higher capacity utilisation. In continental Europe, where recovery is about two years behind the United States, growth broadened in the third quarter. And in Japan, where the recession was the shallowest in the G7—but also one of the longest—private sector spending began to recover, supported by fiscal policy.

In the third quarter of last year, growth in the G7 economies was around 1%, compared with 0.9% in the second. Chart 1 shows growth rates in the major economies. In the United States, only the housing market seemed to slow in response to higher interest rates, and GDP growth—at 1% in the quarter—was still above the estimated growth rate of productive capacity. In France and western Germany, GDP rose by 0.8% and 1.3% respectively, and western German consumption rose by 1.5%. In Japan, GDP rose by 0.9% in the third quarter, and growth in the second quarter was revised from a fall to a rise.

Growth in the industrialised world was stronger in 1994 as a whole than most forecasters had expected at the beginning of the year. In December 1993, the OECD forecast growth in G7 GDP of 2.1% in 1994; a year later its estimate was 3%. When economies recover from recession, growth can be rapid: in the first two years after the recession in the early 1980s, G7 GDP rose by 2.9% and 4.6% respectively. With demand now rising rapidly worldwide, growth this year may be stronger than many recent forecasts have suggested.

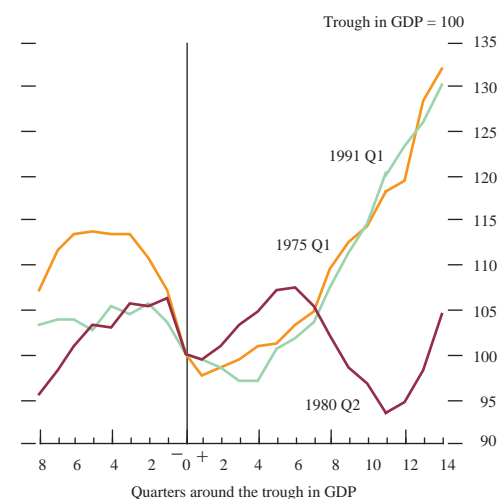
Despite the strengthening of growth in the industrial world, annual rates of consumer price inflation have so far been flat or falling in most countries (see Chart 2). In the G7, annual consumer price inflation was 2.4% at the beginning of 1994 and 2.2% by November. But price pressures have been building in the production chain, as Chart 3 shows. Annual producer price inflation in the G7 was 0.1% at the beginning of 1994 and 1.5% by

Chart 3
Producer prices in the major economies



(a) Output prices (for France, intermediate goods prices are used).
 (b) Wholesale prices (includes prices for exports, unlike other series).

Chart 4
United States: business investment over recent cycles^(a)



(a) Dates shown indicate the quarter in which the trough in output was reached.

September. Excluding oil, commodity prices—as measured by the Economist dollar-denominated index—rose by around 25% between 1993 and 1994. In the fourth quarter, these commodity prices rose by 2% while oil prices fell. But commodity prices are volatile and respond rapidly to news; if GDP growth forecasts are revised further upwards, it is possible that commodity prices, particularly the prices of demand-sensitive metals, will rise further. The OECD forecasts a rise of around 3½% in non-oil commodity prices in 1995, with G7 output growth projected to be 3%.

In response to higher-than-expected growth and rising producer price pressures, some countries have raised interest rates further. The Federal Reserve raised its target federal funds rate by 0.75 percentage points in November; official interest rates were also increased in Australia, Canada and Sweden—as well as the United Kingdom—in the fourth quarter. Most of these countries were among the first to recover after the downturn (stimulated by easier monetary policy and, in some cases, lower exchange rates).

In the United States, output continued to grow above trend

In the United States, GDP rose by 1% in the third quarter, compared with estimated capacity growth of around 0.6%. The growth was broadly based: consumption rose by 0.8% and private business investment by 3.4%. Business investment was 14% higher than a year earlier and appeared not to have been adversely affected by the rise in long-term interest rates from October 1993. Rising capacity utilisation and buoyant corporate profits supported capital investment: retained corporate earnings rose by 15% a year in 1992 and 1993, and by a further 25% in the first three quarters of 1994.

Some commentators have suggested that the sharp rise in investment has increased the productive potential of the US economy, allowing it to grow at a faster rate than in the past without generating inflationary pressures. But as Chart 4 shows, the profile of investment has been similar to that in the recovery after the 1974–75 recession, casting some doubt on this suggestion. The box on page 17 looks in more detail at the cyclical positions of the major overseas economies and the main components of their recoveries.

By the end of the third quarter, the US personal sector seemed little affected by higher interest rates. The rise in consumption in the third quarter was followed by robust retail sales in October, although they were flat in November and December. In the fourth quarter, consumer confidence was at its highest since 1990 and in November consumer credit continued to grow at a rapid rate. The strength of employment, which rose by 3% in the year to the fourth quarter, helped support consumer spending last year. Higher interest rates may, however, have affected the housing market: the annual growth of housing starts was weaker in the second half of the year than in the first.

The Federal Reserve increased interest rates by 2.5 percentage points between February and November 1994; long-term interest rates started rising in October 1993. Because changes in interest rates take time to affect economic activity, most of last year’s monetary tightening may not have an impact on the economy until this year. There are at least two other reasons why US activity continued to grow strongly last year. First, as Chart 5 shows, the

The composition of recovery in the G7 economies

The world economy grew more quickly than most commentators expected last year. This box looks at the timing and duration of the cycle in the G7 economies and at the main factors behind the strengthening demand.

Table 1 compares the recent cycle in the G7 countries. As it shows, the US recession was the shortest, and the Japanese and UK downturns the longest—each lasting seven quarters. Japan's recession was the shallowest, and the Canadian and UK recessions the deepest. The stance of fiscal and monetary policies affected these profiles. The rapid US recovery followed a prolonged period of low real interest rates; these also partly explain why US growth did not slow much in 1994. In Japan, the loosening in fiscal policy—there have been four fiscal packages since August 1992 totalling ¥45 trillion—probably prevented a deeper downturn.

Table 1
G7 cyclical positions

	GDP		Number of quarters from (percentage change in GDP in italics):			
	Peak	Trough	Peak to trough		Trough to 1994 Q3	
Canada	1990 Q1	1991 Q1	4	<i>-3.6</i>	14	<i>9.0</i>
France	1992 Q1	1993 Q1	4	<i>-1.4</i>	6	<i>3.3</i>
Italy	1992 Q2	1993 Q3	5	<i>-1.7</i>	4	<i>3.7</i>
Japan	1992 Q1	1993 Q4	7	<i>-1.2</i>	3	<i>1.9</i>
United Kingdom	1990 Q2	1992 Q1	7	<i>-3.7</i>	10	<i>7.1</i>
United States	1990 Q2	1991 Q1	3	<i>-1.5</i>	14	<i>10.8</i>
Western Germany	1992 Q1	1993 Q1	4	<i>-2.9</i>	6	<i>4.0</i>

Table 2 shows the cumulative contributions to growth since the trough in GDP for five of the G7 countries. Consumption has contributed proportionately less to growth in western Germany than in the other four; real personal disposable income there fell 1/2% in 1993 and further in the first half of 1994. The rise in German consumption has therefore meant a fall in the saving ratio—to its lowest level since 1967. The rise in taxes this year could hold back both German consumption and consumer price inflation. Nevertheless, at the end of 1994, futures markets appeared to be discounting higher short-term interest rates during the first half of this year.

Only in the United States has business investment contributed to recovery. But despite its strong growth, US business investment

Table 2
Contributions to GDP since trough

Percentage changes in italics

	As a percentage of total GDP growth					GDP (a)
	Consumption	Investment (b)	Government expenditure	Net external trade	Stock-building	
France	58	—	9	12	12	<i>3.3</i>
Japan	68	<i>-26</i>	32	<i>-5</i>	16	<i>1.9</i>
United Kingdom	57	<i>-1</i>	7	19	17	<i>6.9</i>
United States	65	30	<i>-3</i>	<i>-18</i>	13	<i>10.8</i>
Western Germany	30	<i>-15</i>	—	5	70	<i>4.0</i>

(a) Growth since trough.

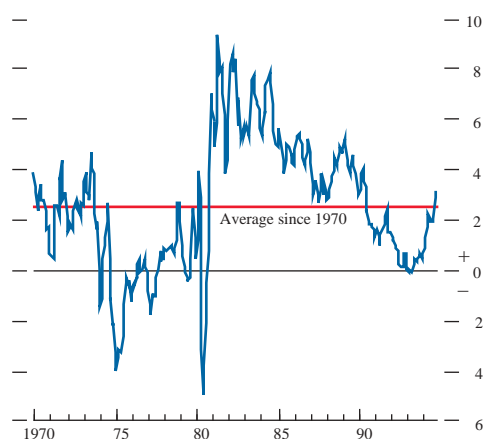
(b) Private investment less residential investment; western Germany also excludes construction industry.

is still a smaller proportion of GDP than in France, Japan or western Germany. In these three countries, business investment began to rise in 1994 but, in the third quarter, had recovered by less than at the same point in the last recovery.

In part, the different investment profiles may reflect the timing of the recoveries. The first three years of US recovery coincided with the sharp bond market rally during which the 30-year long bond yield reached an historic low, encouraging fixed-rate borrowing and business investment. Strong corporate profits and the closing of its output gap last year also boosted US investment. By contrast, European and Japanese recoveries began as long-term interest rates were near to, or past, their trough. Last year's rise in long rates could therefore be holding back a recovery in investment. And in Japan, companies are still adjusting following their high investment during the speculative boom.

Net exports contributed strongly to growth in Canada, Italy and the United Kingdom, helped by more competitive exchange rates and strong external demand (in the first half of last year, 80% of Canada's exports were to the United States). They have contributed less to growth in western Germany, and have reduced Japanese and US growth. Between 1992 and 1994, current account deficits in Italy and the United Kingdom fell and, in the third quarter, both countries had current account surpluses. By contrast, the Canadian deficit has remained large—despite a steady visible goods surplus—because of large payments to foreign holders of Canadian debt.

Chart 5
United States: 'real' short-term interest rates^(a)



(a) Three-month market rate less current consumer price inflation.

rise in short-term interest rates followed a long period during which 'real' short-term interest rates were close to zero. This period allowed banks to rebuild their profits and capital while the economy built up substantial momentum. Despite rising from mid-1993, 'real' rates were around 3% by the end of the year, compared with an average of 2½% since 1970—and lower than at the same point in the recovery in the early 1980s. Second, greater competition for lending business (both within the banking sector, and between banks and finance companies) may have offset some of the intended monetary tightening. Federal Reserve surveys of loan officers, for instance, show that US banks have eased their lending criteria (collateral, covenants and maximum loan criteria) since mid-1993. Towards the end of last year, lending to the small business sector was growing more quickly than overall business lending. In previous cycles, lending to small businesses (which are more dependent than larger businesses on bank finance) has tended to slow first.

Chart 6
Western Germany: business investment over recent cycles^(a)



(a) Dates shown indicate the quarter in which the trough in output was reached.

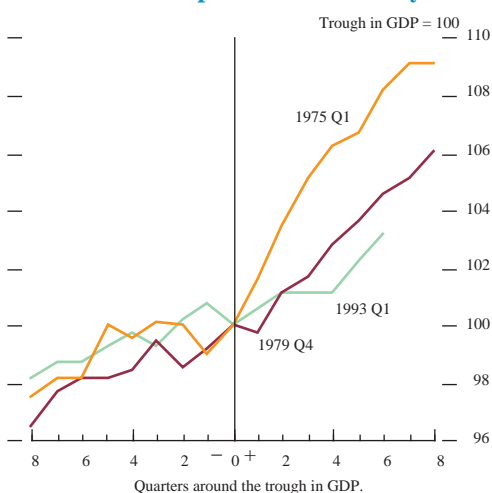
Table A
Contributions to western German GDP growth

Percentage points (a)

	1993	1994		
	Year	Q1	Q2	Q3
Consumption	0.1	0.2	-0.6	0.8
Total investment	-1.7	0.8	-0.2	0.2
Government expenditure	-0.2	-0.2	-0.1	0.2
Stockbuilding	-0.3	—	1.6	0.2
Domestic demand	-2.1	0.8	0.8	1.5
Net external trade	0.4	-0.2	0.2	-0.2
GDP	-1.7	0.5	1.0	1.3

(a) Quarterly contributions are relative to the previous quarter.

Chart 7
France: consumption over recent cycles^(a)



(a) Dates shown indicate the quarter in which the trough in output was reached.

Growth in continental Europe has strengthened

In France and western Germany, growth has been stronger than expected at the time of the last *Bulletin*. Domestic demand growth has also broadened: consumption and business investment are recovering, although the latter is lower than at the same point in previous recoveries (as Chart 6 shows for western Germany).

Unemployment is still high in Europe: the OECD estimates that it will be 11.3% in its European member countries in 1995, compared with a high of 9.9% after the recession in the 1980s. But the rate of change of unemployment may also be an important influence on consumer confidence and spending. In most countries, unemployment has stopped rising and in some it has started to fall; a more stable employment outlook may have contributed to the strength of European growth in the second half of last year.

Table A shows the contributions to western German GDP growth in the third quarter and Table 2 on page 17 looks at contributions to growth since the trough in GDP. The recovery in western Germany has been based on consumption and stockbuilding. (Stockbuilding seems on present estimates to have made a large contribution in the second quarter of 1994, though these figures are sometimes revised.) External trade has made virtually no contribution to the recovery. Export volumes rose by 5½% in the year to the third quarter while import volumes rose by around 11½%, as the domestic economy strengthened. The Deutsche Mark's real effective exchange rate appreciated sharply in 1992 but remained broadly unchanged in the following two years.

Western German consumption rose by 1½% in the third quarter, after falling in the second. Retail sales fell sharply in October and November, however, illustrating the still unsteady demand in parts of the personal sector. Income tax increases in January may hold back consumption in 1995; the OECD projects that consumption will grow by 1.2% this year, compared with 2.2% in the rest of the European Union. But with employment no longer falling and official interest rates still low, personal sector demand may grow more strongly than expected.

In France, GDP rose by 0.8% in the third quarter, with consumption rising by 0.9% and investment by 1.5%. Earlier last year, consumption was supported by a government subsidy scheme to encourage car purchases. Participation in the scheme fell in the second half, but by then consumption of other goods was recovering. By October, consumer confidence had risen sharply to close to its average in the late 1980s. Despite this, consumption in the third quarter had recovered by less than at a similar point in the two preceding recoveries, as Chart 7 shows. And unemployment—at 12.6% in November—has not yet begun to fall decisively.

Last year, French business confidence rose to its highest since the late 1980s, despite a rise of around two percentage points in ten-year interest rates. These higher rates probably prevented a larger increase in business investment, which nevertheless grew in the year to the third quarter.

In Italy, where recovery began later than in France or western Germany, domestic demand has strengthened further. By the third quarter of 1994, consumption had increased for five consecutive quarters. Consumer confidence rose strongly in 1994. But net

exports, which made a large contribution to growth in 1993, had a negative impact in the first three quarters of 1994. Political uncertainty and the difficult passage of the budget may also have hindered a stronger recovery; uncertainty over pension reforms and over whether fiscal stringency would lead to increased taxation may, for instance, have held back consumption.

In Spain, growth has also broadened. In the third quarter last year, GDP rose by 0.6%, and for the first time for nearly two years domestic demand was higher than a year earlier (largely because of investment). Export volumes rose by 17% in the year to the third quarter, helped by a more competitive exchange rate since September 1992. Import volumes rose by 10% over the same period—their strength was one reason why the Bank of Spain raised interest rates in January.

Recovery in Japan is now more firmly established

Japan's recession was one of the longest (at seven quarters) in the G7. Output reached its trough in the final quarter of 1993; since then, recovery has gathered pace. In the third quarter of last year, GDP rose by 0.9% and second-quarter GDP was revised up to a 0.2% rise. Investment has continued to be unsteady and the recovery in 1995 may depend largely on consumption. The past effects of the high yen and a rise in Japanese demand may mean that net external trade will make a negative contribution in 1995.

Table B
Contributions to Japanese GDP growth

Percentage points (a)

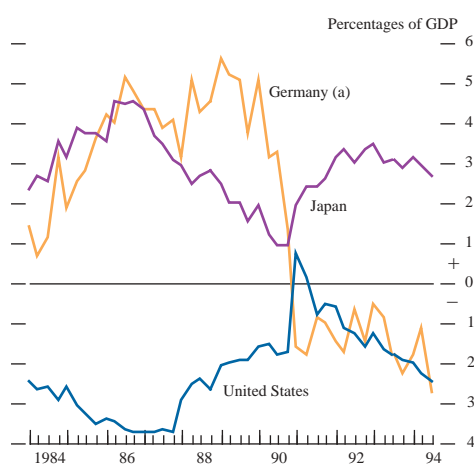
	1993	1994		
	Year	Q1	Q2	Q3
Consumption	0.6	0.8	-0.2	0.7
Total investment	-1.7	-0.5	-0.1	0.2
Government expenditure	1.4	0.3	0.1	0.2
Stockbuilding	-0.2	0.2	0.2	-0.1
Domestic demand	—	0.8	0.2	1.0
Net external trade	-0.2	—	—	-0.1
GDP	-0.2	0.8	0.2	0.9

(a) Quarterly contributions are relative to the previous quarter.

Table B shows contributions to Japanese GDP growth. The rise in GDP in the third quarter brought the first quarterly rise in business investment since 1991. But it may not herald a sharp change of direction: in the Bank of Japan's December Tankan survey, major manufacturers reported that capital spending would fall in the fiscal year ending in March and that employment was higher than necessary. It nevertheless reported a possible rise in profitability over the same period, which could foreshadow future investment.

The strength of personal consumption in the third quarter of last year suggested that tax rebates in June were successful in raising consumer spending. Further tax rebates in December may help to support consumption in 1995. Overall, last year's tax rebates amounted to ¥5.5 trillion (£35 billion), around 2% of annual private consumption. The rebates will continue in 1995, but by 1997 the revenue loss will have been reversed.

Chart 8
Current account balances

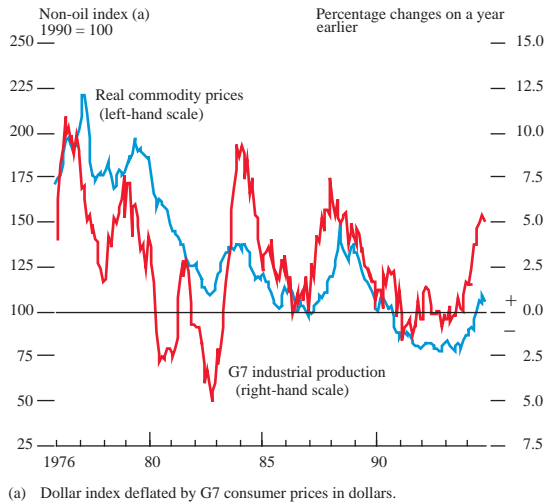


(a) Western Germany before 1991.

Japan's current account surplus fell in the third quarter but the German and US deficits rose

Japan's current account surplus fell relative to GDP during the first three quarters of 1994 (see Chart 8). The fall largely reflected the increase in Japanese domestic demand and the effect of past yen appreciation (Japan's nominal effective exchange rate rose by around 25% in the two years to December 1994). The US current account deficit rose over the same period, as the strength of US demand outweighed any effect of the dollar's depreciation. And Germany's current account deficit rose sharply in the third quarter, from 1% to 2.5% of GDP. Most of the change was the result of a higher deficit on invisibles. In contrast to a surplus of DM 2.9 billion in the second quarter, there was a deficit on interest, profits and dividends of DM 5 billion; the travel deficit also rose sharply.

Chart 9
Real commodity prices and industrial production



Higher demand led to rising raw material prices

In the G7 economies, annual producer price inflation was 0.1% at the beginning of the year but 1.5% by September. Producer price inflation also edged up in other industrialised countries, including Spain and Sweden. Higher producer output price inflation has so far been partly the result of increases in raw material prices and the prices of intermediate goods, such as chemicals and steel. Earnings growth, by contrast, has been weak because of job uncertainty and—outside the United States—historically high unemployment.

Commodity prices, measured by the Economist non-oil dollar index, rose by around 25% between 1993 and 1994; oil prices fell. The rise in metal prices last year was partly a response to higher actual and prospective world growth. Chart 9 shows the correlation between real commodity prices and G7 industrial production growth in the last 20 years or so. By December, real commodity prices were higher than at the equivalent stage in the previous two recoveries. Bank research suggests that in the past real commodity prices have overshot in response to changes in news about future activity, although it is difficult to predict when any readjustment might occur (in the fourth quarter real commodity prices were only 7% above their 1990 average).

The OECD projects that non-oil commodity prices will rise by around 3½% this year and oil prices by 2½%. If GDP forecasts are increased, commodity prices—particularly of demand-sensitive metals—could rise by more than this. Although industrial demand for commodities has increased, and some metal stocks (at the London Metal Exchange) fell last year, stocks are high by recent standards. Some commodities (particularly metals) are also held as part of asset portfolios; although higher interest rates will have increased the cost of holding commodities, last year's fall in bond prices increased their attractiveness as investments. As noted in the financial market developments section of this *Bulletin*, turnover on the London Metal Exchange rose sharply last year. Some commentators have ascribed this to a rise in 'speculative' activity, but it is difficult to distinguish speculation from end-user hedging, and the rise in metal prices was probably the result of expectations of rising end-user demand.

So far, earnings inflation has not risen sharply, even in countries where recovery is firmly established. In the United States—where GDP began rising in 1991 and unemployment fell sharply last year to below most estimates of 'equilibrium'—average hourly earnings rose by 2.3% in the year to the fourth quarter, little changed from 1993 and 1992. In Europe and Japan, unemployment is still well above its pre-recession low. During the early stages of recovery, economies have also benefited from a cyclical improvement in productivity which has resulted in falling unit wage costs (see Table C). This has helped to offset some of the pressure from rising commodity prices.

In the United States, the Federal Reserve's *Beige Book* has reported a progressive tightening in labour market conditions over the last year. In most other countries, labour market pressures are less acute, but may rise this year. The current wage round in Germany will be a key influence on future inflation in Germany and also, perhaps, in other parts of Europe.

Table C
Unit wage costs in manufacturing^(a)

Percentage changes on a year earlier

	1992	1993	1994		
	Year	Year	Q1	Q2	Q3
Canada	-3.3	-2.6	-1.4	-0.9	-3.3
France	2.5	3.5	1.0	-0.9	-1.8
Italy	4.7	3.0	-0.7	-3.3	..
Japan	8.6	4.5	4.9	0.6	..
United States	-1.4	-1.2	-0.6	-0.9	-1.1
Western Germany	4.9	1.6	-5.0	-8.1	-5.8
Major six	1.6	0.5	-0.6	-2.6	..
<i>Memo:</i>					
United Kingdom	1.9	0.6	1.9	-0.2	-1.5

.. not available.

(a) Bank estimates for major six countries.

Last year, consumer price inflation was flat or falling

Despite some evidence of rising inflation pressures at earlier stages in the price chain, consumer price inflation has not risen. In the G7 countries, consumer price inflation remained flat for most of last year, and in many cases was near to historic lows. Even in the United States, where it began to rise in the summer and autumn, it fell towards the end of the year.

In western Germany, consumer price inflation continued to fall in the second half of the year; in December, the 12-month rate was 2.7%, compared with 3% in June. When last year's indirect tax increases drop out of the annual comparison in January, it should fall further. In France, consumer price inflation was broadly flat in the second half of 1994 at around 1.6%–1.7%, compared with an average of nearly 6% since 1980. In Italy, annual inflation was 4.1% in December compared with a 25-year low of 3.6% in July. And in Spain too, annual inflation in November was near to a 25-year low. But with producer price inflation perhaps rising in parts of the OECD in 1995, pressures on consumer price inflation may increase. The box on page 22 assesses some implications of the recent rise in producer price inflation in the major industrialised countries.

In Japan, there are fewer inflation pressures at present. Consumer price inflation was 1% in the year to November, compared with 1.2% at the beginning of 1994. Producer prices were still falling in November (largely because the strength of the yen led to falling imported raw material prices), though the rate of fall decreased during the year. And land prices may still be adjusting to the speculative boom which ended in the early 1990s. According to a survey by the National Land Agency, commercial land prices fell 6.7% in the year to July 1994 while residential prices fell by 1.2%.

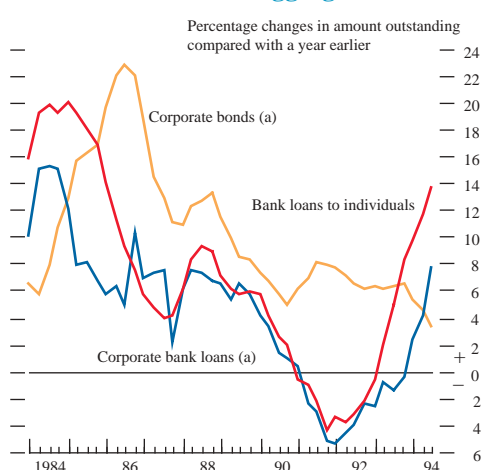
Money and credit growth have continued to give mixed signals

Although growth in the OECD is strengthening, monetary aggregates in some countries have not pointed upwards so unequivocally. In the United States, for instance, M2 growth was 0.9% in the year to December, lower than earlier in the year. And M1 growth fell for most of 1994, though it was distorted by mortgage refinancing in 1993. Some credit aggregates have grown strongly, however. Chart 10 shows that while corporate borrowing from bond markets was less buoyant than in 1993, bank lending growth increased. Bank lending to individuals also grew strongly last year, rising nearly 15% in the year to November.

In Germany, annualised M3 growth fell over the course of 1994—in November, it was 5.8% higher than in the fourth quarter of 1993—just inside the 4%–6% target range. As reported in the last *Bulletin*, the use of money-market funds (permitted from August) lowered the growth rate, as deposits were switched out of M3; without the transfer, M3 growth would have been above its target range (probably at around 6.9% in November). In December, the Bundesbank announced an unchanged M3 target for next year; it will also monitor, but not target, a wider M3 measure which includes money-market funds and Deutsche Mark deposits held in banks outside Germany.

The Bank of France also set out its monetary strategy for 1995 in December, reaffirming price stability as its ultimate objective and

Chart 10
United States: credit aggregates



(a) Companies defined here as non-financial enterprises.

Producer and consumer prices

In the second half of last year, producer price inflation⁽¹⁾ rose in most G7 countries, but consumer price inflation did not. (Charts 2 and 3 on pages 15–16 show recent movements in consumer and producer prices in the major six economies.) Producer price inflation has also risen in Canada, Spain and Sweden since 1992. This box assesses the implications of rising producer price inflation for consumer prices.

Producer price inflation tends to be more volatile—and lower—than consumer price inflation. The differences are partly attributable to the prices of services: producer price indices do not include services prices, which have tended to rise faster than goods prices and are generally less volatile. But using a consumer *goods* price index does not entirely eliminate the differences in inflation rates.

Consumer and producer prices are measured at different points in the production and distribution chain. Producer prices should reflect the prices of raw materials and intermediate goods and unit labour costs, as well as producers' margins. The difference between producer and consumer goods inflation should reflect changes in retailers' margins, although taxes, distribution costs and imported goods prices will also have an impact.

Non-oil commodity prices, as measured by the dollar-denominated Economist index, rose by around 25% in 1994, putting upward pressure on producer prices worldwide, particularly at intermediate stages of production. However, this was partly offset by the effect of unit wage costs which, in the second quarter of 1994, were lower than a year earlier in nearly all of the G7 countries. The lower unit wage costs were the result of restrained earnings growth and cyclical improvements in productivity, both of which are likely to be reversed as the recovery matures. As capacity constraints begin to bind therefore, without a fall in commodity prices, pressures on producer prices will rise. However, structural reform in labour markets might help to contain wage pressures.

The G7 countries can currently be divided into two broad groups: in the first—comprising Canada, Italy and the United Kingdom—producer price inflation is now higher than consumer goods price inflation; in the second, comprising the United States, Japan, western Germany and France, producer price inflation is still lower. The groups suggest that the differential cannot simply be explained by cyclical factors, given the different positions of the United States and Italy.

A factor uniting the groups is recent exchange rate developments. Canada, Italy and the United Kingdom have all experienced substantial exchange rate depreciations since the start of the decade, whereas all the countries in the second group have had relatively stable, or appreciating, exchange rates. A depreciating exchange rate will lead to increased price pressures through higher demand and higher

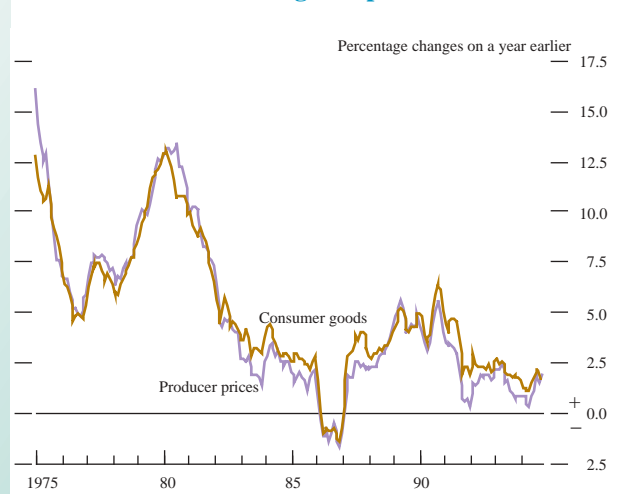
costs of imported raw materials and intermediate goods. Some feed-through to consumer prices would also be expected, however.

Consumer goods inflation has generally tended to follow the same pattern as producer price inflation, as the chart shows. But since 1987, producer price inflation has been higher than consumer price inflation in only one year (1989). So recent experience would suggest that where producer price inflation is now higher than consumer goods price inflation, the difference will not be sustained. The strength of the consumer sector may affect the dynamics of the relationship between the two measures. And structural change in the retail sector, like that seen in the United Kingdom, may also change it over the medium term.

The prices of consumer *services* may be less volatile than consumer goods prices because the demand for consumer goods, such as cars, is more cyclical. In the previous economic cycle, consumer services price inflation in the major economies started rising five years after the trough in GDP growth. If this were repeated in this cycle, consumer services price inflation would not start rising until the end of 1996 at the earliest.

While consumer sectors remain weak, the outlook for consumer price inflation in most economies remains benign, despite the rise in producer price inflation. Upward pressure on consumer price inflation seems likely to arise first in countries furthest ahead in the recovery and whose exchange rates have depreciated significantly. These generally are the countries that have already started to raise their interest rates. Tighter monetary policy will help to contain inflationary pressure. And even in those countries, consumer *services* price inflation may continue to fall for some time, offsetting a rise in consumer *goods* price inflation.

Producer and consumer goods prices^(a)



(a) A GDP-weighted average of Canada, the United Kingdom, the United States and western Germany.

(1) The producer price series used have been selected to be as close to the CSO's definition of output producer prices as possible, ie measuring the prices manufacturers charge for goods as they leave the factory.

aiming to keep inflation below 2% in the medium term. Its intermediate objectives are exchange rate stability and M3 growth of around 5% in the medium term. In October, M3 was unchanged compared with a year earlier (M3 had fallen in the previous 12 months); privatisations, tax changes and the Balladur bond all reduced M3 growth. The authorities also monitor a measure of total domestic debt; its 12-month growth rate slowed in the first half of 1994 to 2.5% in August.

In November, the Bank of Spain announced new monetary objectives for 1995. Annual growth of ALP (liquid assets of the private sector) is no longer to be an official target variable—the Bank adopted a medium-term inflation target for annual growth in the consumer price index of 3% or less within three years. The inflation rate targeted will rise as a result of indirect tax increases, like the United Kingdom's target RPIX rate.

In Japan, annual growth of M2 plus CDs rose gradually last year, in line with the gradual economic recovery: in December, it was 2.9%, compared with 1.4% a year earlier at the trough in GDP. Bank lending remained weak, however; in December, it was lower than a year earlier. In the December Tankan survey, businesses said that the availability of credit had increased further but that interest charges had also increased (in line with the rise in market rates during last year). Net borrowing in the commercial paper market was also weak: in August, outstanding borrowing was lower than a year earlier.

Monetary policy has been tightened again in countries further ahead in the economic cycle

In the fourth quarter, official interest rates were increased further in Australia, Canada, Sweden and the United States, as well as the United Kingdom. The 75 basis-point increase in the US target federal funds rate in November was more than some commentators had expected. It was also the largest single rise since the early 1980s. Between the rise and the end of the year, the yield on the 30-year US long bond fell by around 20 basis points while the gap between 2-year and 30-year interest rates fell. Nevertheless, at the end of 1994, eurodollar futures prices appeared to discount further rises in three-month interest rates before the end of 1995.

In the United States, the first increase in official interest rates occurred about three years after the trough in GDP; in the United Kingdom, the lag was around 2½ years (though rates started from higher levels). By the first quarter of 1995, recovery in France and western Germany had lasted two years: it is perhaps not surprising, therefore, that futures markets appeared to be discounting rising short-term interest rates in the first half of this year. In Japan, the recovery had lasted five quarters by the first quarter of this year; consumer price inflation was also very low and, based on unofficial measures, may have been negative. Given the strengthening of its real effective exchange rate last year, Japanese monetary policy was tighter than the 1.75% official discount rate would suggest; fiscal policy was, however, loosened during the cycle—as described in the last *Bulletin*.

Revisions to the calculation of effective exchange rates

This note describes recent changes made by the International Monetary Fund (IMF) to update and expand its calculation of effective exchange rate indices. The indices calculated by the Bank of England have changed as a consequence; and the Bank has published indices on the new basis since 1 February.

An effective exchange rate is a measure of the value of a currency against a ‘basket’ of other currencies, relative to a base date. It is calculated as a weighted geometric average of the exchange rates, expressed in the form of an index.

The effective exchange rate indices for sterling and other currencies published by the Bank are based on the method the IMF uses to calculate effective exchange rates for a number of industrialised countries. The indices produced by the Bank and the IMF are calculated in the same way but

published with different frequencies: the IMF publishes effective exchange rate indices in the monthly International Financial Statistics (IFS), whereas the Bank publishes the UK effective exchange rate every hour during the London business day.

The weights are designed to measure, for an individual country, the relative importance of each of the other countries as a competitor to its manufacturing sector. The weight for each country is derived from three components.

Table A
Weights derived from trade in manufactures^(a)

Based on 1989–91 trade flows

	Australia	Austria	Belgium-Luxembourg	Canada	Denmark	Finland	France	Germany	Greece	Italy	
Australia	—	0.49	1.16	1.82	0.34	0.61	3.08	7.94	0.07	3.21	
Austria	0.09	—	3.02	0.49	0.86	0.85	6.21	49.93	0.31	10.18	
Belgium-Luxembourg	0.11	1.44	—	0.51	0.79	0.73	18.95	29.13	0.27	7.86	
Canada	0.15	0.21	0.46	—	0.12	0.21	1.57	2.81	0.03	1.21	
Denmark	0.13	1.66	3.19	0.53	—	3.42	7.12	27.28	0.32	5.03	
Finland	0.23	1.69	3.05	0.95	3.54	—	7.33	22.12	0.28	5.60	
France	0.13	1.31	8.38	0.76	0.78	0.78	—	28.56	0.35	14.38	
Germany	0.19	6.01	7.35	0.78	1.71	1.34	16.29	—	0.59	12.99	
Greece	0.08	1.94	3.55	0.41	1.04	0.88	10.46	30.76	—	19.66	
Italy	0.17	2.78	4.50	0.76	0.72	0.77	18.60	29.48	0.85	—	
Japan	1.42	0.96	1.88	3.19	0.51	0.61	4.63	13.69	0.19	3.79	
Netherlands	0.13	1.50	9.89	0.77	1.34	0.98	11.85	31.32	0.25	6.63	
New Zealand	17.77	0.43	0.89	1.87	0.40	0.51	2.20	6.20	0.03	3.33	
Norway	0.14	1.24	2.75	0.81	6.31	3.93	6.09	19.20	0.28	4.85	
Portugal	0.08	1.32	3.22	0.48	1.42	1.41	15.57	23.07	0.22	7.64	
Republic of Ireland	0.17	0.87	3.25	0.84	0.93	0.79	9.58	15.98	0.14	5.54	
Spain	0.06	1.34	3.93	0.48	0.71	0.79	21.46	23.99	0.26	14.02	
Sweden	0.27	1.71	3.55	1.16	5.60	6.69	7.15	22.28	0.27	6.05	
Switzerland	0.17	4.04	3.04	0.62	0.93	0.78	12.07	33.58	0.28	11.37	
United Kingdom	0.48	1.19	5.39	1.38	1.38	1.41	12.59	22.49	0.31	8.27	
United States	0.67	0.56	2.12	25.09	0.47	0.59	5.84	11.50	0.13	4.56	
	Japan	Netherlands	New Zealand	Norway	Portugal	Republic of Ireland	Spain	Sweden	Switzerland	United Kingdom	United States
Australia	31.44	1.28	8.17	0.27	0.12	0.36	0.46	1.67	1.40	10.15	25.97
Austria	4.15	2.93	0.04	0.48	0.40	0.35	2.07	2.09	6.45	4.87	4.22
Belgium-Luxembourg	3.85	9.22	0.04	0.51	0.47	0.62	2.90	2.07	2.32	10.53	7.67
Canada	5.95	0.66	0.07	0.14	0.06	0.15	0.32	0.61	0.43	2.45	82.39
Denmark	4.24	5.01	0.07	4.71	0.83	0.71	2.11	13.14	2.85	10.83	6.84
Finland	5.22	3.82	0.09	3.04	0.85	0.63	2.43	16.24	2.48	11.48	8.93
France	4.20	4.88	0.04	0.50	1.00	0.81	7.00	1.85	4.07	10.87	9.34
Germany	7.08	7.36	0.07	0.90	0.85	0.77	4.46	3.28	6.45	11.07	10.48
Greece	5.05	3.13	0.02	0.70	0.42	0.35	2.56	2.04	2.77	8.06	6.13
Italy	4.45	3.53	0.08	0.52	0.64	0.60	5.92	2.02	4.96	9.23	9.43
Japan	—	2.07	0.61	0.47	0.18	0.45	1.39	1.48	2.40	6.67	53.40
Netherlands	4.55	—	0.06	0.97	0.58	0.84	2.76	2.66	2.29	11.96	8.66
New Zealand	29.45	1.29	—	0.36	0.13	0.33	0.41	1.91	1.39	9.52	21.58
Norway	5.14	4.89	0.08	—	0.88	0.60	1.73	17.54	1.89	12.50	9.14
Portugal	2.49	3.71	0.04	1.12	—	0.52	14.32	3.74	2.58	11.26	5.82
Republic of Ireland	4.90	4.13	0.07	0.58	0.40	—	2.40	2.37	2.07	31.59	13.39
Spain	3.88	3.49	0.02	0.44	2.82	0.62	—	1.96	2.30	10.20	7.21
Sweden	5.20	4.24	0.14	5.58	0.93	0.77	2.48	—	2.74	11.56	11.63
Switzerland	6.45	2.80	0.08	0.46	0.49	0.52	2.23	2.10	—	8.37	9.64
United Kingdom	7.00	5.71	0.21	1.19	0.84	3.08	3.85	3.45	3.27	—	16.49
United States	30.29	2.23	0.25	0.47	0.23	0.70	1.47	1.88	2.03	8.91	—

(a) The weights relating to the effective exchange rates of the countries in the left-hand column are obtained by reading across the appropriate rows. The weights for an individual currency will not necessarily sum exactly to a hundred; this is because of rounding, as the weights are quoted to two decimal places.

To take an example, the weight of the US dollar in the sterling index takes account of: (i) US competition in the UK domestic market (ie bilateral import competitiveness); (ii) UK competition in the US domestic market (ie bilateral export competitiveness); and (iii) competition between US and UK manufactured goods in third-country markets (ie the markets of the other 19 industrialised countries included and those in four other broad groups). The components are weighted together differently in the calculation of each country's index, according to the degree of competition in each market.⁽¹⁾

Beginning with the January 1995 edition of its *International Financial Statistics*, the IMF has started publishing new monthly nominal effective exchange rate indices.

There have been two changes to the method, neither of which alters the underlying conceptual framework. The first is the updating of the trade weights.⁽²⁾ The previous weights were based on disaggregated trade flows for 143 manufactured products in 1980. In the new index, the weights have been updated to reflect average aggregate trade flows in manufactured goods for the period 1989–91. The second change is that the number of countries covered has been increased from 17 to 21, reflecting the widening in EU membership to include Greece and Portugal and the inclusion of Australia and New Zealand.

The 21 countries included in the calculation were chosen partly because of their ability to provide timely and reliable data on unit labour costs; the IMF uses unit labour cost data to construct measures of real exchange rates. This criterion helps to explain the omission from the calculations, for example, of some of the newly industrialised Asian countries.

On the basis of the new weights for the sterling effective exchange rate index, the total weight of EU countries (now including the two European countries added to the calculation—Portugal and Greece—and also Austria, Finland and Sweden, which were previously included but have only recently joined the European Union) has increased from 55.6% to 70.0%. Apart from the new Member States, the weights of every EU country except Denmark previously included in the calculation have risen. The largest increases were for Spain, whose weight rose by 1.8 percentage points to 3.9%, and Germany, the weight for which rose by 2.5 percentage points to 22.5%.

As a result, the weight of the non-EU bloc has fallen—with a decline in the weight for every non-EU country previously

Table B
'New' and 'old' indices of the sterling ERI

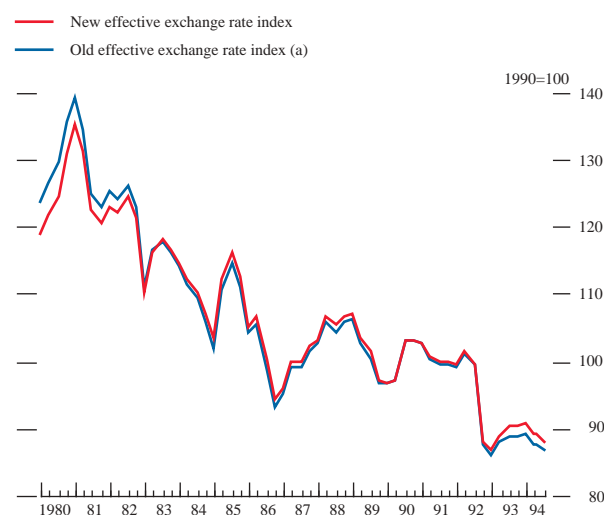
Quarterly averages		1990=100		1985=100
		New	Old (a)	Old
1991	Q1	102.6	102.8	93.8
	Q2	100.7	100.2	91.4
	Q3	99.9	99.4	90.7
	Q4	99.8	99.6	90.9
1992	Q1	99.4	99.2	90.5
	Q2	101.2	101.2	92.3
	Q3	99.4	99.6	90.9
	Q4	87.7	87.5	79.8
1993	Q1	86.6	86.0	78.5
	Q2	88.7	87.9	80.2
	Q3	90.2	88.8	81.0
	Q4	90.2	88.8	81.0
1994	Q1	90.7	89.1	81.3
	Q2	89.1	87.7	80.0
	Q3	87.9	86.8	79.2
	Q4	89.1	87.9	80.2

(a) The old index rescaled so that 1990=100.

included in the calculation. There have been large falls in the weights for Switzerland (declining from 5.5% to 3.3%), the United States (falling from 20.4% to 16.5%) and Japan (falling from 8.8% to 7.0%). The decline in the weight of the US dollar continues a trend apparent at the time of the last revision in 1988, when it was reduced from 24.6% to 20.4%. The matrix of weights is shown in Table A.

The base date for the new sterling index is 1990=100. A change in the base date influences only the scale of the index and not the percentage changes between different dates; nor does it require any alteration to the weights used in the calculation. Table B and the chart compare the new exchange rate index for sterling with the old index.

Sterling effective exchange rate



(a) For comparison, the old index has been rescaled to 1990=100.

(1) For details of how these weights are derived, see 'Measuring price competitiveness for industrialised country trade in manufactures' by McGuirk, A. *IMF Working Paper*, April 1987.

The formula for the resultant nominal effective exchange rate is:

$$E_j = \sum_{i=1}^{20} N_i^{w_i}$$

where:

E_j = the nominal effective exchange rate for country j ;
 N_i = the bilateral exchange rate between country j and country i (expressed in the form of an index); and
 w_i = the total weight of country i in relation to country j .

(2) The weights used until January were introduced in 1988; see the article, 'Revisions to the calculation of effective exchange rates', in the November 1988 *Quarterly Bulletin*, pages 528–29.