II. Developments in industrial countries

Highlights

Driven by continued high growth of domestic demand in the United States and a progressive strengthening in the euro zone countries, output growth in the industrial countries rebounded last year from the 1997–98 slowdown. Japan was an exception to this trend: following an unexpected pickup in the first half of 1999, output there declined during the second half and ended the year at the same level as in 1998.

Even though the countries furthest ahead in the cycle were near or above full capacity last year and energy prices rose sharply, most measures of core inflation remained subdued. In part, this reflected the effects of growing competition in global goods markets, which prevented enterprises from passing higher input costs into final prices. Another reason for the continuing low inflation was that average growth of unit labour costs declined due to nominal wage restraint and stronger productivity growth. The latter was particularly notable in the United States, where output growth per hour in the non-farm business sector rose to 4¼%, the highest rate in 35 years.

Actual output growth was below potential rates in most other countries and common measures of output slack rose. Nonetheless, rates of unemployment generally fell, in marked contrast to historical patterns. The decline was most pronounced in the euro zone countries, consistent with suggestions that wage restraint and measures to make labour markets more flexible could gradually be reducing structural unemployment, though other explanations are also plausible.

Last year also witnessed a further widening of internal and external financial imbalances, notably in the United States and Japan. Driven by wealth gains and an associated rise in private sector indebtedness, the growth of US domestic demand far outstripped that of real output, leading to a further widening of the US current account imbalance. Conversely, in Japan, the private sector's propensity to spend declined further and the government's attempt to boost output growth through fiscal stimulus had only a temporary effect. Hence, the general government budget deficit widened again and the debt/GDP ratio continued to increase at a rapid rate.

Despite the further rise in the US current account deficit, the US dollar was largely stable in effective terms last year, as net long-term capital inflows to the United States largely offset the current account imbalance. In contrast, net long-term outflows far exceeded the current account surplus in the euro zone countries, while, in the case of Japan, announcements of corporate restructuring, combined with deregulation measures, induced a marked rise in foreign direct investment and portfolio inflows which contributed to upward pressure on Japanese equity prices.

Macroeconomic developments in 1999

Output outlook improved

As 1999 progressed and the effects of the events surrounding the Russian debt moratorium wore off, the outlook for output growth in the industrial countries and the global economy gradually improved (Table II.1). For the third consecutive year, actual growth in the United States significantly exceeded forecasts (Graph II.1). In the other countries furthest ahead in the business cycle (Canada, Australia and the United Kingdom), growth also turned out stronger than forecast. Even though predictions for the euro zone countries were more or less realised on average, this outcome can largely be attributed to offsetting forecast errors for individual countries and masked a growing divergence among them. In particular, those economies already well ahead in the euro zone cycle (Ireland, Spain and the Netherlands) grew faster than predicted while the recoveries in those lagging the cycle (Germany and Italy) took longer to materialise than expected. Developments in the Asia-Pacific region also contributed to the improvement in global demand. Japan did not experience the predicted decline in output while the crisis-affected emerging Asian economies recovered much faster than had been foreseen (see Chapter III).

Disinflationary forces stronger than expected

Despite the improvement in output growth, an unexpectedly large rise in oil and energy prices and relatively accommodating policies, CPI inflation last year was more or less in line with predictions. This suggests that underlying disinflationary forces were stronger than most analysts had taken into account. Competitive pressure in global goods markets and an associated reduction in firms' pricing power were among the principal factors behind this favourable outcome. Continued wage moderation and a pickup in productivity growth in some of the fastest growing countries were also important, whereas the role of exchange rate movements remains uncertain. On the one hand, the strengthening of the US dollar against the euro probably helped to shift global demand towards countries with excess capacity and relatively low inflation. On the other hand, the general strengthening of the yen acted in the opposite

Forecasts and outcomes for 1999[1]

	Real GDP		Consumer prices		Current account	
	Forecast	Outcome	Forecast	Outcome	Forecast	Outcome
	annual percentage changes				in billions of US dollars	
North America	2.3	4.1	2.0	2.2	–287	–342
Western Europe	2.0	2.2	1.5	1.2	134	74
Euro zone	2.3	2.2	1.3	1.0	108	40
Asia-Pacific	0.5	2.2	1.1	0.4	192	191
Latin America	0.8	–	7.4	8.0	– 67	– 50
Eastern Europe	–0.4	1.1	53.2	34.1	– 24	– 4
Other countries	2.0	2.1	5.2	3.2	– 14	– 11
World	1.5	2.6	3.7	2.8	– 66	–142

[1] As published in December 1998 (forecasts) and April 2000 (outcomes).

Source: © Consensus Economics, *Consensus Forecasts*. Table II.1

direction by shifting global demand away from a country with excess capacity and price deflation.

Widening external and internal imbalances

Because growth convergence was less pronounced than expected, most of the countries furthest ahead in the cycle experienced a further widening of their external imbalances. The combined external surplus of Asia-Pacific was in line with previous forecasts whereas the surplus of western Europe declined more than anticipated, despite the depreciation of the euro. However, as the discrepancy between global outcomes and forecasts in Table II.1 implicitly suggests, the global deficit or statistical discrepancy increased significantly in 1999. Moreover, the aggregate developments mask a widening of country-specific imbalances, in some cases at a rate that does not seem sustainable. Thus the gradual rise in Japan's external surplus until 1998 and the decline last year can be seen as the net result of a growing private sector saving surplus and a government deficit which is expanding at an unsustainable rate. Similarly, the widening US external deficit reflects growing internal imbalances, but of opposite signs, as the government is paying back debt while the private sector incurs new debt at a very rapid rate.

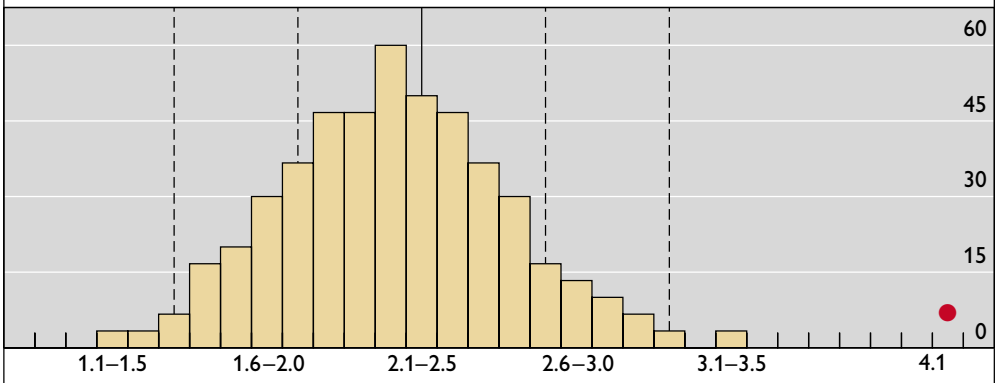
Higher real interest rates with little restraining effect

Parallel to the improvement in growth prospects, long-term real interest rates rose last year, in some cases to levels that exceeded historical averages. However, because the increases in real rates were, in part, an adjustment to perceptions of higher potential rates of growth and thus an endogenous response to some of the factors driving the growth process, their constraining effects on domestic demand growth were not clearly evident. By making room for "crowding in" private investment, the improvement in fiscal balances last year probably also had a mitigating effect.

Unemployment responds to wage restraint and labour market measures

Despite the improvement in economic conditions in the course of 1999, actual growth in most countries was below potential and thus not high enough to prevent a widening of the overall output gap. Even so, unemployment declined, consistent with the view that labour market measures and real wage moderation were favourably affecting the demand for labour. This development was particularly pronounced in the euro zone countries, where the

Dispersion of US growth forecasts for 1999[1]

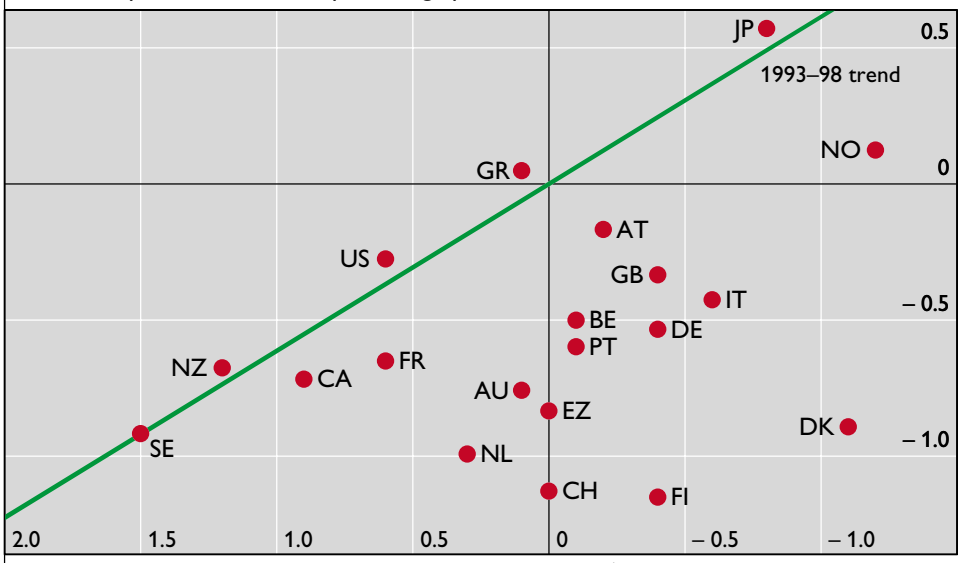


[1] Number of forecasts (made in December 1998) falling in rolling ranges of 0.5 percentage points, as a percentage of total forecasts. The dot indicates actual 1999 GDP growth, the solid line the mean of the forecasts and the dotted lines ±1 and 2 standard deviations from the mean.

Sources: © Consensus Economics; national data. Graph II.1

Changes in unemployment rates and output gaps

Over the period 1998–99, in percentage points



AT = Austria; AU = Australia; BE = Belgium; CA = Canada; CH = Switzerland; DE = Germany; DK = Denmark; FI = Finland; FR = France; GB = United Kingdom; GR = Greece; IT = Italy; JP = Japan; NL = Netherlands; NO = Norway; NZ = New Zealand; PT = Portugal; SE = Sweden; US = United States; EZ = euro zone.

[1] The output gap is expressed as a percentage of potential GDP (inverted scale).

Sources: OECD; national data. Graph II.2

aggregate unemployment rate declined by almost 1 percentage point whereas the 1993–98 trend would have suggested no change (Graph II.2). Of course, this apparently favourable outcome might also have been the result of less welcome developments, such as involuntary part-time work, declining labour force growth and slower productivity gains (see below).

Developments in individual countries

US expansion the longest in the postwar period …

Early this year, the *United States* economy recorded its 107th month of uninterrupted growth, making the current expansion the longest in the postwar period (Table II.2). However, because of the "headwinds" during the early 1990s it has not been the expansion with the highest rate of growth; even during the last four years, average growth only just reached that of the expansion of the 1980s and remained well short of that of the 1960s. The pace of job creation has also been lower than during those upswings. But because the expansion started with relatively little labour market slack, the rate of unemployment has continuously been low and, early this year, fell to the lowest level since end-1969. However, unlike in 1969, when the rate of inflation had increased to 6%, the CPI (excluding energy and volatile food prices) rose by only 2% last year.

One key feature which distinguishes the current upswing from previous ones of similar length is that inflation has fallen rather than increased in the course of the expansion. By allowing policies to remain accommodating,

low inflation has been a principal contributor to the longevity of the upturn. The variability of inflation has also been low, which has probably reduced uncertainty, improved the signalling ability of relative price changes and thus made it easier for firms to match output with demand. Indeed, an important feature of the current cycle has been the marked declines in inventory/sales ratios and in the amplitude of the inventory cycle, both of which helped firms to cut costs and reduced the variability of GDP growth.

… thanks to low and stable inflation …

This improvement in performance has not been entirely exogenous but can, to a large extent, be attributed to investment in IT equipment and the implementation of new technologies throughout the production and distribution chain. As Table II.2 shows, the ratio of equipment investment to GDP, at 8¼%, has been significantly higher than in earlier expansions. Moreover, there are, thus far, few signs that the investment boom is about to end, as the ratio of equipment investment to GDP reached over 11% by the end of last year. One key result of the new technologies and the rise in the capital intensity of the US economy has been a marked pickup in labour productivity growth and in the potential growth rate of the whole economy. In fact, productivity growth in the non-farm business sector reached 4¼% last year, which helped to restrain unit labour costs and overall price inflation. The rise in capital/labour ratios and in labour productivity growth during the second half of the 1990s has also meant that the rate of output growth consistent with a stable rate of unemployment is estimated to have increased from just below 2% to 3¼% during the decade (Graph II.3).

… and higher productivity growth

The contribution of the government has differed from that in past cycles. First, the growth of government spending has been smaller than in the 1960s, when it was a major cause of overheating. Second, unexpected revenue gains

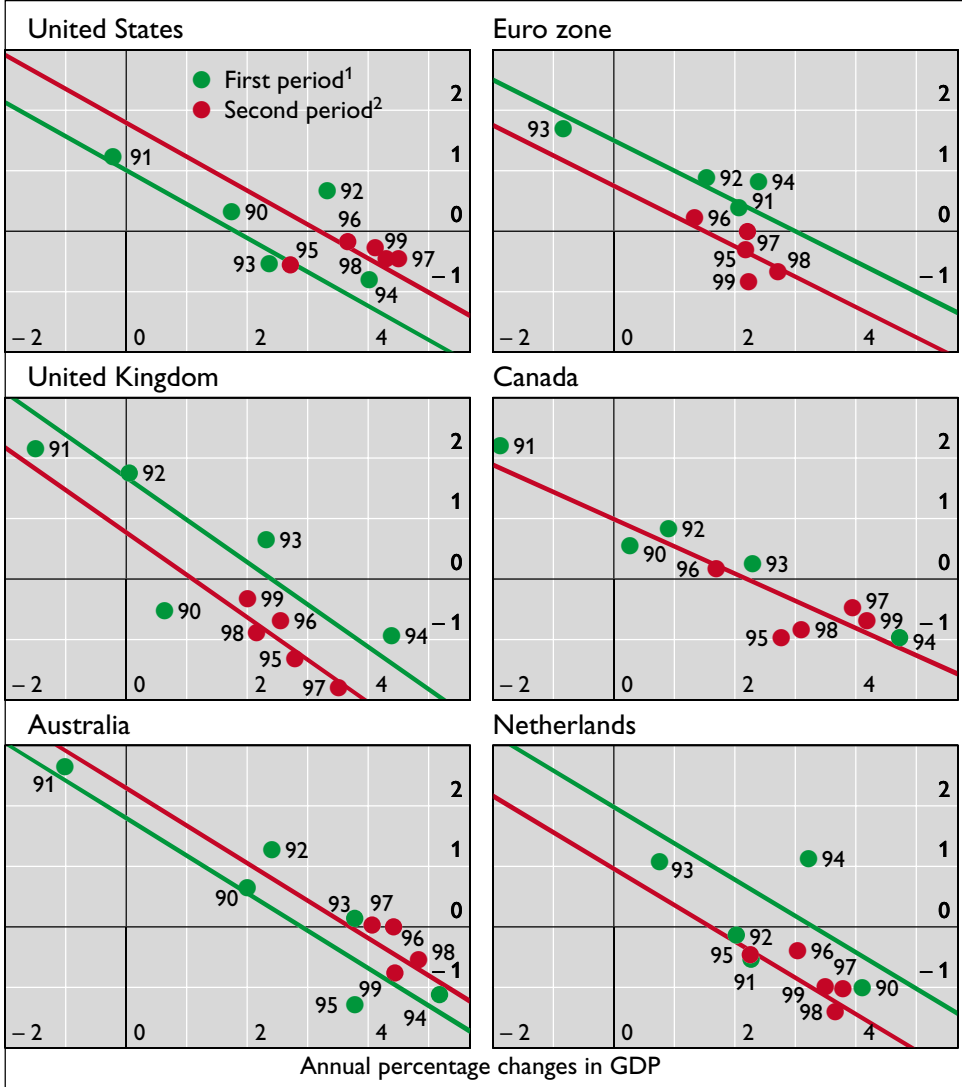
US expansion in historical perspective

	1961 Q1–1969 Q3	1983 Q1–1990 Q2	1991 Q2–1999 Q4	1995 Q4–1999 Q4
GDP volume[1]	5.0	4.3	3.6	4.4
Standard deviation[2]	*2.0*	*1.7*	*1.3*	*0.7*
Employment[1]	2.1	2.5	1.5	1.7
Productivity[1]	2.9	1.7	2.1	2.6
Unemployment rate[3]	4.7	6.8	5.8	4.8
GDP deflator[1]	2.6	3.3	1.9	1.6
Standard deviation[2]	*1.3*	*0.6*	*0.6*	*0.4*
Household saving ratio[3]	8.4	8.4	5.6	3.9
Equity prices[1,4]	5.1	12.6	16.4	23.1
Ten-year interest rate[3,5]	4.7	9.6	6.4	5.9
Household debt/income[3]	63.4	74.4	89.6	94.2
Business debt/output[3,6]	54.9	70.6	75.3	76.3
Corporate profits/GDP[3]	10.8	7.4	8.7	9.7
Business investment/GDP[3,7]	13.4	14.6	15.6	17.3
Equipment investment/GDP[3,7]	3.4	6.0	8.3	9.7
Current account/GDP[3]	0.5	–2.4	–1.7	–2.3

[1] Annual percentage changes. [2] Of four-quarter changes. [3] Average of period. [4] S&P 500. [5] US Treasury notes and bonds. [6] Non-financial corporate sector. [7] In volume terms.

Source: National data. Table II.2

GDP growth and changes in the unemployment rate during the recent cycle



Note: The lines are obtained by regressing quarterly changes in the unemployment rate on an intercept and current and lagged changes in logs of quarterly GDP, allowing for intercept shifts between the two periods. A downward (upward) shift of the line indicates that less (more) growth is required to keep the rate of unemployment constant. For Canada, no intercept shift was found.

[1] 1990 Q1–1994 Q4 (for Australia, to 1995 Q4). [2] 1995 Q1–1999 Q4 (for Australia, from 1996 Q1).

Sources: National data; BIS calculations. Graph II.3

Public saving surplus "crowds in" investment

(in part from taxes on capital gains) and efforts to cut spending have led to a growing saving surplus, enabling the government to reduce debt and "crowd in" private investment spending. Third, the reduction in average and marginal income tax rates and the replacement of low-income transfers with incentives to rejoin the labour force have probably contributed to labour force growth and reduced potential excess demand and wage pressure.

New technologies help to cut costs …

Despite their welcome supply side effects, the new technologies have also induced imbalances and might eventually contribute to a more volatile business cycle. First, the high-tech sectors, which have accounted for a rising share of US output, have a history of volatile cycles and high sensitivity to fluctuations in the demand for their products. Second, on the users' side, new technologies

and pressures to cut costs have encouraged firms to reduce inventories and other contingency reserves substantially. While new technologies have also improved firms' capacity to manage inventories effectively, their vulnerability to supply and demand shocks may have increased. Consequently, the lower variability of GDP growth is not only the result of new investment and the application of new technologies but may have become a necessary condition for their continued profitability. Third, because the new technologies and the internet have reinforced competitive pressures in wholesale and retail markets and eroded firms' pricing power, profit margins and profit shares have increasingly become subject to downward pressure. Profits are also being squeezed by growing depreciation charges, reflecting the short duration of recent investment in equipment. For example, during the last three years, higher labour productivity growth has actually been associated with lower profit shares, in contrast to earlier periods when a positive correlation could be observed (Graph II.4). In short, investment spending not only contains a growing share of replacement investment but it is increasingly being financed by firms taking on more debt.

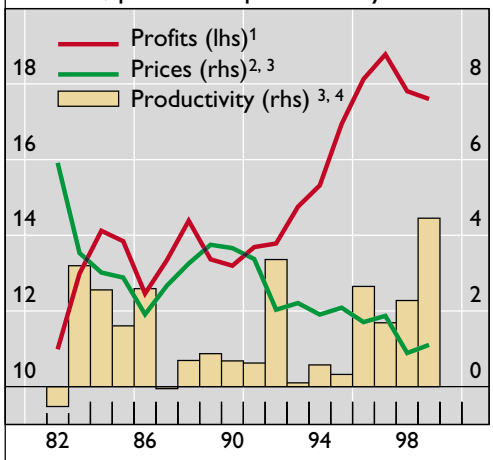
… but might still squeeze profit margins

Finally, there are signs that equity prices and the financial wealth of households have increased by more than can be justified by the rise in potential growth to about 3¼%, implying that the demand side effects of higher productivity growth have outpaced the supply side effects. This is not only seen in a widening gap between actual demand and potential output but is, perhaps, most evident in the marked rise in the ratio between households' net financial wealth and their disposable income (Graph II.5) and in the influence of wealth gains on household spending. Even if only 4% of the wealth gain were spent in the short run, higher equity prices would account for 20–25% of the rise in consumption over the last five years (Table II.3).

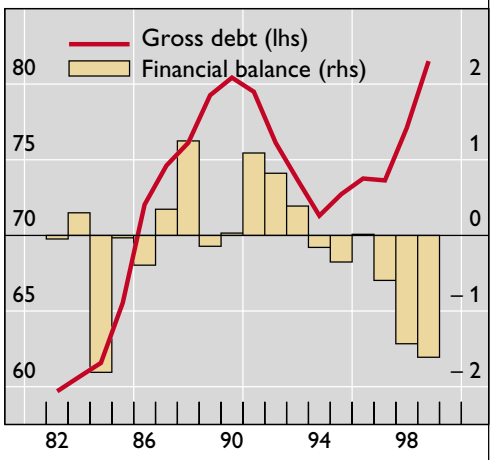
Risk of excess demand through wealth gains

Indicators for the US corporate sector

Profits, prices and productivity



Debt and financial balance[1]

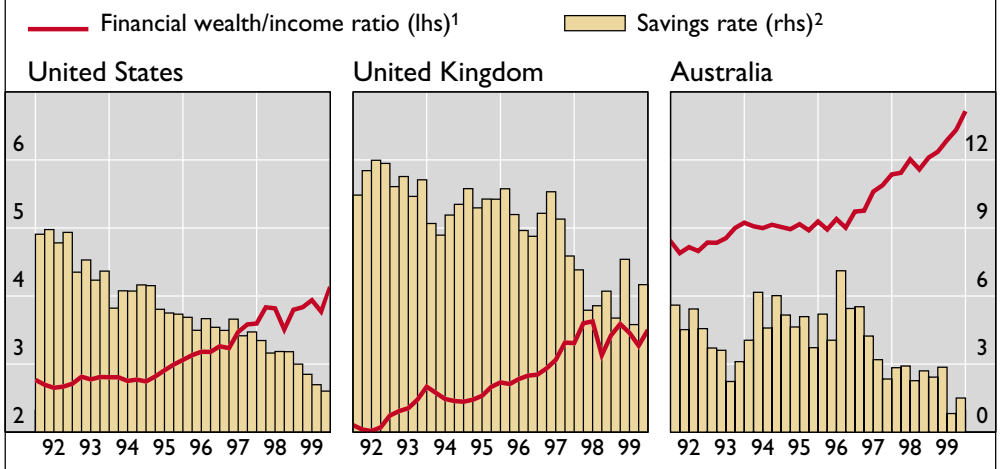


[1] As a percentage of output. [2] Output deflator. [3] Annual percentage changes. [4] Output per hour worked.

Sources: Board of Governors of the Federal Reserve System; US Department of Commerce.

Graph II.4

Household net assets and savings



[1] Ratio of net financial assets (for Australia, including housing) to disposable income. [2] Savings as a percentage of disposable income.

Source: National data. Graph II.5

Similar developments in other English-speaking countries …

Some of the developments discussed above can also be observed in the other English-speaking countries leading the cycle (the *United Kingdom*, *Canada* and *Australia*). All three countries operated near or above full capacity last year and saw unemployment rates falling to 10- to 20-year lows. However, the sources of growth differed among the three. Canada benefited from a rise in the prices of the commodities it exports and from booming exports to the United States, while domestic demand picked up only relatively late in the year. In Australia, the main source of growth was household spending, while investment slowed and export earnings declined, partly because Australia has a relatively high export share of commodities whose prices declined in the first half of the year. The modest year-on-year growth of GDP observed for the United Kingdom was the net outcome of conflicting trends. First, a weak first half was succeeded by a strong second half, reflecting the lagged effects of monetary policy being loosened in response to lower inflation. Second, a clear dichotomy has emerged between, on the one hand, sectors oriented towards

Estimated consumption elasticities with respect to income and wealth

	Income elasticities[1]		Wealth elasticities[1,2]		Contributions[3]	
	Short-run	Long-run	Short-run	Long-run	Income	Wealth
United States	0.62	0.89	0.04	0.12	15.5	6.5
United Kingdom	0.59	0.76	0.02	0.16	10.5	7.5
Australia	0.41	0.90	0.11	0.13	14.5	7.5

[1] The elasticities are obtained by regressing household spending on disposable income and net wealth of the household sector respectively, using an error correction model on quarterly data; for the United States, 1960 Q1–1999 Q4; for the United Kingdom, 1980 Q1–1999 Q4; for Australia, 1977 Q1–1999 Q4. [2] For the United States and the United Kingdom, financial wealth only; for Australia, including housing wealth. [3] Calculated as contributions (in percentages) to consumption growth during 1994 Q4–1999 Q4, using the long-run elasticities. During this period real consumption expanded by 22% in the United States and Australia and 18% in the United Kingdom.

Source: National data. Table II.3

the domestic economy which are benefiting from lower import prices and strong wealth gains and, on the other, sectors exposed to the competitive pressure associated with the strong currency and, for part of the year, weak export market growth.

… including low saving …

Household saving in the three countries has also fallen to levels which are not only low by historical standards but also significantly below those of other industrial countries apart from the United States. A principal reason seems to have been the aforementioned rise in net financial wealth which, in the United Kingdom and Australia, has been reinforced by higher house prices and by a rise in mortgage loans in excess of what can be explained by residential investment. In Canada, the household saving ratio even fell to 1% last year, as the debt/income ratio climbed to over 100%.

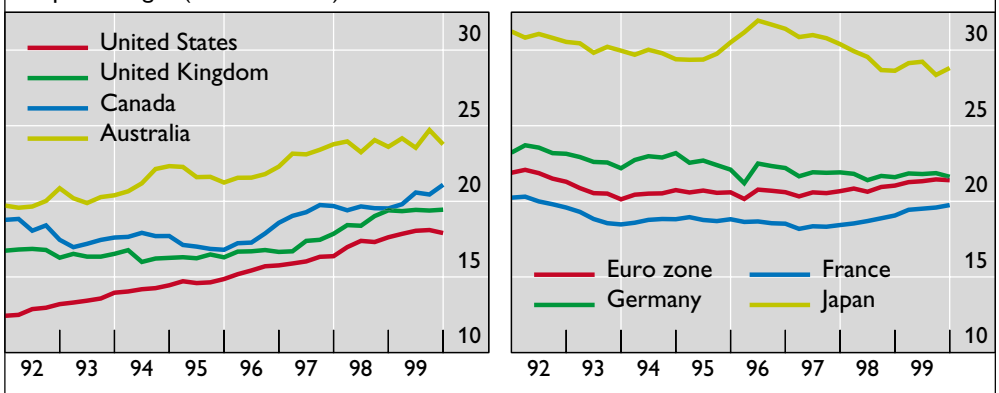
… while productivity performance differs

The development of enterprise investment and its effects on potential growth and labour productivity appear to differ across the three countries. While all three have seen a rising investment/GDP ratio since around 1995 (Graph II.6), only Australia has recorded a significant rise in productivity growth. Except for the United States, Australia is also the only country where the rate of GDP growth consistent with stable unemployment appears to have increased. While there are signs that productivity growth in Canada has strengthened since mid-1998, the increase has been too small and come too late to influence the calculated relationship between GDP growth and unemployment. For the United Kingdom, the picture is even more mixed. Faced with a marked appreciation of the pound, manufacturing firms have succeeded in raising productivity sufficiently to maintain export growth without narrowing profit margins. In contrast, measured productivity has changed little in the services sector and, because of various labour market measures and a marked rise in the proportion of part-time workers, less growth is now needed to keep unemployment stable.

Even though domestic demand rebounded strongly in *New Zealand* last year, output growth remained below that of most other English-speaking countries. A drought reduced output in the primary sectors, prices of New Zealand's major export commodities remained low, and a strong rise in import

Investment/GDP ratios

In percentages (volume terms)



Sources: ECB; national data.

Graph II.6

demand led to both a negative growth contribution from the trade sector and a widening of the external deficit to some 8% of GDP.

Slowdown in Japan reflects the effects of …

In *Japan*, positive growth was confined to the first half of 1999, when the effects of the fiscal stimulus package adopted in late 1998 were reinforced by an unexpected pickup in household spending. During the second half, the weakness of private demand reappeared as household saving rose, business fixed investment declined further and the stimulus from earlier fiscal packages gradually faded away. But the contribution from net exports improved slightly, despite the stronger yen.

… continued weakness in the financial sector …

Last year's developments should be seen in the light of the structural problems with which the Japanese economy is confronted. One problem, which had a major influence on developments in 1997–98, was the weak financial position of banks and their inability (or unwillingness) to lend. This problem seems to have been more or less resolved through a publicly financed recapitalisation programme which, together with rising profits, has enabled banks to write off large amounts of non-performing loans. Nevertheless, bank credit is still shrinking, reflecting a combination of lack of demand, as large companies prefer to pay back bank debt and/or finance themselves in the capital market, and stricter lending criteria vis-à-vis small and medium-sized firms. Moreover, banks' continued exposure to falling property prices could require new write-offs (see also Chapter IV).

… and corporate restructuring

A second problem stems from corporate restructuring to improve the return on capital. As a first step, firms have attempted to reduce excess capacity, which contributed to the fall in business fixed investment last year. However, since a significant improvement in return does not seem feasible without a sizeable reduction in labour's share of income, corporations have also announced plans to cut back on employment. Although the implementation of these plans is likely to be protracted and their effects, to date, are mainly seen in less overtime and a lower number of new hires, the announcements seem to have depressed consumer confidence and spending.

Substantial rise in private saving …

In fact, low spending and a resulting excess supply of private saving may be the single most serious structural problem facing the Japanese economy. In sharp contrast to developments in the English-speaking countries, Japan has seen a progressive rise in private saving since the late 1980s, with a marked acceleration since 1997. Combined with the decline in business investment and, more recently, a recovery of corporate profits and retained earnings, this has raised the private sector's *net* financial surplus to more than 10% of GDP in 1999 and further to almost 13% by the first quarter of 2000.

… is only partly offset by fiscal stimulus

The Japanese government has attempted to offset the depressive effect of the private sector saving-investment imbalance by adopting a series of fiscal stimulus packages (of which two were implemented last year), amounting to around one half of the cumulative net private saving surplus since 1992. To increase demand for residential construction and improve borrowing conditions for small and medium-sized firms, the stimuli have been supplemented with various credit schemes. While these have helped to temporarily boost residential investment and reduce the number of bankruptcies, the

multiplier effects of the fiscal stimuli seem to have progressively declined. Financially constrained local governments have faced increasing difficulties in providing the expected supplementary measures, and the marginal efficiency and utility of the public investment projects seem to have decreased in step with the number of projects implemented. However, the fact that economic activity has declined in periods where no fiscal stimuli were active shows that, without these measures, the downturn in economic activity would have been much steeper.

Unsustainable rise in public debt

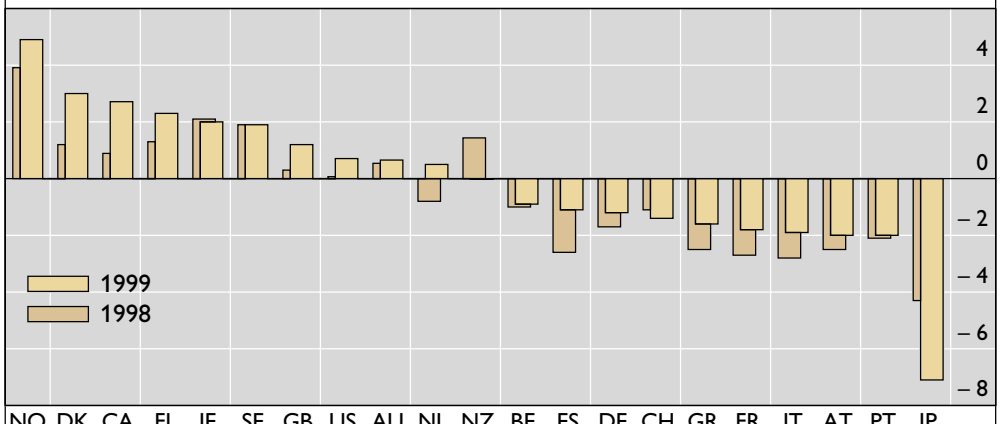
Because the fiscal stimuli have not generated a sustained recovery in private demand and tax revenues have fallen relative to GDP, the net government debt/GDP ratio is currently on an unsustainable upward path, even if its level is still modest by international standards. The primary balance was in deficit last year and since the implicit debt interest rate significantly exceeded the growth of nominal GDP, by the end of the year the net debt had increased to over 37% of GDP (from less than 30% in 1998) and the gross debt to 105%. Moreover, based on current forecasts, the net debt ratio would grow to nearly 45% by the end of this year and the gross debt to almost 115%.

Modest imbalances in the euro zone

The *euro zone countries* experienced only modest internal and external financial imbalances last year (Graph II.13). The budget deficit for the euro zone declined to 1¼% of GDP (Graph II.7), partly due to lower debt interest payments but also reflecting unexpected revenue gains. Although these gains seem to have occurred more or less independently of the cyclical phase, there is a significant positive correlation across the euro zone countries between budget deficits and output gaps, with the largest deviations observed for countries with relatively large structural imbalances (Austria and Finland). Generally, however, structural imbalances declined in 1999, as did the gross debt/GDP ratio. Consequently, the major imbalance was in the labour market, where the rate of unemployment, despite significant reductions over the last two years, still averaged 10%.

General government financial balances in 1998 and 1999

As a percentage of GDP



ES = Spain; IE = Ireland; the other country codes are explained in Graph II.2.

Sources: Eurostat; IMF; national data. Graph II.7

Variations in growth rates and excess capacity across the region

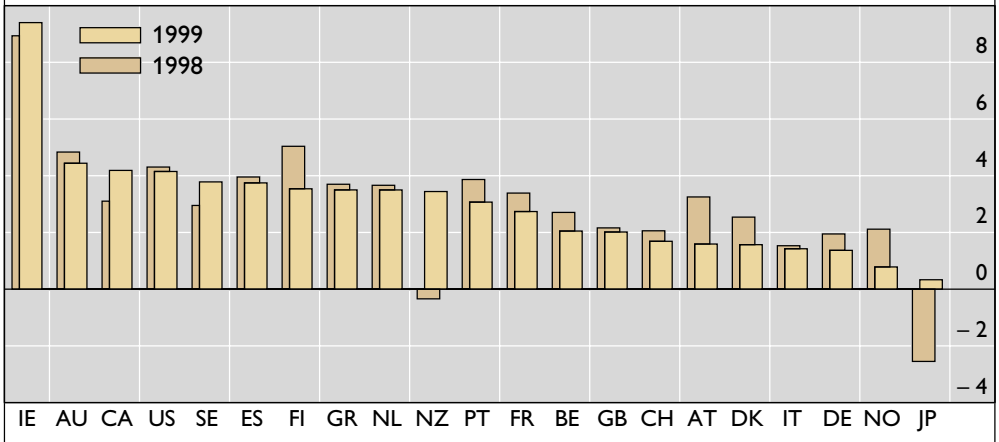
While the average growth rate for the euro zone was more or less in line with previous forecasts, the expected narrowing of internal growth differentials did not materialise. In fact, growth rates last year ranged from a high of 9.4% in *Ireland* to a low of 1.4% in *Italy* and *Germany* (Graph II.8). Since these differentials have persisted for some years, there are also wide variations in excess capacity and unemployment across the region. With average GDP growth in Ireland of 8¾% for the last five years, actual output now exceeds estimates of potential output by some 5%. Actual GDP also exceeds potential GDP in the *Netherlands*, although progress in making the labour market more flexible has reduced unemployment to only 2¾%. In contrast, at −3¼%, Italy has the largest output gap in the euro zone and a rate of unemployment second only to that of *Spain*.

Significant improvement in labour market conditions

Another feature of developments in the euro zone countries last year was that, despite average output growth of only 2%, employment expanded by 1½% and unemployment declined. Estimates shown in Graph II.3 would suggest that less output growth has been required in recent years to keep unemployment stable than was previously the case. One reason for this outcome might be that a gradual shift of output and employment towards the more labour-intensive service sectors has reduced aggregate labour productivity and thus the growth of output needed to keep unemployment stable. Second, the fact that unemployment can be reduced even when output growth is low suggests that progress has been made in making labour markets more flexible and in reducing structural unemployment. The Netherlands is a particularly striking example in this respect. As Graph II.3 shows, the rate of output growth required to keep unemployment stable has fallen significantly and the shift is, to a large extent, attributable to a sizeable increase in part-time workers. Nonetheless, while these results are welcome from the point of view of reducing unemployment, they also suggest that relatively high

Real GDP growth in 1998 and 1999[1]

In percentages



Note: The country codes are explained in Graphs II.2 and II.7.

[1] Annual averages. The standard deviations (across all countries) for GDP growth in 1998 and 1999 are 2.18 and 1.91 respectively.

Source: National data. Graph II.8

investment/GDP ratios (Graph II.6) in the euro zone have yet to be reflected in a technologically induced rise in labour productivity growth and in the return to capital.

Developments in other European countries

Most other European countries experienced considerably slower output growth last year. In *Denmark* and *Norway*, the slowdown can be ascribed to more restrictive policies as both output growth and the rate of inflation were getting too far ahead of the European cycle. The most remarkable feature of recent developments in *Greece* has been the fall in unit labour cost growth from an average rate of over 10% during 1990–97 to 6% in 1998 and then further to only 2½% last year. The decline can be attributed to a combination of wage moderation and stronger productivity and was a principal factor aiding Greece in its efforts to satisfy the criteria for joining EMU. The weakening of economic activity in *Switzerland* last year was mostly due to slower growth of domestic demand despite relatively favourable monetary conditions and a remarkable fall in unemployment. *Sweden* was the main exception to the general slowdown in Europe. Its economy grew rather sluggishly until the middle of the year, but a subsequent turnaround in foreign demand lifted GDP growth to 3½% for the year as a whole.

Inflation and labour markets

Inflation and oil prices

Moderate impact of higher oil prices …

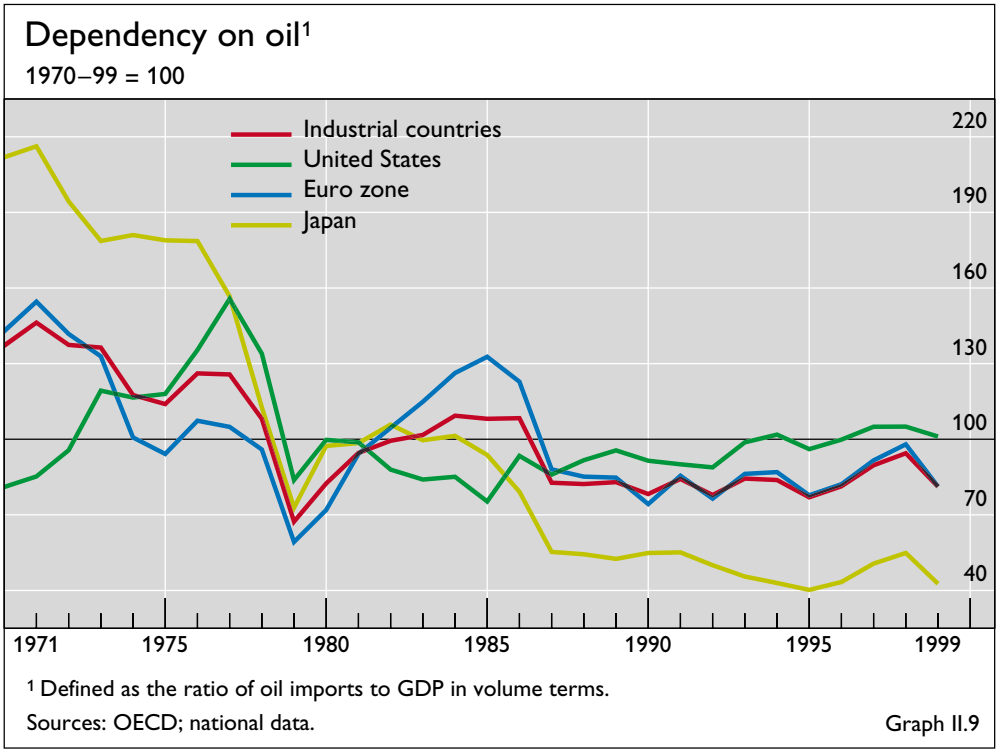
While the last months of 1999 saw yearly headline inflation rates rising by an average of 0.4 percentage points over third quarter rates, this increase may not signal the end to the benign inflation environment of the 1990s. The increases were modest in most countries and primarily reflected the steep rise in oil prices. Indeed, the absence of any significant effect on core inflation rates suggests that, so far, the forces underlying the 1990s disinflation remain in place.

… reflects the effects of conservation, technologies …

One possible reason for the modest impact on core inflation is that the recent jump in oil prices only reverses earlier declines, leaving real prices below their levels of two years ago. Thus, users may not have found it difficult to adjust to the new prices. Second, oil is less important than it once was. Reflecting the effects of technological innovation, the development of cost-effective alternative sources of energy and a wide range of conservation measures, the volume of oil imports relative to GDP in the industrial countries has fallen since the 1970s (Graph II.9). The greater number of energy sources, combined with the reduced importance of oil, restrains second-round effects by making it easier for firms to find cheaper alternatives or to absorb price changes into margins.

… competition and aggregate demand conditions

A third reason for the lack of spillover effects from the oil price rise has been the combined influence of competitive pressure, aggregate demand conditions and monetary policy. Compared with previous periods of major oil price increases, inflation is subdued worldwide and more countries have excess capacity. In addition, more competitive markets (hastened by globalisation and deregulation), consumer resistance and credible monetary policies have all been credited with helping to break down "old" inflation patterns. Under these conditions, firms that raise prices cannot expect competitors to follow



suit or a currency devaluation to restore their competitiveness. To avoid loss of market share, price increases for one input must be offset by cost cutting elsewhere or absorbed in narrower profit margins. Thus, heightened competition mutes the subsequent effects of oil price increases.

In sum, thus far the disinflationary forces of the 1990s appear to have limited the oil shock of 1999 to a change in relative prices without sparking either inflation or its ancillary, subsequent recession. Moreover, the favourable response in 1999, combined with the agreement of March 2000 to ease earlier supply quotas, provides grounds for optimism regarding second-round influences from energy costs during this and the coming year.

Labour markets, wage setting and the inflation process

Rising global competition and technological change have not only influenced firms' price setting behaviour but have also had far-reaching implications for wage formation and the interaction between wages and prices in the industrialised countries. Wage setting constitutes a key part of the inflation process because wages are simultaneously a major determinant of both nominal income and production costs. Thus, wage setting practices can either slow or reinforce the establishment of low and stable inflation.

Low inflation clarifies nominal wage signals …

One characteristic of the wage setting environment arises from the inflation regime itself. Labour markets, like other markets, work more efficiently when participants have better information. A straightforward benefit of low, stable inflation is that the background noise from inflation subsides, allowing nominal wage changes to mirror more closely real and relative wage growth, in turn making it easier for market participants to read and respond appropriately to signals. One measure of the greater clarity of nominal wage signals is the ratio of the dispersion of wage changes to the dispersion of

inflation across time and countries. A rising ratio suggests that nominal wage changes increasingly reflect real changes, rather than inflation differences. As Graph II.10 shows, the ratio of the dispersion of wage changes to inflation rates across the 1990s rose in 16 out of 20 industrial countries compared to the 1980s (upper panel). Similarly, the time path of the ratio across the same 20 countries (lower panel) shows an upward trend over the last two decades. This development allows employers and workers to expend less effort in separating real wage signals from inflationary noise and thus helps to provide more accurate guidance regarding hiring, training and career paths.

… while competition increases the need for flexibility

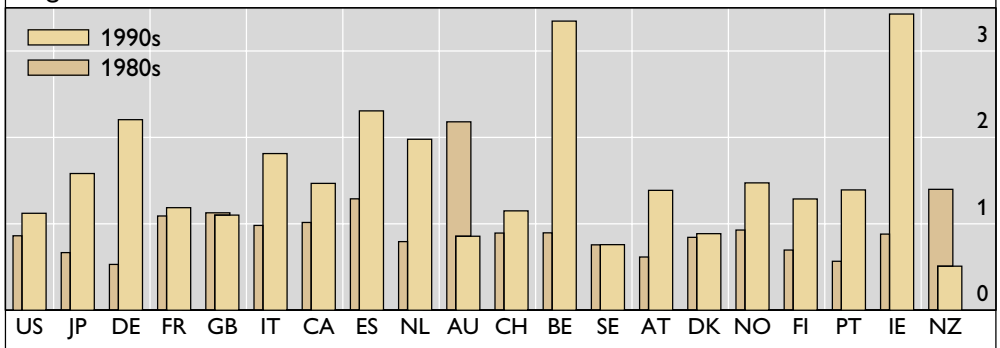
A second set of influences comes from global competition and technological improvements, both of which have heightened the pressure for innovations in the industrial world. Maintaining competitiveness requires that firms and their workers have the skills, incentives and flexibility to produce and exploit technological advances. Hence, workforce management is increasingly recognised as a key arena for competition in any industry, especially those in which trade or output is growing.

Compensation linked to performance …

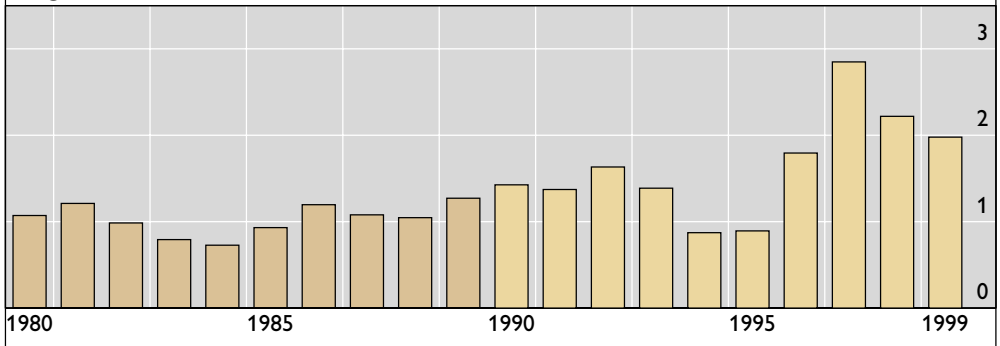
A principal aspect of workforce management is compensation policy. Competing countries and corporations already differ markedly in how they set and adjust pay, and the next decade is likely to see even more diverse

Wage signals relative to noise from inflation variation[1]

Signal-to-noise ratios in the 1980s and 1990s



Signal-to-noise ratio across the above 20 countries



Note: The country codes are explained in Graphs II.2 and II.7.

[1] Ratio of the standard deviation of average annual changes in nominal compensation per employee (whole economy) to that of average annual changes in the private consumption deflator.

Source: OECD. Graph II.10

approaches. In some countries (notably the United States and the United Kingdom), corporations offer more incentives, bonuses, profit-sharing and stock option plans to augment wages and link pay more closely to individual and corporate productivity. Comprehensive measures of the prevalence of these pay components are still difficult to obtain. However, anecdotal evidence and special surveys agree that most very senior US managers receive a large share of their compensation as stock options and that incentives and bonuses have become more common for lower-level employees. Moreover, stock options for high-level managers are increasingly observed in German, Swiss and other European corporations.

… is likely to raise productivity and the cyclical sensitivity of wages

Such developments may raise productivity and are likely to amplify the sensitivity of nominal earnings to the business cycle. While faster productivity growth and the higher real wages it brings are clearly beneficial, the impact of more cyclical earnings is ambiguous. During the next recession, downturn-related pay cuts could steepen the fall-off in consumer spending, as happened in Japan during the 1990s. Considering their high household debt, this issue could be of particular concern for the English-speaking countries. On the other hand, the same compensation cuts might also save jobs and sustain confidence by enabling employers to reduce labour costs without resorting to redundancies.

EMU, wage bargaining and inflation

European labour market institutions and monetary union pose particular challenges for each other in the coming years. Monetary union may induce changes in bargaining and wage setting structures while the evolution of labour markets could have important implications for the conduct of monetary policy.

Wage setting patterns in Europe

Wage bargaining in continental Europe typically takes place at the national level, as in Austria, Belgium, Portugal and the Nordic countries, or at the intermediate level (sectors/industries), as in France, Germany, Italy, the Netherlands and Spain. A typical European agreement establishes average or minimum wage increases and other terms of employment for large portions of the workforce whereas, until recently, plant or firm-level bargaining, as found in the United States, has been rare.

Main features of centralised …

How does the level of bargaining or the degree of coordination affect economic performance? National-level, or centralised, bargaining has often been credited with encouraging unions and employers to reach agreements which take proper account of the macroeconomic effects and social costs of the settlement ("internalising externalities"). The parties seem to understand that a wage settlement exceeding average productivity growth will be self-defeating as it will force employers either to raise prices and thus undermine real wage growth or to cut employment if competitive pressure prevents higher prices. Moreover, centralised bargains offer an opportunity for governments to affect the outcome directly, for instance through tax reductions, as seen in Ireland and Finland earlier this year. On the other hand, by imposing uniform wage hikes across jobs and industries, centralised bargaining hampers the adjustment of relative wages, which, in a changing labour market, raises the potential for skill mismatches and structural unemployment.

… decentralised and industry-level bargaining

Firm-level or decentralised bargains rarely internalise the consequences of higher wages but, equally important, the outcome is constrained by competition in the product market. Moreover, such bargains allow for greater flexibility of relative wages with respect to differences in productivity. It is often argued that the intermediate case of sectoral or industry-level bargaining produces the worst of both worlds. Because competition is less than at the firm level and the incentives to internalise the macroeconomic effects of the settlement are less than in centralised bargains, unions may exploit their market power to gain higher wage increases for their members. Although the empirical evidence is not robust, both real wages and unemployment tend to be higher in countries which are midway between centralised and decentralised bargaining models.

EMU could move wage bargaining towards …

EMU could alter these bargaining relationships in at least two ways: negotiating parties in each country are demoted to a lesser role within the euro zone and competition is heightened with a common currency and a common European market. The first factor implies a shift towards intermediate-level bargaining and a risk that negotiators will pursue wage increases more single-mindedly, knowing that the inflationary impact of any one settlement on the euro zone as a whole will be small. The second factor implies that, as in decentralised bargains, competitive forces are more likely to moderate wage demands and thus average inflation in the euro zone. Ultimately, if negotiators recognise that excessive wage demands will only lead to more unemployment and social conflict when monetary policy is credible and markets are competitive, the second factor will dominate. However, this outcome is by no means certain and greater conflict could change the institutions of coordinated bargaining.

… more centralised negotiations …

To avoid the latter, bargaining parties might attempt to centralise European wage negotiations. Such a step could be justified as employers and competition become more pan-European. However, melding the diverse national players (for instance, industrial and occupational unions, and equally distinct employer associations) into a unified process would be a complex task. Moreover, increased competition and technological change are likely to widen the variety of wage settlements appropriate for different sectors or skill groups. This would require more flexibility, whereas pan-European negotiations would move in the opposite direction.

… or, more likely, towards firm-level bargaining

A more probable outcome is that European wages will eventually be set more locally. In fact, decentralisation is already in progress in several countries. It started in the United Kingdom as early as the 1960s and then accelerated in the 1980s. During the last two decades, Denmark, Sweden and the Netherlands have decentralised most of their wage discussions, retaining negotiation only over other terms of employment at the national or sectoral level. In other countries, the transition has been more gradual, though, in Germany, agreements between firms and unions to alter plant-level wages in response to current market conditions ("wage drift") or to circumvent hampering regulations are increasingly seen.

The role of the ECB

To the extent that an important component of monetary policy for EU central banks has been to promote the incorporation of low inflation

expectations into wage settlements, a more decentralised system means a more indirect, but by no means less important, role for the ECB in the future. When wages are set locally, inflation expectations enter into nominal wage changes less uniformly and less explicitly than under central bargaining. Competitive markets largely replace the role of political pressure on the bargaining parties while the central bank plays the key role of providing information and minimising uncertainty about the intent of monetary policy. However, it will have no direct effect on the myriad of bargains as they are struck.

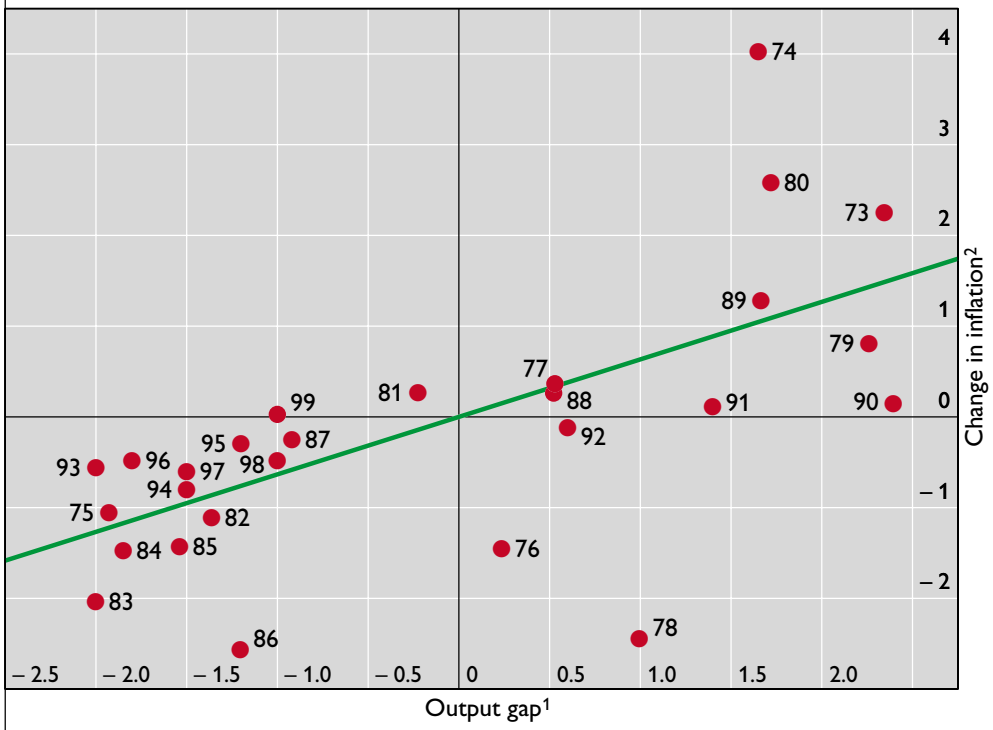
Phillips curves

Diversity and innovation in labour markets could also imply that Phillips curve relationships would vary significantly across countries or change over time. For monetary policymakers, the slope of the short-run Phillips curve provides clues about the inflationary consequences of current output trends, and shifts in observed Phillips curve relationships not only provide insight into the monetary policy consequences of important trends in an economy but also change an important parameter of the transmission mechanism.

The Phillips curve for the euro zone

The launch of EMU has aroused interest in the nature of the Phillips curve relationships for the euro zone as a whole. Is the curve steeply sloped compared with other countries? Has it shifted as monetary policy has succeeded in reducing inflation? Is there evidence of a common relationship for the euro zone countries? As a preliminary illustration, Graph II.11 shows the

A Phillips curve for the euro zone (1973–99)



Note: For an explanation of the regression line, see Table II.4.

[1] As a percentage of potential GDP. [2] In percentage points; inflation measured by average annual percentage changes in consumer prices.

Sources: OECD; national data. Graph II.11

relationship between the aggregate output gap across the euro zone countries and the change in the average rate of inflation from 1973 to 1999. As the plotted curve suggests, a 1 percentage point change in the output gap has been associated with an average change in inflation of 0.6–0.7 percentage points.

An apparent flattening of the Phillips curve …

Table II.4 compares this relationship with estimates over the same period for the United States and Japan and tests whether the slope has changed over time. When no slope changes are allowed, the results are remarkably similar, as seen in the first column of the table. It is also notable that, for all three regions, the slopes decline to 0.2–0.3 for the 1990s (see also Chapter IV). In other words, inflation now seems to be less sensitive to output than during the 1970s and 1980s. While this result also holds for Japan, it appears that, perhaps because of uncertainties regarding the actual size of the output gap or changes in firms' pricing behaviour towards maintaining profit margins, the Phillips curve for Japan is better captured when changes in inflation are related to lagged changes in the output gap rather than to its *level*. However, in both versions, the sensitivity of inflation to output changes has declined appreciably.

… may reflect nominal rigidities as well as measurement errors

As discussed in last year's Annual Report (Chapter II, pp 28–30), there may be several reasons for the flattening of the Phillips curves in the 1990s, including lower inflation, more credible monetary policies and downward nominal wage or price rigidities. For example, if wages are rigid downwards and inflation is low some wages are constrained to be higher than they would be otherwise so that lower demand will have a smaller disinflationary impact. Other factors could also produce changes in the slope. Thus an undetected decline in a country's human and physical capital stock (due to restructuring or technological change), as may have happened in Japan, would overstate the output gap and bias the slope towards zero.

Common Phillips curve for the euro zone countries

The third question of whether a common relationship exists for the euro zone rests on the assumption that the constituent countries are similar enough to share a common Phillips curve relationship. If not (and there was no progress toward such convergence), a common monetary policy could lead to persistent, potentially destabilising disparities in economic activity. Fortunately, while countries do show somewhat different individual relationships, imposing

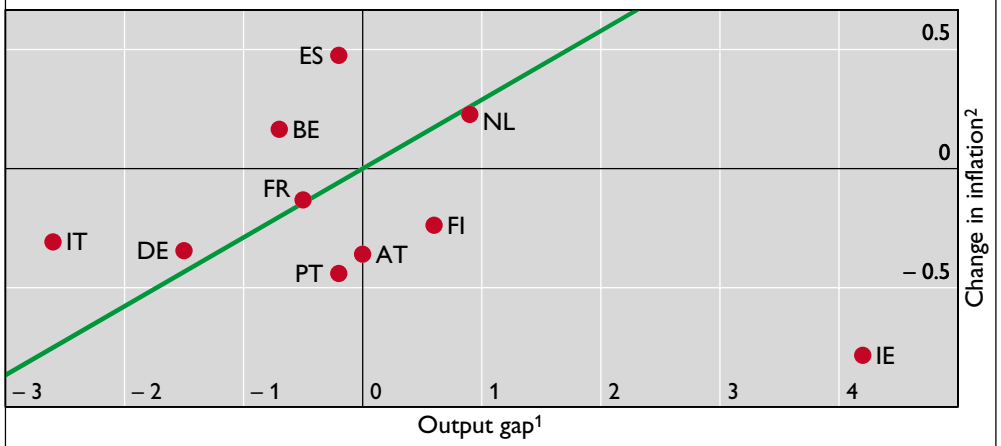
Phillips curve estimates[1]

	1973–99	R^2	DW	1973–88	1989–99	R^2	DW
Euro zone	0.63	0.41	1.59	0.89	0.30	0.48	1.75
United States	0.67	0.38	1.93	0.74	0.32	0.38	2.04
Japan	0.69	0.11	2.29	1.06	0.25	0.12	2.47
Japan[2]	1.37	0.48	1.70	2.10	0.35	0.68	1.39

[1] For the full period 1973–99, the Phillips curve model was estimated as $\Delta\pi = \beta Gap + \varepsilon$, where π denotes the rate of inflation (CPI), *Gap* the output gap and β the slope of the curve as shown in the first column; ε refers to unexplained changes in inflation while R^2 and DW denote the coefficient of determination and the degree of autocorrelation respectively. The estimates in the second part of the table were obtained from $\Delta\pi = \beta Gap + \delta Dum.Gap + \varepsilon$, where *Dum* is a dummy variable, taking the value of 1 after 1988 and 0 until then. The slope for the period 1973–88 is β while $\delta + \beta$ is the slope for the period 1989–99. All slope coefficients were found to be significant. [2] The first equation for Japan is estimated as $\Delta\pi = \beta\Delta Gap_{-1} + \varepsilon$ and the second as $\Delta\pi = \beta\Delta Gap_{-1} + \delta Dum.\Delta Gap_{-1} + \varepsilon$.

Sources: OECD; national data. Table II.4

Euro zone countries in 1999 and their joint Phillips curve



Note: The regression line refers to 1989–99; for an explanation, see Table II.4.

[1] As a percentage of potential GDP. [2] In percentage points; inflation measured by average annual percentage changes in consumer prices.

Sources: OECD; national data. Graph II.12

a common relationship does not worsen the ability of the Phillips curve to predict inflation on the basis of the output gap. Consequently, the placement of the euro zone countries around the 1990s euro zone curve (Graph II.12) mainly reflects cyclical divergences rather than differences in the underlying relationships. Indeed, with the exception of Ireland, the fit around the euro zone curve is reasonably good.

In sum, the Phillips curve relationship seems to be roughly similar across the euro zone countries and has a slope fairly close to that of the United States, whereas an alternative model better explains the relationship for Japan. For all three regions, the Phillips curve is markedly flatter in the 1990s, implying that a given change in the output gap now appears to be associated with a smaller change in inflation. This could ease central banks' ability to maintain the current rate of inflation, but complicate the task of restoring a rate that deviates from a desired path.

Developments in world trade and external balances

World trade and prices

World trade grows only moderately …

The expansion of world trade (in volumes) fell sharply in 1998, as output growth in some of the most open and actively trading emerging market economies turned negative. Despite the recovery last year in both global growth and economic activity in the crisis-hit Asian countries, world trade increased only moderately, mainly because import demand in the emerging market economies (and thus exports from the advanced countries) remained depressed by low domestic demand growth (Table II.5).

… while price trends differ

World trade prices (measured in SDRs) fell again last year, but price trends differed sharply across different groups of goods and commodities. The prices of manufactures declined somewhat, following a modest rise in 1998, as

Developments in world trade and prices				
	1991–96	1997	1998	1999
	annual percentage changes			
Trade volumes	6.5	10.0	3.8	4.9
Trade prices (in SDRs)	–	–0.8	– 4.2	– 1.6
Manufactures	–	–2.7	0.2	– 1.7
Oil	–3.1	–0.2	–31.2	37.6
Food	3.0	–6.0	–11.2	–15.9
Beverages	2.6	39.9	–14.0	–21.9
Industrial raw materials	–2.2	3.9	–13.1	– 3.0

Sources: HWWA-Institut für Wirtschaftsforschung; IMF. Table II.5

competition in global goods markets remained intense and pockets of excess supply after the Asian crisis could still be observed. Prices for food products fell sharply for the second year, whereas prices of industrial raw materials (notably metals), which tend to be more sensitive to developments in global industrial output, started to recover in the course of last year, though not fast enough to prevent a small year-to-year decline. Oil prices, however, displayed the most spectacular recovery. Due mainly to an effective production ceiling introduced in March last year, prices rose by nearly 40% between 1998 and 1999 and more than tripled when measured from the end-1998 trough to the latest peak. However, following the agreement in March this year to raise production ceilings, the oil price declined by almost one third.

Current account balances

Growing statistical discrepancy

As Table II.6 shows, the global deficit or statistical discrepancy has increased significantly since the outbreak of the Asian crisis. The aggregate deterioration of all the countries that have experienced a weaker current account since 1997 is about $320 billion, of which the United States accounts for around 60% and other industrial countries for one third. However, the cumulative improvements amount to only $144 billion, the bulk of which occurred in Asia. Most of the deterioration can be attributed to faster import growth, but import

Changes in current account balances, 1997–99[1]			
	Deteriorations		Improvements
United States	–195.4	Emerging Asia	85.3
Euro zone	– 61.0	Japan	15.2
United Kingdom	– 31.5	Canada	7.3
Australia	– 9.6	Switzerland	3.2
Other industrial countries	– 3.9	Other industrial countries	2.4
Middle East	– 9.6	Transition economies	20.8
Africa	– 9.4	Latin America	9.9
Total	–320.4	Total	144.1

[1] In billions of US dollars.

Sources: IMF; national data. Table II.6

developments in the countries and regions in the left-hand side of the table do not seem out of line with historical relationships between imports and domestic demand growth. The separation of volume and price changes is complicated by the large exchange rate movements during this period, which also blur the distinction between export volumes and prices. All in all, the table suggests export growth, and hence overall output growth, may have been higher than so far assumed. The precise location of these additional growth and payments effects is, however, far more difficult to determine.

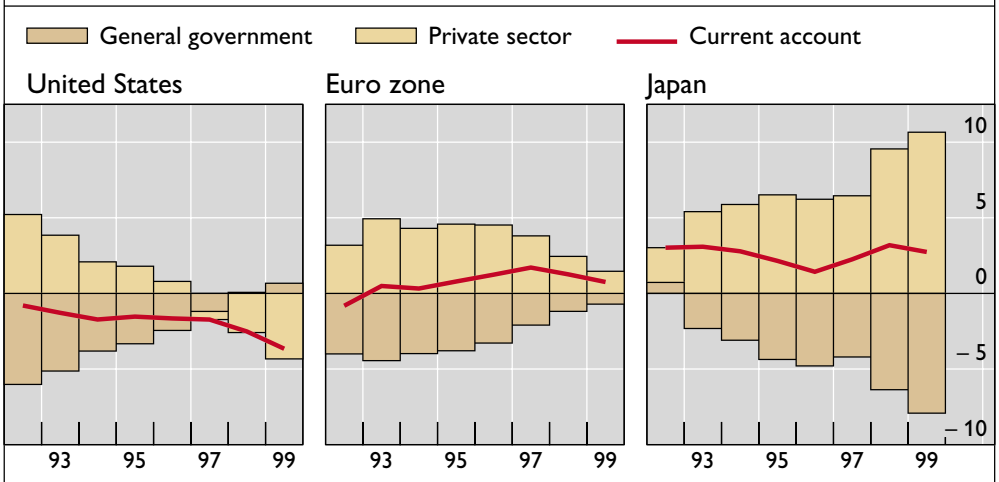
Sustainability of the US current account deficit …

Leaving aside the issue of the statistical discrepancy, financial imbalances in the United States are not confined to the domestic economy, as discussed above, but are, perhaps, most manifest in a widening external imbalance and a growing concern about the longer-run sustainability of the current level of the US dollar (Graph II.13). However, the question of whether and when the US external deficit will be judged unsustainable by the markets cannot be answered without also looking at net long-term capital flows and the forces that are determining those flows. For the last two to three years, the current account balances for the three major currency areas have been swamped by net FDI and portfolio equity flows (Table II.7). For instance, last year, net FDI inflows into the United States corresponded to approximately 40% of the current deficit and net equity inflows more than covered the rest. It is also worth noting that between 1991 and 1997 US companies invested more abroad than foreign companies invested in the United States. However, this trend reversed in 1998. Net equity flows had changed sign as early as 1996, though partly because US investors became net sellers of foreign equities. All in all, the acceleration of net FDI and portfolio inflows into the United States over the last two years suggests that foreign investors' expected returns on investment in the United States have risen in step with perceptions of productivity and potential output growth and that this change has ensured the financing required to support the sharp widening of the current account imbalance.

… dependent on long-term capital inflows

Development in net sectoral financial balances[1]

As a percentage of GDP



[1] Defined as saving less investment.

Source: OECD.

Graph II.13

The euro zone, in a sense, presents the mirror image of the United States. The current account was in surplus last year, but net long-term capital outflows were four times the size of the current surplus, causing a highly negative overall balance. In the case of Japan, repatriation of funds invested abroad, allied with net foreign purchases of Japanese equities and a tripling of FDI inflows compared with 1998 (induced by deregulation and corporate restructuring), reduced net capital outflows to only one third of the current account surplus.

Features of capital flows in the euro zone and Japan …

Turning to other individual countries, all of the larger euro zone countries recorded net capital outflows last year, with Germany having the largest overall deficit while the Benelux countries recorded a surplus. Switzerland, by contrast, saw a shift from a surplus to a deficit on the overall balance. The United Kingdom also experienced a major shift in net capital flows and the overall balance turned uncharacteristically positive. Among the other English-speaking countries, current account and capital flow balances diverged quite markedly last year, in contrast to 1998, when all three had recorded relatively high current account deficits and a weakening of net capital flows. Helped by exports to the United States and higher commodity prices, Canada virtually eliminated its current account deficit while net outflows declined. In contrast, Australia and New Zealand, being more exposed to the relatively slow recovery of import demand in Asia and having a larger share of agricultural products in their commodity exports, saw a further widening of their trade and current account deficits. Australia, however, benefited from larger net inflows, which are likely to have mitigated currency pressure, whereas New Zealand experienced a further decline in inflows.

… and in a number of other countries

Overall, it appears that over the past decade net FDI and equity flows driven by changing perceptions of returns and long-term growth rates have

Various forces driving capital flows

Balance of payments in the industrial countries

	Current account			Net FDI and portfolio flows			Overall balance[1]		
	1997	1998	1999	1997	1998	1999	1997	1998	1999
	in billions of US dollars								
United States	–143.5	–220.6	–338.9	277.6	238.5	359.0	134.1	17.9	20.1
Japan	94.3	120.6	109.5	3.6	– 62.9	– 35.8	97.9	57.7	73.7
Euro zone	106.8	67.3	45.8	–80.9	–214.2	–180.4	25.9	–146.9	–134.6
Germany	*– 3.1*	*– 4.6*	*– 20.2*	*–37.9*	*– 75.9*	*– 59.4*	*–41.0*	*– 80.5*	*– 79.6*
France	*38.8*	*40.6*	*37.4*	*–37.5*	*– 64.2*	*– 84.5*	*1.3*	*– 23.6*	*– 47.1*
Italy	*32.2*	*21.7*	*9.8*	*4.8*	*– 6.9*	*– 13.0*	*37.0*	*14.8*	*– 3.2*
Benelux countries	*41.4*	*37.7*	*34.6*	*–40.8*	*– 88.0*	*– 27.9*	*0.6*	*– 50.3*	*6.7*
United Kingdom	10.8	– 1.1	– 20.7	–67.2	– 84.2	50.0	–56.4	– 85.3	29.3
Switzerland	25.9	23.8	29.2	–24.9	– 14.0	– 55.4	1.0	9.8	– 26.2
Australia	– 12.7	– 17.9	– 22.3	16.2	6.6	12.2	3.5	– 11.3	– 10.1
Canada	– 10.3	– 11.1	– 2.9	– 6.9	– 8.1	– 5.6	–17.2	– 19.2	– 8.5
New Zealand	– 4.3	– 2.6	– 4.3	5.4	3.0	0.1	1.1	0.4	– 4.2
Industrial countries	80.2	– 41.1	–193.2	103.3	–163.2	163.2	183.5	–204.3	– 30.0

[1] Calculated as the sum of the first two sets of columns.

Sources: IMF; national data. Table II.7

increased in importance compared with current account imbalances. This is clearly evident for the United States, where the correlation between equity prices and net capital inflows is highly positive, as is the correlation between the dollar and equity prices (see Chapter V). It is also evident in Japan, where announcements of corporate restructuring have led to a marked rise in inflows and equity prices. However, relative equity price movements fail to explain outflows of longer-term capital from Europe as European equity prices rose at about the same rate as Japanese prices and more than twice as fast as US prices.

Sustainability of US inflows

Moreover, while most of these trends are unambiguous, it is less certain that they are sustainable. On the one hand, to the extent that perceptions of future returns and thus capital inflows are mainly cyclical, a slowdown in the US economy is likely to heighten concerns about the current account deficit and, perhaps, lower net inflows. On the other hand, if capital flows are primarily driven by structural changes, such as IT-induced increases in long-term growth or corporate restructuring, and demand pressures in the host countries remain moderate, further widening of current imbalances might have only marginal effects on the size of longer-term capital flows.