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70th Annual Report

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Conventions used in this Report

p	preliminary
pe	partly estimated
lhs, rhs	left-hand scale, right-hand scale
billion	thousand million
...	not available
.	not applicable
–	nil or negligible
\$	US dollar unless specified otherwise

Differences in totals are due to rounding.

70th Annual Report

*submitted to the Annual General Meeting
of the Bank for International Settlements
held in Basel on 5 June 2000*

Ladies and Gentlemen,

It is my pleasure to submit to you the 70th Annual Report of the Bank for International Settlements for the financial year which began on 1 April 1999 and ended on 31 March 2000.

The net profit for the year amounted to 307,824,257 gold francs, compared with 303,618,800 gold francs for the preceding year. Details of the results for the financial year 1999/2000 may be found on page 171 of this Report under "Net profits and their distribution".

The Board of Directors recommends that, in application of Article 51 of the Bank's Statutes, the present General Meeting should apply the sum of 54,658,243 gold francs in payment of a dividend of 340 Swiss francs per share.

The Board further recommends that 50,633,203 gold francs be transferred to the general reserve fund, 3,000,000 gold francs to the special dividend reserve fund and the remainder – amounting to 199,532,811 gold francs – to the free reserve fund.

If these proposals are approved, the Bank's dividend for the financial year 1999/2000 will be payable to shareholders on 1 July 2000.

Basel, 17 May 2000

ANDREW CROCKETT
General Manager

I. Introduction: old problems in a new era?

A decade of tumultuous economic developments ended with a year full of surprises, the majority of them welcome. Inflation stayed very low in most industrial and emerging market countries, while economic growth remained high in the United States, picked up in Europe and began to recover later in the year in Latin America. The turnaround in the fortunes of several crisis-hit East Asian countries was nothing short of remarkable, and China and India continued to expand at high rates. Even in Japan there were signs that the worst might be over. In financial markets, stock prices reached new peaks, generally led by companies in the high-technology sector. Issues of corporate bonds also set new records, with issuance in the newly (and smoothly) created euro developing particularly rapidly. All of these events were judged by most observers to bode well for prospects early in the new millennium, with the absence of any serious computer problems at the moment of transition being taken as another good omen.

The prevailing spirit of optimism was materially supported by recognition that the last decade had established a number of desirable trends. Technological advances were stunning and measured productivity in the United States increasingly seemed to reflect their influence. Furthermore, assuming adequate flexibility in labour, capital and product markets, there was no obvious reason why these transferable technologies could not bear fruit elsewhere. Indeed, this logic may have underpinned the infatuation with “new era” stocks on a global level. In addition, deregulation and privatisation proceeded apace, promising not only a more efficient allocation of resources, but also (through financial markets) new means to discipline irresponsible governments. Whatever the reason, the commitment to sound monetary and fiscal policies was widespread in both industrial and emerging market economies. Finally, it had become increasingly accepted that well functioning markets require a comprehensive infrastructure of legal, institutional and governance systems.

Ironically, as history has repeatedly shown, even well founded optimism has the insidious tendency to transform itself into excess. The probability of this happening seemed to increase during the period under review. The near universal underestimation of the strength of the expansion in the English-speaking countries (see Chapter II) and of the recovery in East Asia (see Chapter III) suggests that the underlying causes of this good performance remained less than completely understood. However, one disconcerting observation was that the various economic and financial forces at work seemed unusually interrelated. For example, in the United States rising stock prices (especially in the high-tech sector) added to personal wealth and facilitated business financing, contributing in turn to stronger consumer spending and

investment respectively. Higher demand and capital deepening raised measured productivity, which enhanced optimism about future profits, further supported stock prices, and so on. Clearly, mutually reinforcing processes of this sort can exaggerate both financial market and real fluctuations, particularly if accentuated by supportive exchange rate shifts.

A further reason for tempering optimism is that many of the imbalances and structural deficiencies which had characterised the global economy in the previous few years came no closer to being redressed. Indeed, in some respects they worsened. Foremost amongst these imbalances was the unprecedented gap between the record high rate of private saving in Japan and the record low rate in the United States. While shifts in fiscal positions moderated the impact of these extremes, albeit at the cost of a steep deterioration in the public finances of Japan, large current account imbalances remained, carrying risks of exchange rate consequences. As for reducing structural impediments to sustained growth, progress continued to be made in both Japan and continental Europe, although rigid product and labour markets remained a source of concern. In all regions, but perhaps particularly in East Asia, there was the fear that the political support for restructuring efforts would dwindle owing to the strength of the economic recovery. Thus, again, albeit in a different way, short-term optimism tended to undermine the very foundations necessary for longer-term optimism.

While recognising the prevailing uncertainty, financial market participants and monetary authorities in the industrial countries concluded that interest rates ought to be higher. Long rates on government bonds rose throughout 1999, although prices later rallied temporarily, and policy rates were also raised as many central banks concluded that action was needed to confront the risk of higher inflation. Nevertheless, at the time of writing, higher rates had provoked neither a clear reduction in the pace of economic growth nor any sharp break in important financial markets. In particular, while equity prices became much more volatile and technology stocks fell substantially, equities suffered no generalised retreat.

Inflation, interest rates and debt levels

In the prevailing circumstances, it seemed difficult to imagine that only a year previously some commentators had been worried about the prospect of global recession and deflation. The unanticipated evidence of stronger economic growth almost everywhere rightly refocused the attention of both markets and policymakers on inflationary pressures. Nevertheless, the fact that these pressures remained relatively muted confirmed the powerful effect of such underlying disinflationary forces as technological change, deregulation, excess capacity and fiscal restraint in many countries. Moreover, the possible interaction of higher interest rates, increased debt levels and widening imbalances heightened concerns about unpredictable, and possibly disinflationary, consequences at some point in the future.

The remarkable, uninterrupted and non-inflationary economic expansion in the United States continued last year, underpinned by both supply and

demand side components. On the supply side, unexpected wage moderation and capital deepening actually reduced unit labour costs as the unemployment rate fell below levels that historically would have triggered inflation. On the demand side, household consumption rose strongly, spurred by higher stock prices, expanding employment opportunities and rising confidence in a “new economy” based on high technology. Investment also rose strongly, with the high-tech sector again being particularly favoured. Moreover, many of these features were shared by the other major English-speaking countries, with the important exception that measured productivity gains elsewhere were generally less evident.

The decision of the US Federal Reserve to begin cautiously raising policy rates in mid-1999 (see Chapter IV) reflected a worry that demand was likely to continue to outstrip supply, even supposing the advent of a “new economy”. Stepped-up government expenditures, responding to pre-election pressures and projections of massive surpluses, may have added to the arguments for restraint. Sharply higher oil prices, after a long period of decline, also raised concerns, even though the role of oil in the industrial countries has been much reduced. By spring 1999, these worries were being aggravated by more overt upward pressure on both prices and employment costs. The balance sheets of both households and businesses in the United States also suggested the need for some moderation in private sector behaviour. The household saving rate fell again during the year, accompanied by a further increase in indebtedness. Margin lending for the purchase of equities rose sharply, albeit to still low levels, and other forms of household borrowing also continued to grow rapidly. The sustained high level of equity prices may well have supported these propensities, given that over 50% of US households now own stocks. Corporate debt also expanded at a fast pace, reflecting strong investment growth and continuing share buybacks.

In sharp contrast, net private sector saving in Japan rose to a record high. Since the resultant dampening of demand was only partially offset by an increase in government dissaving, overall growth in the Japanese economy was very modest and deflation was barely avoided. Cautious behaviour on the part of both corporations and households played a role. Faced with the continuing burden of excess capacity inherited from the 1980s, firms cut investment further in spite of their growing expenditures in the high-tech area. With profits recovering in the wake of internal restructuring, priority was given to repaying debt.

As for the household saving rate, the upward trend that had begun in 1997 resumed after a slight dip in the early part of 1999. Households’ anxiety stemmed from a number of sources. Corporate restructuring created worries about employment and hurt confidence. Perhaps of longer-term significance, growing government debt along with a rapidly ageing population raised concerns about future tax burdens and the viability of pension commitments. The Bank of Japan pledged to maintain its zero interest rate policy until a self-sustaining recovery was under way, and this helped support confidence and keep bond yields at low levels. Nevertheless, a threatened downgrading by Moody’s, continued liberalisation in the Japanese financial system which will

offer savers new possibilities, and ongoing government deficits aroused concern that bond yields might rise before robust growth resumed.

The divergence in the saving behaviour of the US and Japanese economies was mirrored in the record US current account deficit and the persistently large Japanese current account surplus. Indeed, the US deficit rose to a record high as a proportion of GDP. In contrast, the euro area as a whole maintained a small, if declining, current account surplus, consistent with its intermediate cyclical position. For most of the period, the major exchange rates seemed more influenced by cyclical factors than by these external balance sheet considerations. Thus, a depreciating euro and a still strong dollar could continue to divert demand pressures to countries with relatively more excess capacity.

Starting in the second half of 1999, however, the unexpected weakness of the euro (even as European growth increased) and the very sharp appreciation of the yen (even as Japan fell into technical recession) implied that other factors were also at work (see Chapter V). In the former case, market commentary focused on the allegedly slow pace of structural reform in Europe and supposedly contradictory comments from policymakers. In the latter case, it was contended that the external surplus was at last beginning to have an effect, and that structural reforms would give a spur to profits. What is indisputable is that there were large recorded outflows of longer-term capital from Europe into both the United States and Japan, primarily into high-tech sectors promising attractive rates of return. In a sense, the newly created euro may have proved too successful. Larger and more liquid markets, along with relatively low interest rates, encouraged the issue of euro-denominated bonds whose proceeds could then be exchanged and used to finance investment elsewhere.

Whatever the cause of the shift in the yen/euro exchange rate, it was not deemed unequivocally helpful by policymakers in either Japan or the euro area. Conscious of the persistent fragility of the Japanese economy and the fact that policy rates could be lowered no further, the Bank of Japan intervened repeatedly to slow the yen's rise. The European Central Bank, given its focus on domestic price stability, was discomforted by the inflationary effects of depreciation at a time when commodity prices were also rising and wage demands in some countries looked excessive. As a result, the ECB first raised policy rates in late 1999, and this policy tightening subsequently continued.

The trend towards higher bond rates in the industrial countries (see Chapter VI) had no immediate effects on most emerging market economies. Inflows of foreign capital continued at about the same pace as in 1998 (ie still well below pre-crisis levels), with foreign direct investment being the primary vehicle and bank loans declining further. While the strength of the recovery in many Asian countries was unexpected, the dynamic process was rather traditional, beginning with expansionary macro policies, higher exports and inventory swings. In this context, the strong appreciation of the yen played in these countries' favour, as did the continuing heavy purchases of IT products by customers in both Japan and the United States. The fact that most Asian countries were growing fast, while still reporting large current account

surpluses, underpinned the currencies in the region and allowed central banks to keep rates low. In most countries, inflation remained subdued, which was a further positive factor.

What was more surprising was that higher interest rates in industrial countries had so little impact in Latin America and eastern Europe. Many countries in these regions had high levels of external debt and large current account deficits that had persisted through the previous deep recession. Yet the downward pressure felt by most currencies was not great and proved insufficient to derail a continuing modest upturn in economic growth. As in Africa and the Middle East, many countries in Latin America also benefited from higher commodity prices, although the effects varied greatly given diverse movements in the prices of oil, metals and other products. What particularly seemed to aid confidence was the new emphasis on fiscal restraint, even in the midst of recession. Markets viewed this as a regime shift which, in association with privatisation and other structural reforms, would provide a sound basis for sustainable growth. Whether such optimistic views prove correct will only be revealed in the fullness of time.

Structural and architectural achievements

Macroeconomic policies and demand-driven events work within a framework which includes the supply side of the economy, its financial structure and the host of international agreements and conventions comprising the “international financial architecture”. While changes in these areas tend to be undramatic and evolutionary, it is here that the foundations of lasting prosperity must be laid.

Significant supply side reforms took place around the world against the backdrop of the apparent upward shift in trend productivity in the United States. This led to a large number of involuntary job losses, yet the unemployment rate fell continuously nevertheless. With this US experience in mind, many other countries began to adopt the more flexible practices characteristic of US labour and product markets. With respect to the former, some progress was made in Europe towards the adoption of plant-level wage bargaining, and preliminary evidence began to emerge that the natural rate of unemployment might be moving down as well. In France, the introduction of the 35-hour working week was rightly seen as a retrograde step, but significant efforts were subsequently made to use it as a catalyst for reforming outdated working practices. In Japan, the lifetime employment policy in large firms showed signs of breaking down, reflecting corporate cutbacks affecting the old as well as cultural changes affecting the young.

As for structural advances in product markets, many public utilities and telecommunications companies were privatised in Europe, and in a number of emerging market countries, often resulting in sharply lower prices for services. In spite of the enthusiasm of financial markets, progress in Japan was less obvious, although the gradual rationalisation of the distribution system continued, again putting downward pressure on prices. Moreover, there were growing indications that keiretsu links were breaking down, and that ties

with foreign firms were becoming more acceptable. In Korea, corporate restructuring seemed well under way, with strong support from the government. Although many of the chaebol shifted their focus from size to profits, the commitment to sell non-core businesses nevertheless remained largely untested. Finally, there was a remarkable upsurge of interest in the business uses of internet technology, both in Europe and in many emerging markets. Given the existing overhang of anti-competitive practices in many countries, this could eventually lead to even greater cost reductions than in the United States.

Structural change also accelerated in the financial sector, with credit provided through markets continuing to gain at the expense of traditional bank lending. International issues of bonds and notes soared, as did cross-border trading in equities, even as international bank lending continued to fall in the wake of the recent crises. Competitive pressures increased everywhere, and so too did the search for shareholder value. In this harsher environment, two important trends stood out. First, there was a sharp step-up in merger and acquisition activity among financial firms in all parts of the world. While these were largely domestic events in most industrial countries, the penetration of emerging markets by financial firms from industrial countries increased substantially. Second, in the context of further increases in the resources controlled by the professional asset management industry, there seemed to be a shift towards funds which had successfully specialised in “momentum” strategies.

A unique structural development at the beginning of 1999 was the successful introduction of the euro as a replacement for its legacy currencies (see Chapter VII). Almost immediately, money and interbank markets in the euro area began to function in a wholly integrated way, and issues of corporate securities denominated in euros rose to multiples of those characteristic of the legacy currencies. Lower-rated credits benefited particularly from this trend, as did markets for mortgage-backed securities. Somewhat in contrast, equity and government debt markets failed to consolidate. While due in part to the failure to date to construct a common trading and clearing infrastructure, national conventions continued to be a significant impediment to full unification. In this new environment, banks faced intensified competitive pressures from markets, each other and a whole host of foreign and internet-based challengers. Many banks consequently recast their growth strategies while making plans for internal rationalisation as well as external consolidation.

In many countries, earlier financial crises had led to the need for further bank restructuring. As a result, in much of Latin America, but especially Brazil, the banking sector had by last year become significantly stronger. However, and in spite of a sizeable increase in foreign penetration, Mexico was an apparent exception as legal and judicial shortcomings continued to restrain creditors' rights to realise collateral. In Asia, progress was quite appreciable in some countries, in particular Korea and Malaysia, but slower in others. To some extent, this was because the task of corporate restructuring needed to be tackled at the same time as bank restructuring, and this proved a considerable complication. As for the restructuring of banks in China, it remains difficult

to assess recent developments. In Japan, the fact that the Japanese banking premium almost disappeared seemed to indicate market participants' confidence in the underlying solvency of the system, as a result of ongoing mergers and the government's injection of equity. Credit growth, however, still failed to recover.

In the light of the succession of international financial crises since 1994, public sector authorities in industrial countries as well as emerging markets directed increased attention to measures to prevent crises, to manage them better and to eventually resolve them. While significant progress was made in some areas, many participants in the process also noted the proliferation of working groups and the apparent lack of coherence amongst them. To judge by the results of its first three meetings, the newly established Financial Stability Forum seems likely to provide an effective means for dealing with overlaps and gaps in this area, as well as giving useful guidance on how recommendations might be implemented in practice. This last task constitutes a huge and critical challenge for the international community.

In the realm of crisis prevention, groups of national experts continued to meet, many of them at the BIS, where they focused increasingly on drawing up or revising codes of good practice in financial behaviour. The work undertaken by all the Basel-based committees is described in detail in the chapter on the Activities of the Bank. Going beyond statements of principle, particular progress was made in implementing the Core Principles for Effective Banking Supervision, through the cooperative efforts of the Basel Committee on Banking Supervision, and its Core Principles Liaison Group. The IMF and World Bank, which began an ambitious pilot programme for assessing financial stability in the context of Article IV consultations, also made key contributions. With regard to crisis management, the debate focused on the trade-off between the provision of liquidity to support sovereigns in difficulty, on the one hand, and the problem of moral hazard on the other. Discussions on how a framework of rules might be blended with the exercise of discretion, and the implications for the terms and conditions of IMF lending, served to underline continuing differences of view about appropriate procedures.

Some limited progress was also recorded in the area of crisis resolution. With the encouragement of the IMF, a number of smaller countries negotiated both a restructuring and a writedown of the value of their international bonds, without any obvious spillover effects on the cost of such credit to other emerging market borrowers. Moreover, recognising that bondholders are increasingly important creditors, Canada, Germany and the United Kingdom took various steps to encourage the use of collective action clauses in new bond contracts. Finally, further hesitant measures were taken to ease the debt burden of a number of the world's poorest countries, some of which had also suffered from natural disasters. However, the issue of debt relief arouses powerful emotions, which has made the international process of forging agreement painfully slow. In this area, as in others, further progress is needed, perhaps along the lines suggested in the Conclusion of this Annual Report.

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.

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.

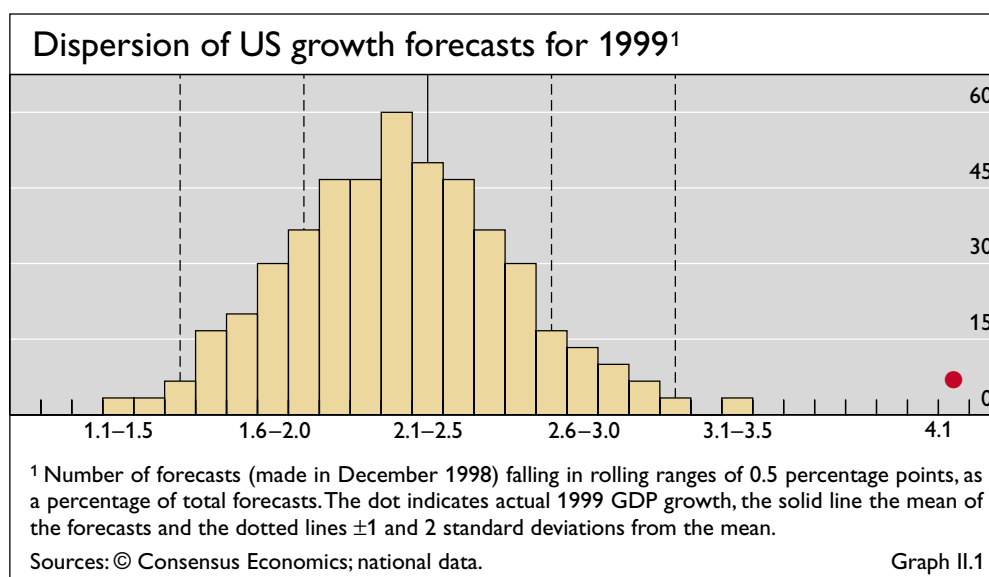
Widening external and internal imbalances

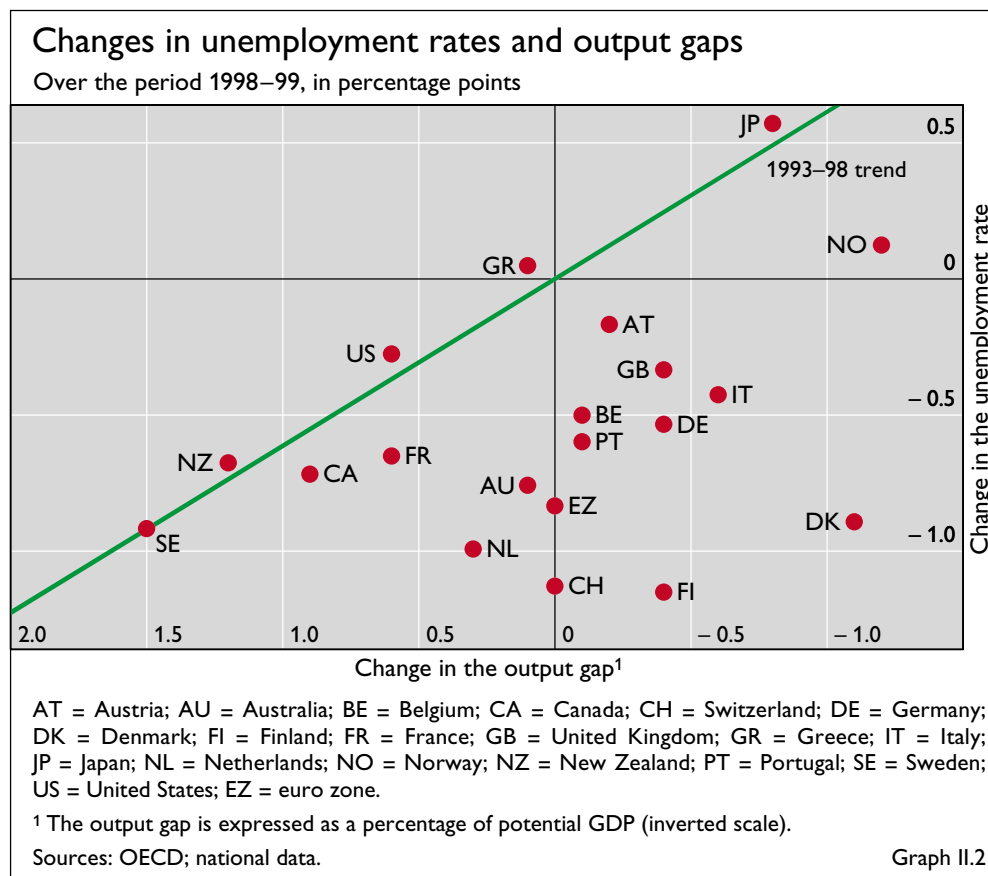
Parallel to the improvement in growth prospects, long-term real interest rates rose last year, in some cases to levels that exceeded historical averages. However, because the increases in real rates were, in part, an adjustment to perceptions of higher potential rates of growth and thus an endogenous 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.

Higher real interest rates with little restraining effect

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

Unemployment responds to wage restraint and labour market measures





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 8¹/₄%, 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 4¹/₄% 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 3¹/₄% during the decade (Graph II.3).

... and higher
productivity
growth

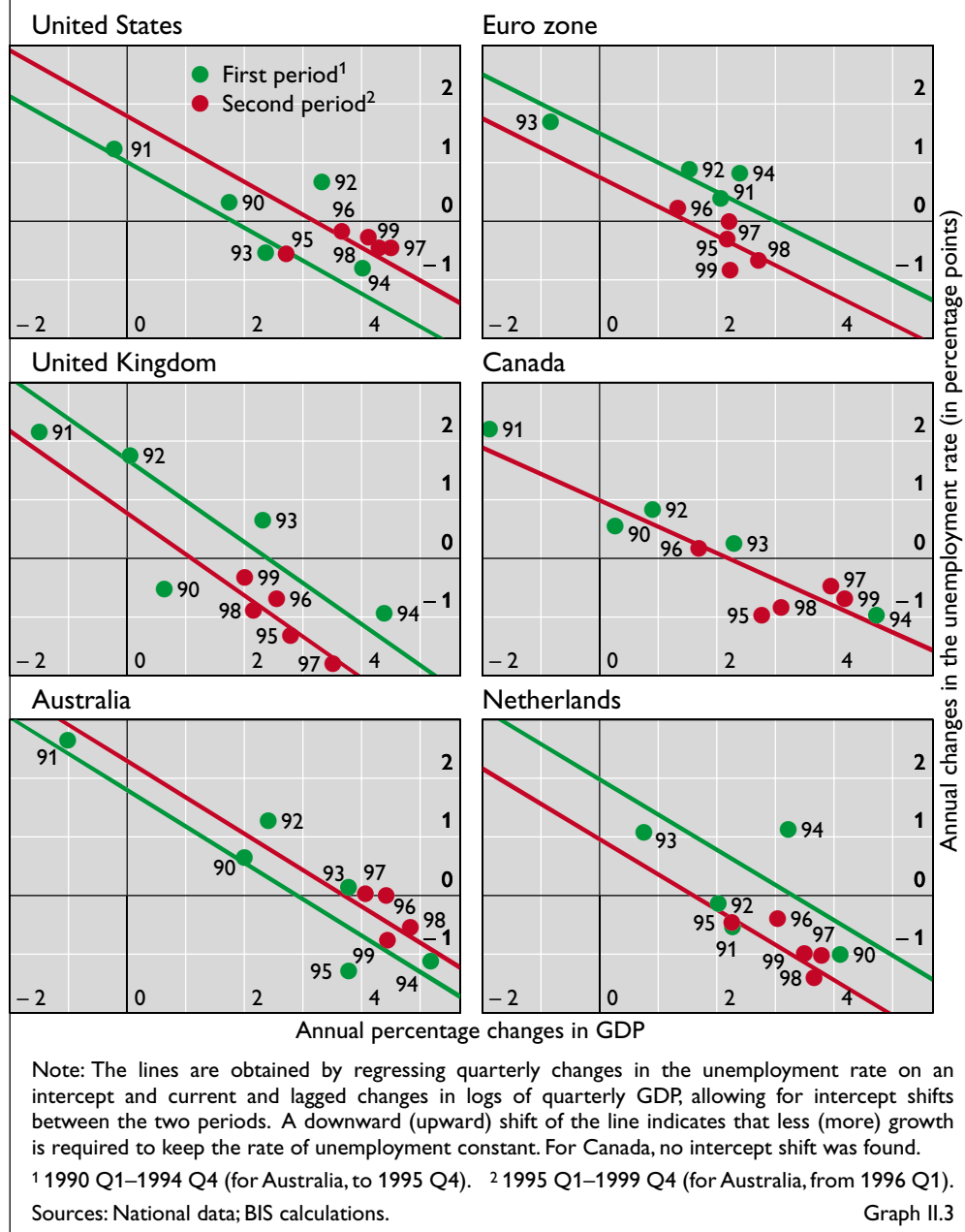
The contribution of the government has differed from that in past cycles. First, the growth of government spending has been smaller than in the 1960s, when it was a major cause of overheating. Second, unexpected revenue gains

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
<i>Standard deviation</i> 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
<i>Standard deviation</i> 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



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 ...

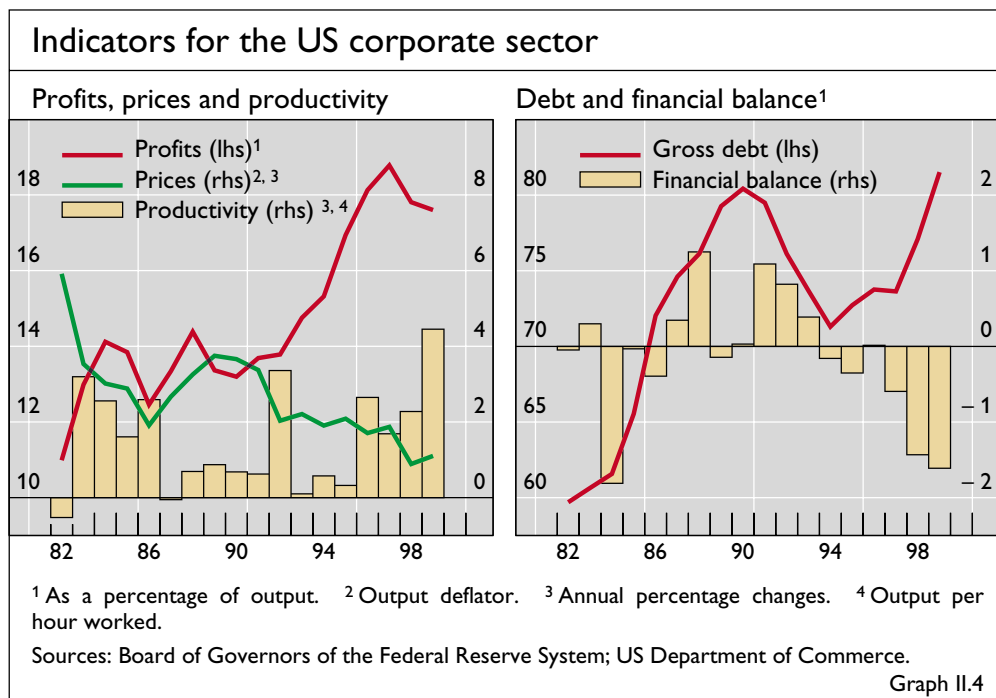
Despite their welcome supply side effects, the new technologies have also induced imbalances and might eventually contribute to a more volatile business cycle. First, the high-tech sectors, which have accounted for a rising share of US output, have a history of volatile cycles and high sensitivity to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

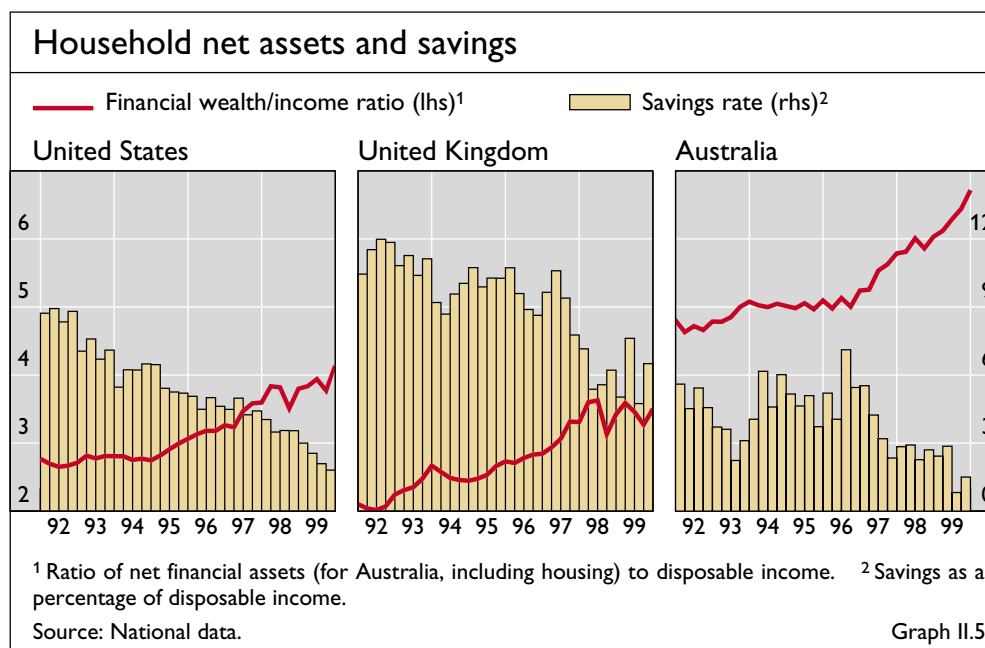
and pressures to cut costs have encouraged firms to reduce inventories and other contingency reserves substantially. While new technologies have also improved firms' capacity to manage inventories effectively, their vulnerability to supply and demand shocks may have increased. Consequently, the lower 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 3 1/4%, 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





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.

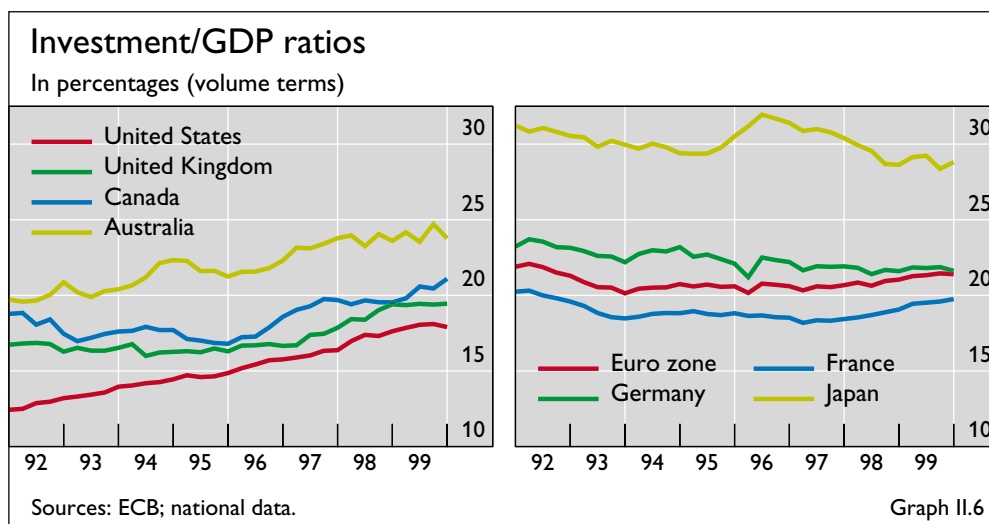
Household saving in the three countries has also fallen to levels which are not only low by historical standards but also significantly below those of other industrial countries apart from the United States. A principal reason seems to have been the aforementioned rise in net financial wealth which, 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%.

... including low saving ...

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.

... while productivity performance differs

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



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

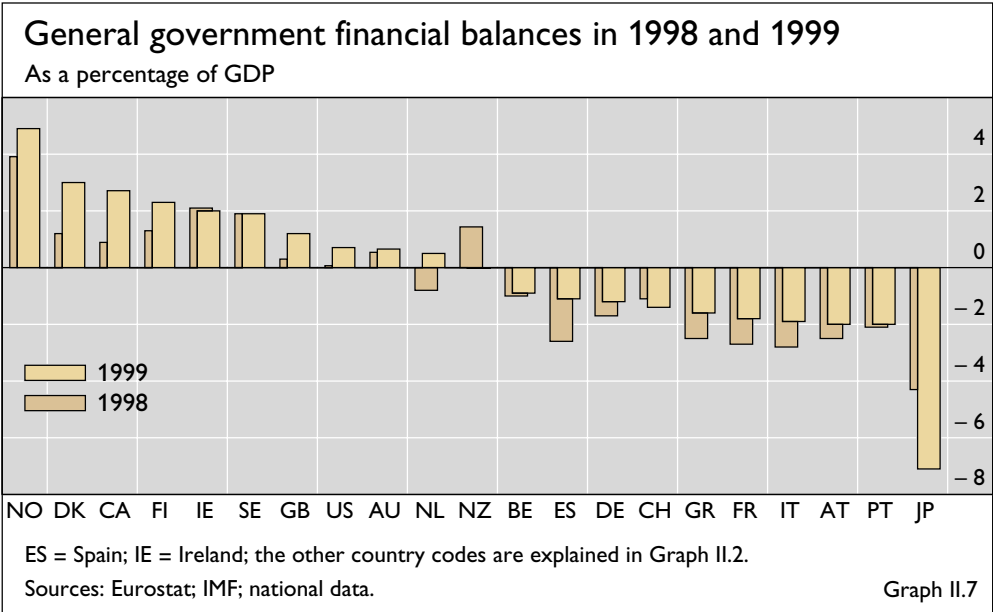
multiplier effects of the fiscal stimuli seem to have progressively declined. Financially constrained local governments have faced increasing difficulties in providing the expected supplementary measures, and the marginal efficiency and utility of the public investment projects seem to have decreased 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.

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%.

Unsustainable rise in public debt

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%.

Modest imbalances in the euro zone

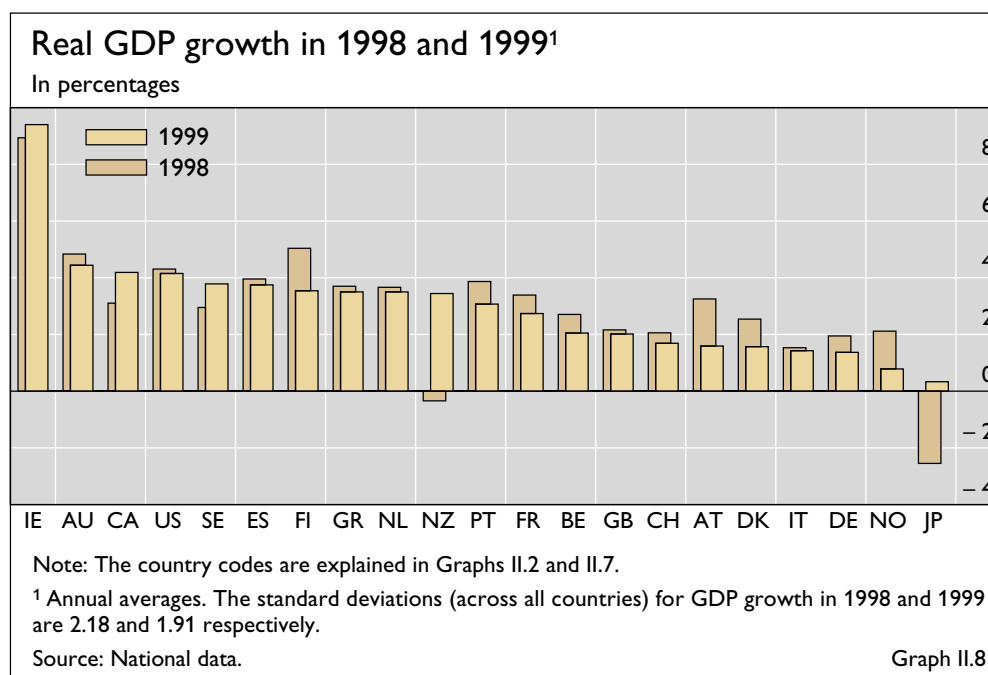


Variations in growth rates and excess capacity across the region

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 8³/₄% 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 2³/₄%. In contrast, at -3¹/₄%, *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 1¹/₂% 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



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.

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.

Developments
in other European
countries

Inflation and labour markets

Inflation and 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.

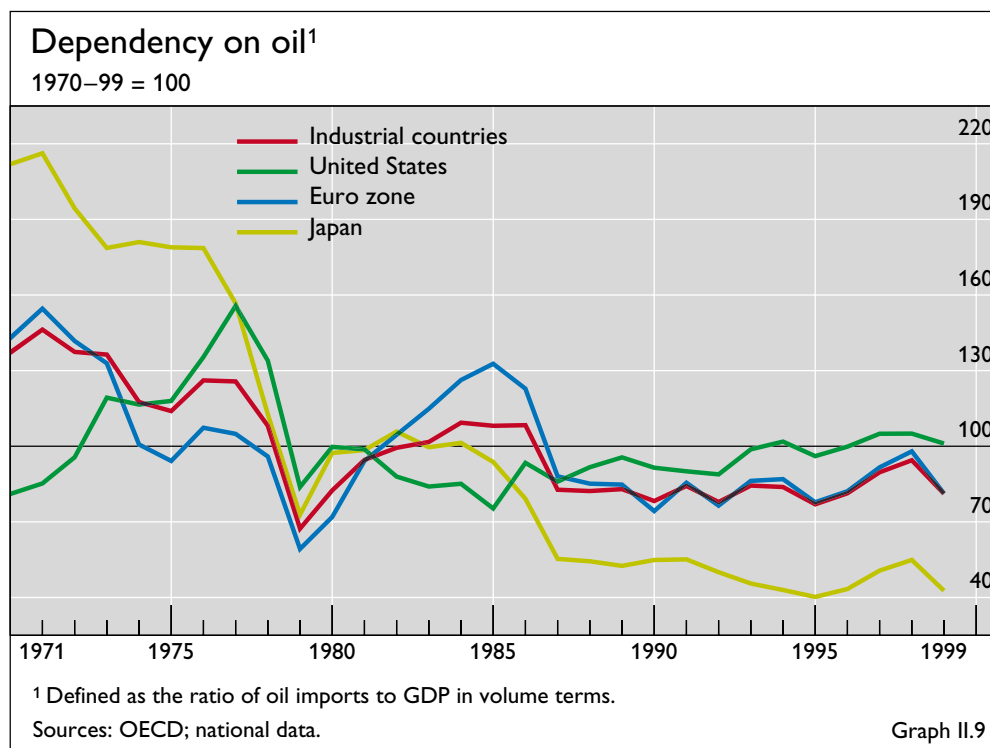
Moderate
impact of higher
oil prices ...

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.

... reflects
the effects of
conservation,
technologies ...

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

... competition and
aggregate demand
conditions



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.

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

Low inflation clarifies nominal wage signals ...

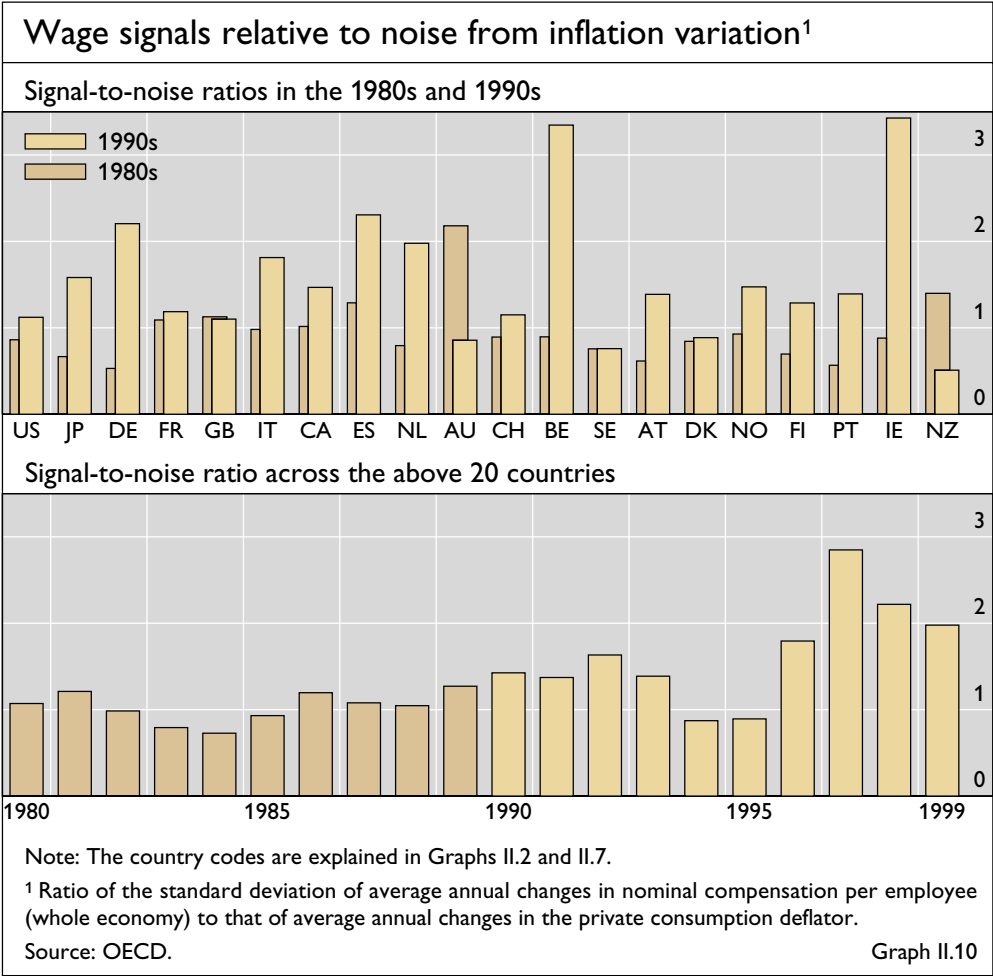
inflation across time and countries. A rising ratio suggests that nominal wage changes increasingly reflect real changes, rather than inflation differences. As Graph II.10 shows, the ratio of the dispersion of wage changes to inflation rates across the 1990s rose in 16 out of 20 industrial countries 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.

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.

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

... while competition increases the need for flexibility

Compensation linked to performance ...



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.

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.

... decentralised and industry-level bargaining

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.

EMU could move wage bargaining towards ...

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.

... more centralised negotiations ...

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.

... or, more likely, towards firm-level bargaining

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

The role of the ECB

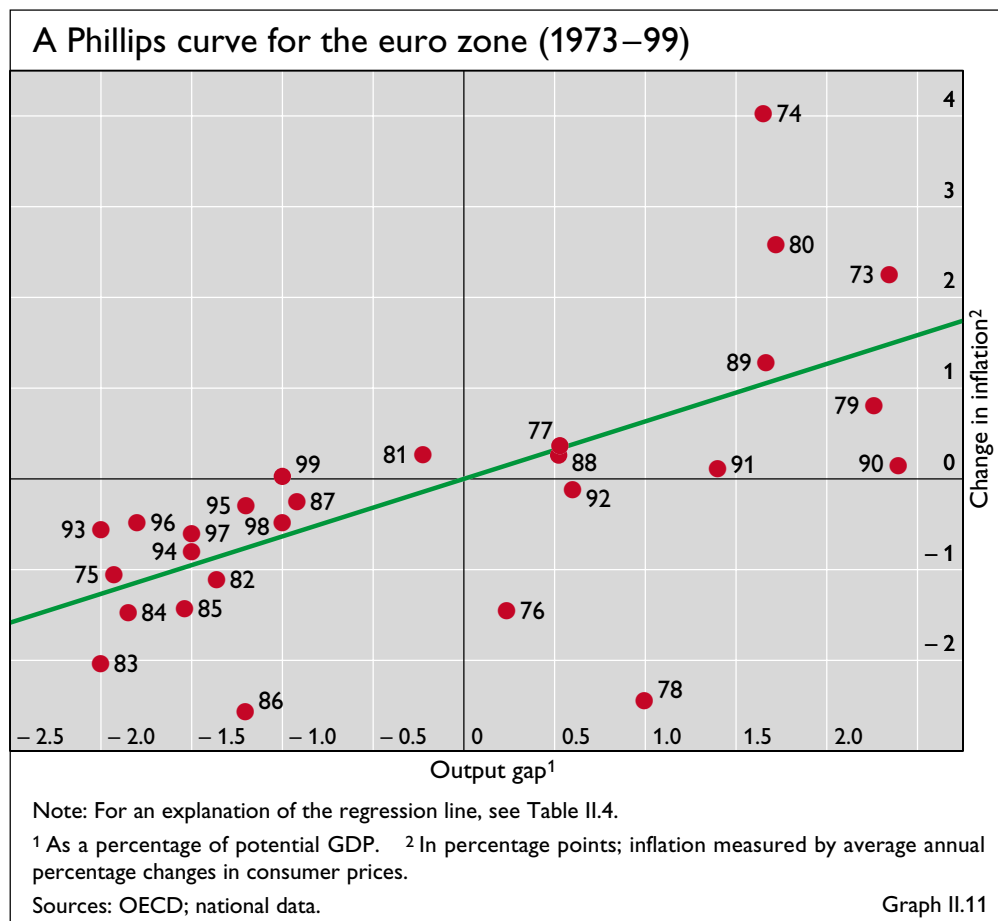
expectations into wage settlements, a more decentralised system means a more indirect, but by no means less important, role for the ECB in the future. When wages are set locally, inflation expectations enter into nominal wage changes less uniformly and less explicitly than under central bargaining. Competitive 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



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.

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.

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.

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

An apparent flattening of the Phillips curve ...

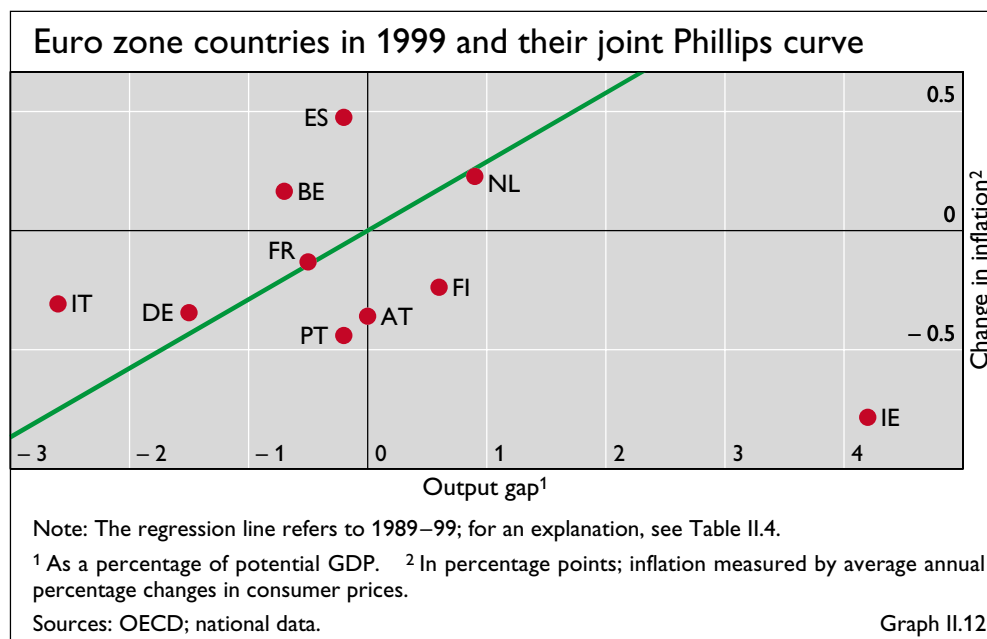
... may reflect nominal rigidities as well as measurement errors

Common Phillips curve for the euro zone countries

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



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

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).

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

World trade grows only moderately ...

... while price trends differ

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: HWVA-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

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

Growing statistical discrepancy

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

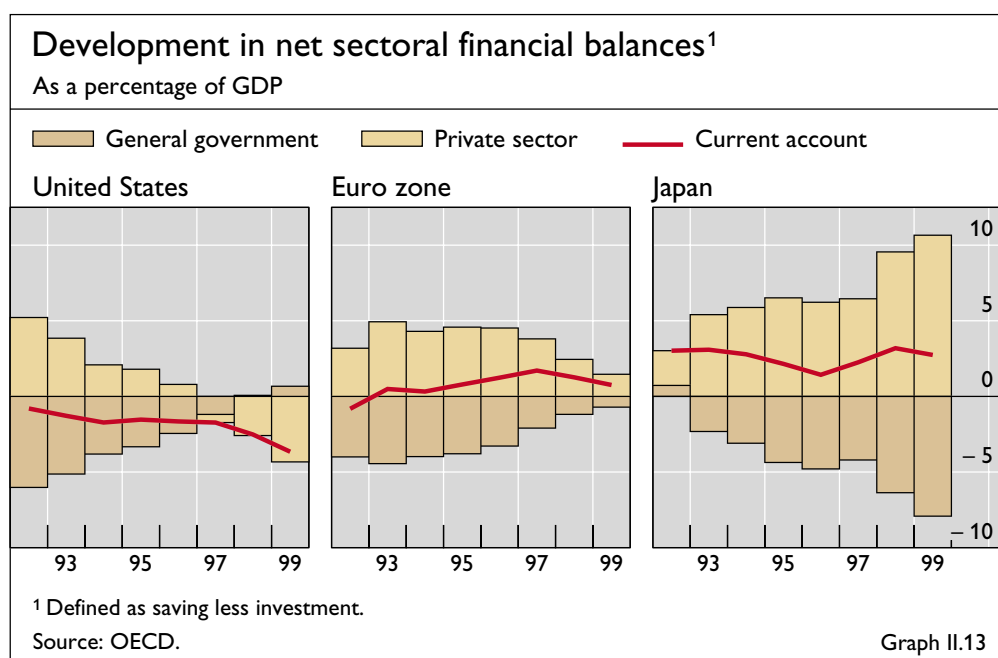
¹ In billions of US dollars.
Sources: IMF; national data. Table II.6

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



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.

III. Recovery from the crisis in the emerging markets

Highlights

Macroeconomic performance in the emerging markets in 1999 proved much better than had been feared at the beginning of the year, with growth strong and inflation remaining under control in most countries. Both Brazil and Russia managed to contain inflation in the wake of sizeable devaluations. The recovery in Asia strengthened and widened to encompass most countries in the region, while the spectre of deflation in both China and Hong Kong faded. Better performance went hand in hand with returning confidence in financial markets, with credit spreads narrowing appreciably and international funds flowing into both equity and bond markets. While strong equity markets made it easier for governments to dispose of assets acquired from banks during the crisis, their vulnerability to possible capital outflows also raised concerns in some Asian countries.

Most Latin American countries gradually recovered from recession in the course of last year, as the improving external environment made it possible to ease monetary conditions, while measures to limit fiscal deficits contributed to greater stability. A wave of foreign direct investment and freer international trade further increased Latin America's integration with the world economy. The progressive rise in oil prices helped the oil-producing countries in the region as well as Russia and the Middle East. Yet high external deficits in a period of weak domestic demand and favourable global demand conditions remained a source of vulnerability, especially given the high external debts of several countries. This was also true for many countries in Africa. For that region as a whole, the current account deficit stayed high last year even though average growth declined.

While microeconomic reforms have made several economies more competitive, there are concerns that their resistance to future financial or economic crises is still quite low. Progress has been made in strengthening banks' balance sheets in several Asian countries. However, corporate restructuring appears to be taking more time even if, in Korea, manufacturing has been invigorated somewhat by more open markets and foreign direct investment. China and India are also reforming their financial and economic systems. However, progress has been slow and much depends on the ability of the authorities to carry forward their agendas.

As emerging market countries have moved towards more flexible exchange rate regimes, policymakers have searched for or adopted alternative ways to anchor expectations of inflation. A number of economies have already introduced inflation targeting frameworks for conducting monetary policy, and several Asian countries are contemplating a similar move.

Principal economic and financial trends

Improvement in economic and financial conditions

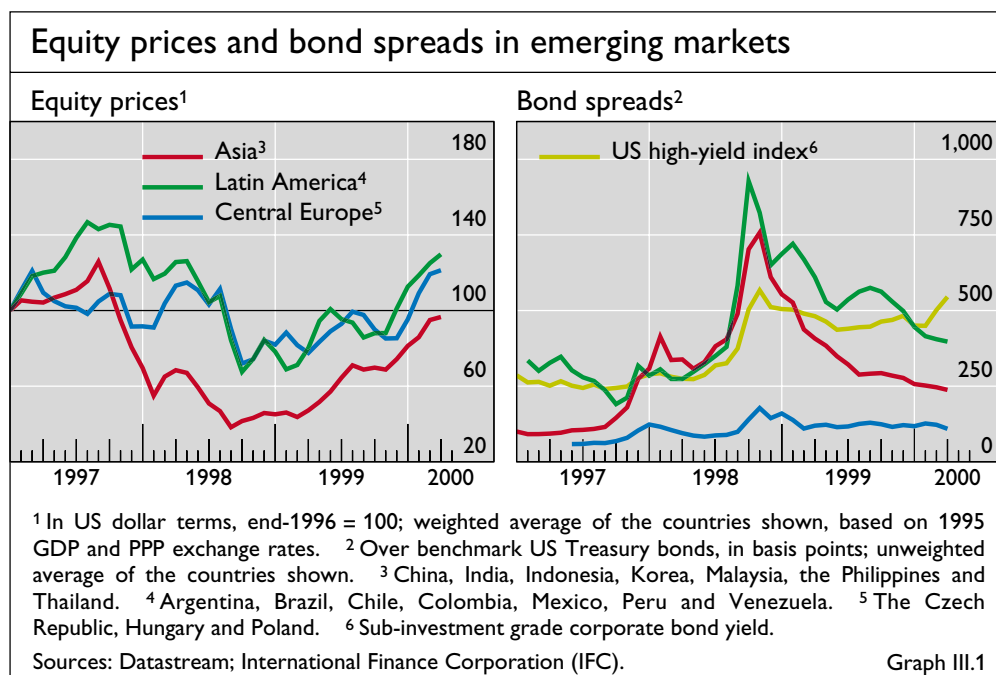
As 1999 progressed and growth in the industrial countries picked up, the real and financial conditions of the emerging market economies gradually improved. Equity prices for the countries shown in Graph III.1 increased by about 60% during 1999, far more than in most industrial countries. Even though both short- and long-term interest rates rose in the industrial countries, the impact on emerging markets was muted and spreads on international borrowings continued to narrow. Another sign of increased confidence was that the currencies of countries which had adopted a managed float tended to stabilise or, in some cases, even appreciate against the US dollar.

Unexpectedly strong recovery in Asia

While the strengthening of global demand was a crucial factor in the recovery of economic activity last year, policies and other domestic factors were also important, not only in bolstering the recovery, but also in keeping inflation low. This was particularly evident in Asia, where accommodating or expansionary policies supported a rebound that displayed the typical features of a “V-shaped” recovery, the strength of which was significantly underestimated by most forecasters. There was a positive swing of the inventory cycle, a large contribution to growth from net exports, initially mainly in the form of falling imports but progressively shifting towards a larger role for expanding exports, and finally a rebound of consumption. Asian exchange rates also strengthened as confidence and real growth improved. These changes tended to ease upward pressure on domestic prices without endangering competitive positions.

Surprising strength in Latin America ...

Output growth in Latin America and the transition economies also turned out stronger than forecast. Following the depreciation of the Brazilian real early last year, output was generally expected to decline, not only in Brazil but also in a number of other countries in which recessionary tendencies had already been observed in late 1998. Partly because timely policy changes helped



to keep inflation subdued, Brazil recovered surprisingly quickly and overall output for the region was largely unchanged compared with 1998 (Table III.1). However, countries with a large export share of commodities with falling prices and/or that maintained a fixed exchange rate tended to suffer declines in output.

Among the transition economies, the principal surprise last year was Russia's quick recovery from the financial crisis of autumn 1998. As in Brazil, this favourable outcome seems partly attributable to policies which prevented a full pass-through of currency depreciation into domestic inflation. In spite of

... and in the transition economies

Growth, inflation and current account balances									
	Real GDP			Consumer prices			Current account balance		
	1992-97	1998	1999 pe	1992-97	1998	1999 pe	Average 1992-97	1998	1999 pe
	annual percentage changes						as a percentage of GDP		
Asia ¹	8.8	2.0	6.0	9.7	7.4	2.2	-0.3	4.5	3.0
China	11.5	7.8	7.1	13.3	-0.9	-1.4	1.0	3.0	1.5
Hong Kong	5.2	-5.1	2.9	7.8	2.8	-4.0	0.1 ²	0.5 ²	4.4 ²
India	6.3	6.0	6.3	8.4 ³	6.9 ³	3.5 ³	-1.2	-0.9	-0.8
Korea	6.8	-6.7	10.7	5.2	7.5	0.8	-1.8	12.6	6.0
Singapore	9.1	0.4	5.4	2.1	-0.3	0.5	14.7	25.4	25.3
Taiwan	6.6	4.6	5.7	3.2	1.7	0.2	3.1	1.3	2.0
Indonesia	6.9	-13.7	0.2	8.2	58.4	20.5	-2.4	4.4	3.8
Malaysia	9.2	-7.5	5.4	3.6	5.3	2.7	-5.7	13.7	16.9
Philippines	3.8	-0.5	3.2	7.8	9.7	6.7	-4.2	2.0	9.2
Thailand	6.5	-10.2	4.1	5.0	8.1	0.3	-5.9	12.5	8.9
Latin America ¹	4.1	1.9	0.1	102.9	10.5	9.1	-2.7	-4.4	-2.6
Argentina	5.3	3.9	-3.0	7.0	0.9	-1.2	-3.1	-4.9	-4.2
Brazil	4.4	0.1	0.8	363.3	3.8	4.9	-1.8	-4.4	-4.0
Chile	8.4	3.4	-1.1	10.2	5.1	3.4	-3.9	-5.7	-0.1
Colombia	4.3	0.6	-4.5	22.2	20.4	11.2	-4.3	-5.3	-1.3
Mexico	2.5	4.8	3.4	19.9	15.9	16.6	-4.0	-3.8	-2.9
Peru	5.6	0.3	3.8	27.5	7.2	3.5	-5.6	-6.0	-3.6
Venezuela	2.2	-0.7	-7.2	55.2	35.8	23.6	2.7	-2.7	5.4
Central Europe ¹	3.9	3.3	3.2	24.0	11.9	6.5	-1.5	-4.1	-5.8
Czech Republic	1.9	-2.2	-0.2	11.3	10.7	2.1	-3.5	-2.5	-2.0
Hungary	1.1	4.9	4.5	22.4	14.3	10.0	-4.8	-4.9	-4.3
Poland	5.2	4.8	4.1	29.3	11.8	7.3	0.5	-4.4	-7.5
Russia	-7.2	-4.9	3.2	285.3	27.7	85.7	2.3	0.4	13.9
Israel	5.2	1.9	2.2	10.9	5.4	5.2	-4.3	-0.9	-2.6
Turkey	4.9	2.8	-5.0	82.3	84.6	64.9	-1.2	0.9	-0.5
Saudi Arabia	1.1	1.6	1.0	1.3	-0.4	-1.6	-6.4	-10.2	-2.8
Africa	2.3	3.4	2.8	24.0	6.7	5.8	-9.5 ⁴	-16.5 ⁴	-13.2 ⁴
South Africa	1.7	0.1	1.2	9.5	6.9	5.2	-0.4	-1.7	-0.4
<i>Memorandum:</i>									
<i>Industrial countries</i>	2.5	2.7	2.9	2.5	1.3	1.5	-	-0.1	-0.8

¹ Weighted average of the countries shown, based on 1995 GDP and PPP exchange rates. ² Balance of goods and non-factor services. ³ Wholesale prices. ⁴ As a percentage of exports of goods and services.

Sources: IMF; national data; BIS estimates.

Table III.1

Developments in world terms of trade			
	1997	1998	1999 pe
	annual percentage changes		
Emerging market economies	-0.4	- 6.2	3.6
Asia	-0.9	- 0.8	-1.3
Latin America	-1.3	- 7.2	5.2
Africa	0.9	- 9.9	3.6
Middle East	1.0	-14.4	12.3
Industrial countries	-0.4	1.5	0.2

Source: IMF, *World Economic Outlook*. Table III.2

the slowdown in Latin America, Africa and the Middle East, average growth for the emerging market countries last year is estimated at 4%. Though significantly higher than in 1998, it remained well below the average for the early 1990s and only partly restored the historical growth differential vis-à-vis the industrial countries.

Adverse impact of low commodity prices

Movements in commodity prices, exchange rates and associated terms-of-trade changes had a significant influence on growth performances last year, notably as regards the relatively slow growth of regions and countries with less diversified exports (Table III.2). In Africa, the Middle East and most of Latin America, developments last year seemed to reflect the lagged effects of large terms-of-trade deteriorations in 1998, while the subsequent improvement in relative trade prices affected developments only from late 1999. The contractionary effects of lower terms of trade were most evident in countries with fixed exchange rate regimes and steep declines in the volume of their key exports. Other countries allowed a weakening of their currency against the US dollar to cushion the effect on real incomes of the fall in commodity prices. However, in most cases, such effects were partly offset by the adoption of tighter policies to prevent currency devaluations from pushing up domestic inflation.

Slow recovery of capital flows reflecting ...

Although of a more indirect nature, both the size and the composition of net capital flows may also explain some of the growth divergences among the emerging market economies (Table III.3). Overall, net private inflows remained more or less constant compared with 1998 but significantly below the level seen prior to the Asian crisis. The sizeable current account surpluses in Asia permitted repayment of banking debt without hurting the recovery. The build-up of foreign exchange reserves was almost as large as in 1998. Conversely, the decline in net inflows to Latin America, combined with continued high current account deficits, led (or forced) several countries to tighten monetary and fiscal policies in early 1999 when the Brazilian crisis raised risk premia for the whole region. Net capital flows to Africa have been rather impervious to changes in international capital market conditions and, unfortunately, also to Africa's external borrowing needs. Largely reflecting the weakness of agricultural commodity prices, the aggregate current account deficit for the region rose sharply in 1998 and stayed high last year, whereas net inflows remained at their previously low level. Given low domestic saving, the

lack of external financing might, in some cases, have exacerbated the slowdown in output by constraining investment spending.

The composition of capital inflows probably also influenced growth patterns last year. Over the last 10 years, foreign direct investment (FDI) in the emerging market economies has increased significantly, both in absolute terms and as a share of total private inflows. Moreover, despite the crisis in Asia and the turbulence in 1998, FDI inflows have remained remarkably stable at a high level. This development has in part been the result of a general trend towards more global production structures. However, it also reflected more specific

... larger FDI inflows ...

Net private capital flows to emerging market countries				
	1996	1997	1998	1999
	in billions of US dollars			
Emerging market economies				
Total flows	216	148	75	81
Direct investment	113	139	143	150
Portfolio investment	78	53	9	23
Other inflows	25	-44	-77	-93
Memo: Current account	- 94	-72	-51	14
Change in reserves ¹	-114	-73	-38	-79
Asia				
Total flows	104	- 1	-43	-27
Direct investment	53	55	58	50
Portfolio investment	13	4	-18	- 6
Other inflows	38	-60	-83	-71
Memo: Current account	- 37	23	114	96
Change in reserves ¹	- 50	-16	-70	-60
Latin America				
Total flows	72	86	70	54
Direct investment	40	53	56	64
Portfolio investment	41	19	15	11
Other inflows	- 8	13	- 1	-20
Memo: Current account	- 38	-64	-89	-54
Change in reserves ¹	- 31	-15	17	5
Africa				
Total flows	8	17	12	15
Direct investment	5	7	5	10
Portfolio investment	1	4	4	4
Other inflows	1	6	2	1
Memo: Current account	- 7	- 7	-20	-17
Change in reserves ¹	- 9	-11	1	- 3
Countries in transition				
Total flows	17	23	14	12
Direct investment	14	20	21	24
Portfolio investment	19	22	7	4
Other inflows	- 16	-18	-14	-16
Memo: Current account	- 17	-26	-25	- 5
Change in reserves ¹	- 2	-10	- 1	- 8

¹ A minus sign indicates an increase.

Source: IMF, *World Economic Outlook*.

Table III.3

features, such as the removal of restrictions on FDI inflows in some Asian countries, the attraction of low production costs following large depreciations and/or lower equity prices, and the privatisation of large public companies. In Latin America, such inflows last year financed almost the entire current account imbalance. Similarly, in transition economies such as Poland and Hungary, relatively stable FDI inflows eased the need for restrictive policies to prevent a further widening of current account imbalances. In contrast, receiving only a fraction of the FDI flows to the emerging markets, African countries have had to adjust monetary and fiscal policies to keep the current imbalances within narrow bounds.

... but a further decline in banking flows

Aggregate cross-border bank lending to the emerging markets continued to decline in 1999 but less sharply than in 1998. Asian countries have reduced outstanding debt to international banks by some \$160 billion since the onset of the crisis (Table III.4), as investment fell and banks and corporations restructured their balance sheets. International bank lending to Latin America and Russia also contracted. Net issuance of international debt securities, by contrast, has proved to be a more stable source of finance. In fact, Latin American countries have significantly increased bond issuance since mid-1997 despite wide fluctuations in bond spreads. Argentina and Mexico were

International bank and securities financing of emerging market economies							
	Average 1990–95 ¹	1996	1997	1998	1999	June 1997	December 1999
in billions of US dollars							
	International bank lending ²					Outstanding liabilities	
Asia ³	37	80	5	-96	-53	480	315
of which: China	7	13	10	-11	-15	85	68
Crisis countries ⁴	28	58	-10	-83	-31	329	190
Latin America	1	28	31	- 8	-16	284	280
of which: Argentina	-	5	8	1	-	42	48
Brazil	-	17	14	-11	- 9	98	85
Mexico	-	-	- 7	-	- 4	69	61
Central Europe ⁵	-	2	6	6	5	26	39
Russia	1	6	10	- 6	- 8	54	44
Africa	-2	-	3	- 2	1	51	56
	Net issuance of international debt securities					Outstanding amount	
Asia ³	15	42	34	-	- 3	127	139
of which: China	2	2	4	-	-	17	18
Crisis countries ⁴	11	38	25	-	- 2	98	107
Latin America	13	41	42	22	32	136	205
of which: Argentina	6	11	14	11	11	35	63
Brazil	4	12	10	3	6	35	46
Mexico	2	13	8	2	10	50	63
Central Europe ⁵	3	-	2	2	2	15	20
Russia	-	-	7	12	- 1	6	19

¹ 1993 Q4–1995 for net securities issuance. ² Exchange rate adjusted change in claims of BIS reporting banks. ³ Excluding Hong Kong and Singapore. ⁴ Indonesia, Korea, Malaysia, the Philippines and Thailand. ⁵ The Czech Republic, Hungary and Poland.

Source: BIS.

Table III.4

particularly active in 1999 and bond issuance strengthened further early this year as more Latin American countries took advantage of the narrowing bond spreads.

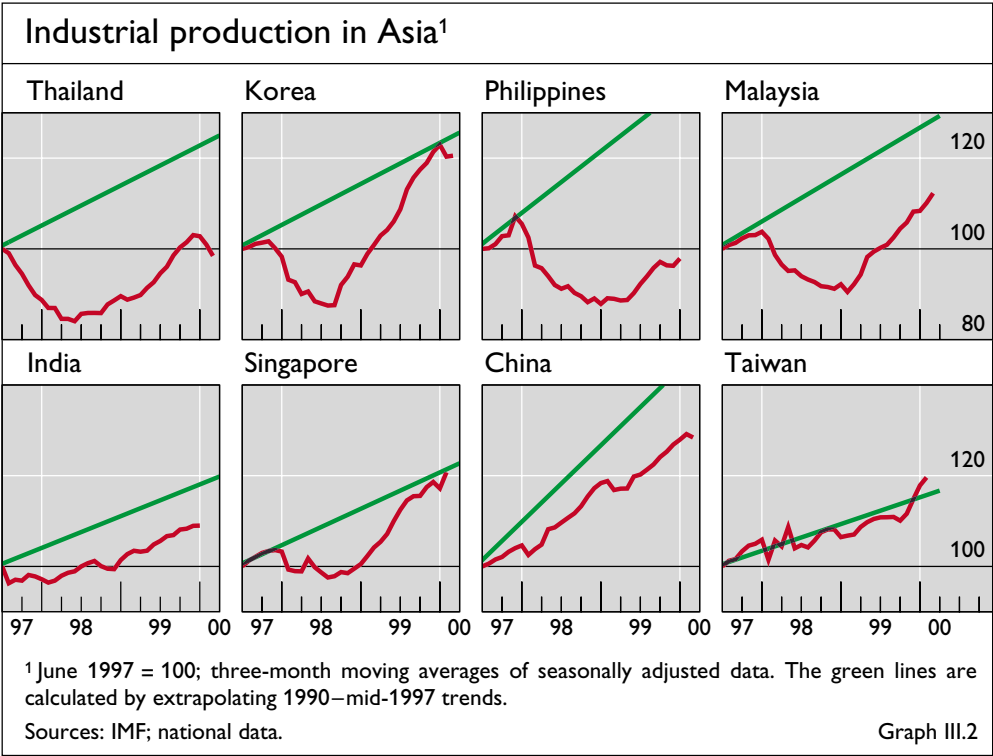
Recovering from the crisis in Asia

The deep contraction of output in much of East Asia bottomed out in the second half of 1998. While the subsequent rebound was much stronger than generally expected, there were marked divergences between economies in its pace and in the extent to which earlier output losses were recovered (Table III.1). In *Korea*, *Singapore* and *Taiwan*, production was back around its pre-crisis trend by end-1999 while output in *Malaysia* and *Thailand* surpassed its pre-crisis levels (Graph III.2). Although the recovery came later in *Hong Kong*, activity turned up in the first half of 1999 and then progressively strengthened in the course of the year. The *Philippines* suffered a recession in 1998 induced by poor harvests as well as by the recession in neighbouring countries. However, the economy recovered in 1999, partly helped by the fact that it did not have as serious a problem with foreign debt and overstretched banks as other countries. The *Indonesian* economy, which had suffered the deepest and longest contraction, turned around in late 1999, though a firm recovery has yet to be established. Until late in the year, political uncertainty undermined household and business confidence and the fragility of the financial sector was a further impediment to recovery.

Strong but divergent recovery in Asia

China has grown faster than other Asian countries, although output growth has been on a slowing trend for several years. To compensate for the short-term contractionary effects of economic reform and the weakness of exports, public spending has been expanded. Confronted with falling prices

High but slowing growth in China ...



and rising unemployment, as well as a weak banking sector, the authorities sought to ease monetary conditions by lowering nominal interest rates and cutting reserve requirements. They also directed banks to increase credit for infrastructure, housing and exports, provide more working capital to state-owned enterprises and grant more consumer credit.

India benefited from a pickup in industrial output and a fast growing information technology sector. Rising rural production and incomes also contributed to growth, while higher oil prices worsened the trade balance. Notwithstanding a high fiscal deficit (see below) and rapid monetary growth, underlying inflation fell to an unusually low rate, mainly reflecting good harvests and the impact of global disinflation. Even though microeconomic reform may also have lowered inflationary pressures, the importance of food prices implies that the exposure to supply shocks and sudden rises in inflation has not gone away. In the medium term, privatisation of major sectors is planned, which should ease the public sector debt burden and might also attract further foreign direct investment.

Exports were the driving force behind the recovery in East Asia during the first half of 1999. The extent of the export expansion differed markedly between countries, in part reflecting differences in the composition and direction of exports. For some economies the recovery in demand for electronic components, particularly in Japan, gave an important boost while those with a large share of industries suffering from global oversupply, such as motor vehicles, received less help from external factors. Those economies whose exports were more directed to US markets benefited from the strong demand there, but a significant recovery in intra-Asian trade also helped. In China, exports were stimulated in the latter half of 1999 by an increase in tax rebates. The initial depreciation of many emerging Asian currencies was followed by a strong appreciation of the yen, giving a further advantage over an important competitor. However, given Japan's importance as an export market and as a source of both finance and direct investment, its continued structural and cyclical weakness has, on balance, detracted from growth in the region.

As 1999 progressed, stronger domestic demand, including a turn in the inventory cycle, replaced the reliance on export-led growth (Graph III.3). As consumers regained confidence about employment prospects and asset prices recovered, deferred expenditure on durables began to be undertaken. There was a modest recovery in business investment during 1999 in Korea and Malaysia. However, because of excess capacity in several sectors and the focus by many companies on restructuring and debt reduction, investment generally remained weak. The problems in the banking sector made it particularly hard for small enterprises to fund new investment whereas large companies relied more on equity or bond issuance to finance investment or to repay banks.

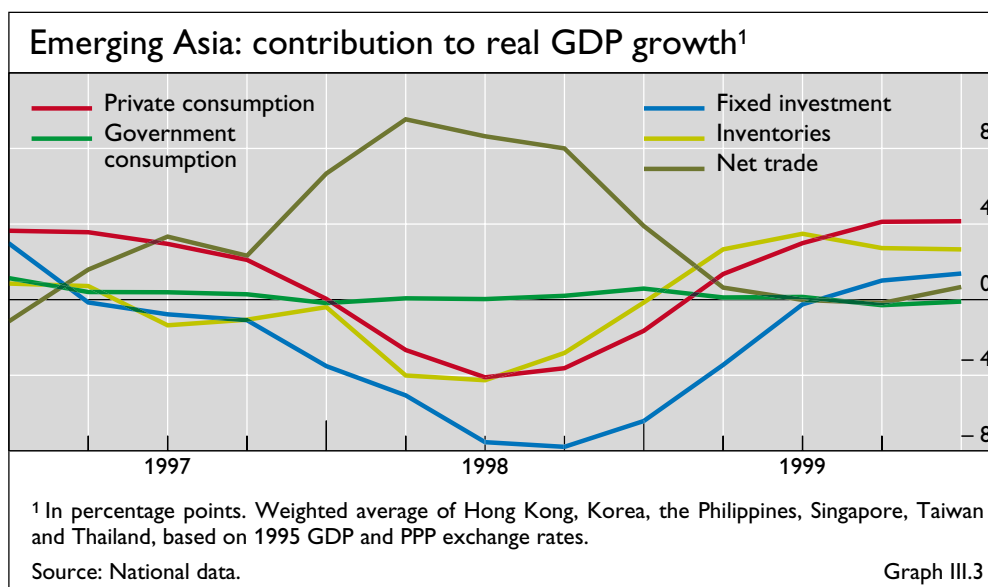
The region continued to post a large current account surplus. The recession had led to a marked contraction in imports and, as exports strengthened, the aggregate current account position had moved from a deficit of \$37 billion in 1996 to a surplus of \$114 billion in 1998. In 1999 domestic demand revived somewhat and imports increased accordingly as firms moved to rebuild inventories, cutting the surplus to \$96 billion. In China there was

... and unexpectedly low inflation in India

Large growth contribution from exports ...

... and a progressive pickup of domestic demand

Large current account surpluses ...



a particularly large rise in reported imports, although this was at least partly a result of a crackdown on smuggling. FDI flows to emerging Asia were relatively stable, although more went to Korea and Taiwan and less to China and Malaysia. Portfolio investment remained modest while international bank lending continued to contract in 1999, reflecting both the demand influences discussed above and the measures taken by Japanese banks to pare down their international balance sheets.

... and stable FDI flows

Capacity constraints and inflationary pressures

Inflation remained low in most of Asia (Table III.1) and forecasts were revised downwards in the course of 1999 even as forecasts of real growth were upgraded. The pass-through of the large exchange rate depreciations was very modest. This partly reflected unusually weak domestic demand in 1998, but also the fact that the more extreme exchange rate movements were correctly viewed as only transitory. Prices in China and Hong Kong were falling for most of 1999. This can be attributed to an appreciation of their effective exchange rates as well as the impact on food prices of a bumper harvest and, in the case of China, the effects of restructuring the economy. Even in Indonesia, where the depreciation was much larger and there were the additional influences of poor harvests and civil disturbances, inflation came down quickly after a sharp increase in 1998.

Continued low inflation

The rise in oil prices starting in early 1999 boosted headline CPIs in most countries but does not yet seem to have sparked second-round effects and inflation forecasts have remained low. A possible exception is Korea, where output may be approaching capacity limits. However, the early move by the Korean authorities to raise interest rates might have moderated inflation concerns.

Fiscal imbalances and government debt

The 1997–98 crisis left a marked impact on fiscal balances and government debt (see Table III.7 on page 53). Revenue declines, combined with discretionary

Widening deficits and growing public debt ratios

measures to stimulate the economies and rising interest expenses on government debt, meant that most Asian countries were running budget deficits by end-1998. Thanks to the unexpected strength of the recovery and consequent revenue gains, Hong Kong and Korea managed to reduce their deficits in 1999, while a combination of poor revenue collection, lack of expenditure control and, in the case of Taiwan, the effects of a major earthquake led to higher deficits (or smaller surpluses) in other countries. Reflecting measures taken to restructure and recapitalise the banking system, the effect of the crisis was even more pronounced with respect to government debt, with several countries recording debt/GDP ratios of 40–60% last year.

In India, concerns about the fiscal situation progressively increased during the 1990s. Last year the deficit of the central government increased to about 6% of GDP and that of the public sector as a whole was around 10%. The resultant rise in public sector debt to almost 60% of GDP, combined with the large contingent liabilities arising from guarantees provided by various levels of government and only modest proposals for reform in the last budget, have exacerbated concerns about sustainability.

Financial markets and monetary policy regimes

Stable exchange rates allow lower interest rates ...

Most of the Asian currencies that had sharply depreciated in 1997–98 had partly recovered their losses by early 1999 and were either fairly steady against the dollar or appreciated gradually during the year (Graph III.4). This allowed the authorities to reduce nominal interest rates, in most cases to below pre-crisis levels. However, in some countries declining inflation meant that real interest rates changed only little. Some central banks intervened to buy foreign currency, partly to build up foreign exchange reserves further, but partly also to preserve competitiveness gains.

... but future responses depend on the exchange rate regime

While interest rates were generally quite steady by the end of 1999, the actual and expected increases in US and European interest rates also threatened an adjustment of monetary conditions in Asia. With its currency board, Hong Kong was forced to follow movements in US rates, whereas for the economies that had abandoned their pegs to the dollar this was no longer necessary. For instance, in those economies experiencing upward pressure on their exchange rates due to a combination of large current account surpluses and FDI inflows, the authorities could tighten monetary conditions by keeping interest rates constant and letting the exchange rate appreciate.

Strong rise in equity prices

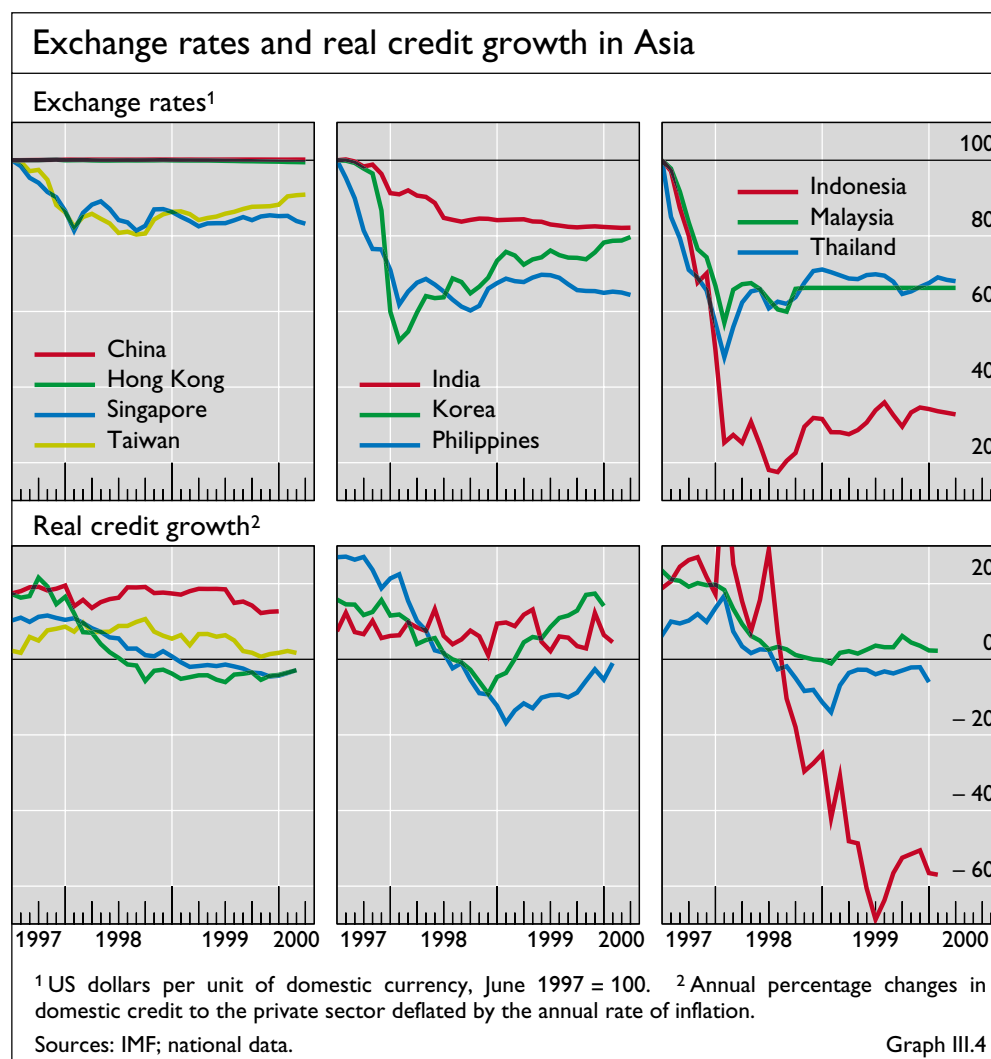
Equity prices in the region rose strongly in 1999, in many cases almost doubling, and thus regained some of the ground lost during the crisis. With corporate earnings still low in most economies, price/earnings ratios tended to be higher than before the crisis, although in most cases still below those in the United States (Graph III.5). While high P/E ratios are common in early stages of recoveries, concerns about overvaluation could re-emerge if prices are not soon underpinned by improved profits. Equity prices are also vulnerable to higher interest rates in Europe and the United States and, generally, to lower equity prices in the industrial countries (see Chapter V). However, it is hard to gauge the extent to which lower equity prices in Asia would affect the real economy.

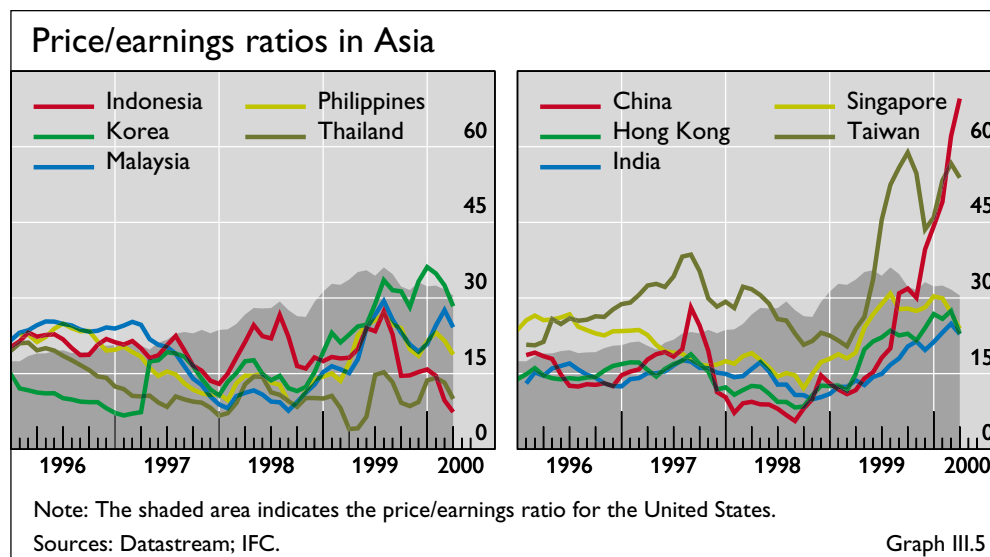
Following the crisis, a majority of central banks in the region adopted floating exchange rate regimes. Three important exceptions were Malaysia, China and Hong Kong. Malaysia maintained the fixed exchange rate it adopted in the midst of the crisis, though it eased some exchange controls and allowed others to expire. China was able to retain its de facto peg to the US dollar because of its exchange controls, while the currency board arrangements were maintained in Hong Kong, at the expense of temporarily higher interest rates. In both China and Hong Kong, the appreciation of many neighbouring currencies against the dollar combined with domestic deflation to lower their real effective exchange rate back to around pre-crisis levels in 1999. In contrast, the real effective exchange rate of Malaysia ended 1999 about 25% below its mid-1997 level, as did those of Thailand and the Philippines despite different exchange rate regimes.

The experience of countries with fixed exchange rate regimes

Views differ about whether the current floating exchange rate regimes in the region are only interim arrangements. Adjustable exchange rate pegs may impede structural change and are often subject to speculative attacks. One particular weakness of the earlier pegs to the dollar was that they left the Asian currencies vulnerable to large swings in the yen/dollar rate, possibly suggesting that a peg to a basket of currencies (including, for example, the

The shortcomings of adjustable pegs





dollar, the yen, the euro and perhaps the renminbi) would be preferable. However, with media and public attention focused on the bilateral rate against the dollar, public confidence as well as transparency could be weakened by an exchange rate that appears to be continually fluctuating.

Currency board arrangements

Probably influenced by the fact that three of the economies that were able to maintain their exchange rate parities during the crisis (Brunei, Macau and, above all, Hong Kong) were operating various types of *currency boards*, some countries are considering such arrangements as an alternative. Four factors have been key to Hong Kong's success in maintaining its link to the US dollar in recent years. The first is widespread political and public support and acceptance of any short-term pain. The second is a well respected monetary authority that enjoys the operational independence needed to support its fixed exchange rate and has been seen to have achieved it for a long period in the face of large shocks. The third is a strong and well capitalised banking system able to withstand sizeable financial and monetary disturbances. The fourth is a sufficient degree of flexibility of domestic prices and wages.

Inflation targets

In searching for a new nominal anchor, several Asian economies with floating exchange rates have implemented or are considering some form of *inflation targeting*. However, the optimal configuration of such a target may well differ from those in the advanced economies. In particular, the higher share of imports in consumption could make it difficult to meet a narrow inflation target given volatile exchange rates or commodity prices.

Longer-term growth prospects

Lower forecasts ...

Most forecasts made in late 1999 envisaged longer-term growth rates 1–2 percentage points below pre-crisis rates. This may have reflected concerns about “headwinds” following the collapse of asset price bubbles, shortages of skilled workers or hysteresis effects, such as the contraction of investment leading to a smaller capital stock and unemployed workers losing their skills. However, these forecasts still anticipated rapid growth by global standards, owing to the strong fundamentals in the region.

Most Asian economies still have substantial scope to increase their capital/labour ratios and, unlike many other countries, a sufficiently well educated labour force to use more capital. In addition, they have high savings rates with which to fund such investment. Fiscal and monetary policies have remained sound despite increases in government debt/GDP ratios, and the currency depreciations have not led to a marked rise in inflation. The economies have also resisted the temptation to introduce protectionist measures. In addition, many Asian economies are well placed to benefit more than other regions from the productivity improvements evident in advanced economies and attributed to information technology. Finally, even if sustainable long-term rates of growth are expected to be lower than in the past, the large excess capacity remaining in most East Asian economies implies some room for rather fast growth in the early years of the recovery, as has been seen in Korea recently.

... but still scope for high medium-term growth

Some aspects of corporate and financial restructuring in Asia

Corporate and financial restructuring have been particularly closely linked in the Asian crisis economies because of the heavy reliance of most corporations on bank debt. As a result of the high gearing of corporations and the low interest cover of banks, much of the risk that in other countries would have been taken on by shareholders was carried by financial institutions. As the banks entered the crisis with weak balance sheets and substantial off-balance sheet exposures, the debt servicing problems experienced by many large corporations and smaller companies in 1997 were bound to spread quickly to the financial sector.

Corporate restructuring

The Korean experience illustrates the major causes of corporate distress in Asia, as well as the main approaches to corporate reform. Following a series of diversification drives and ambitious investment projects undertaken by the large conglomerates during the mid-1990s, the debt/equity ratio in Korean manufacturing had increased to 400% at end-1996 from under 300% in the early 1990s. When these investments failed to deliver adequate returns, further borrowing, mostly short-term, became necessary. Problems were allowed to accumulate because there was no effective monitoring and reporting of company operations and balance sheets. Against this background, the main objective of corporate restructuring was to overhaul the corporate governance system by enhancing transparency and strengthening the bankruptcy system. As a complement, broad financial sector reforms were undertaken with a view to improving the pricing of credit and market risk by liberalising capital markets. Finally, an attempt was made to improve competitiveness through deregulation and liberalisation of foreign investment.

Causes of corporate distress in Korea ...

Two years into the programme, there is evidence that Korean corporations are meeting their restructuring objectives, even if the enthusiasm for reform is ebbing. Faced with a collapse in demand in the wake of the crisis, firms cut employment by more than 5% (over 1 million workers) and real

... and the progress made

wages fell by 9% in 1998. Lower labour costs and the recovery of external demand, benefiting from a competitive exchange rate and rising semiconductor prices, improved profitability and enabled companies to reduce debt in 1999. Corporations also contained their capital expenditure and the institutional framework was strengthened. Thus, markets became somewhat more open, corporate governance and financial disclosure improved, prudential regulations forced banks to tighten their lending practices and risk assessment, and a specialised bankruptcy court was established. Including equity issues and asset sales, debt/equity ratios for the top five chaebol fell by 30–40%, though they remained high by international standards, and many of the top 30 chaebol downsized and improved their production structure by focusing on their core strengths.

Restructuring
in Indonesia,
Thailand ...

Progress with corporate restructuring has been more limited in other economies, either because of the sheer scale of the problem (Indonesia and China), or due to a weak institutional framework (Indonesia and Thailand) or the perception that the debt overhang could only be resolved gradually (Malaysia). In *Indonesia*, most of the corporate sector was insolvent by early 1998, with foreign debt equivalent to around two thirds of GDP. The main vehicles for corporate restructuring have included a voluntary scheme for out-of-court agreements, an official restructuring agency and an amended bankruptcy law. By September 1999, around 170 companies had sought assistance to restructure about one third of their foreign debt. However, owing to inadequate fiscal and administrative support, so far fewer than 30 companies have reached agreement with their creditors. To facilitate corporate restructuring in *Thailand*, a new bankruptcy law was passed and new creditors' rights, as well as a framework for out-of-court debt restructuring, were established. Even though most foreign and local banks have signed debtor-creditor and inter-creditor agreements, only a quarter of reported non-performing loans had been restructured by August 1999. However, an important precedent was finally set in March 2000, when the country's largest corporate debtor was declared insolvent.

... Malaysia and
China

Historically, *Malaysia* has had a relatively effective legal framework for corporate debt restructuring and only needed to create a framework for voluntary debt restructuring agreements. Yet progress to date has been slow, with only nine cases (about 7% of the total debt) having been dealt with and fewer than 50 others being processed. Various patterns of restructuring are also beginning to emerge in *China*, where the state-owned enterprise (SOE) reform agenda has focused on improving management and governance. Budget constraints for the SOEs are being progressively hardened, their social functions transferred to local governments and pension funds, redundant workers laid off, idled capacity closed, and funds for debt writedowns established. Large SOEs are being corporatised and many are forming joint ventures with foreign investors, while small SOEs are quickly moving out of the state sector.

Bank restructuring

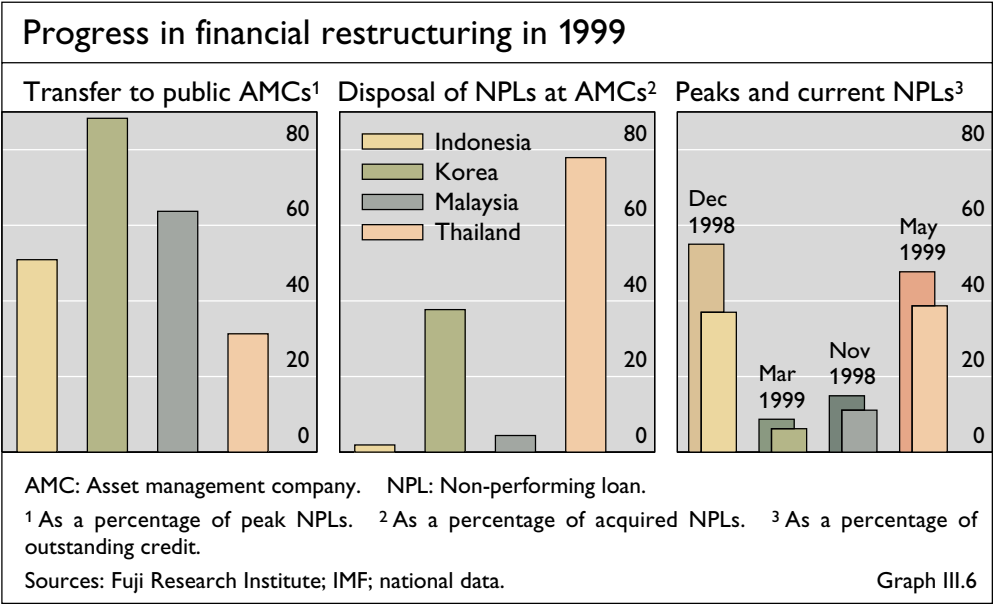
Two approaches to
bank restructuring

Asian governments have followed two basic approaches in refinancing and restructuring their banking systems, depending on the seriousness of the

problems, the fiscal capacity of the government and political constraints. Korea and Malaysia followed an interventionist course. They required banks to sell non-performing loans (NPLs) at large discounts to asset management companies (AMCs) owned and financed by the governments and injected government capital into weak but still viable banks. Thailand's approach (and initially also Indonesia's) was to leave resolution more to the banks themselves and to the market. Under both approaches, bank depositors were protected as banks were closed, merged or nationalised. In addition, supervisory oversight was significantly strengthened and prudential measures addressed a wide range of concerns, including loan classification and provisioning standards, connected lending and cross guarantees, capital adequacy and accounting and disclosure standards.

As their basic strategy to resuscitate virtually paralysed financial systems, the Asian crisis economies established AMCs to buy NPLs from distressed banks or non-bank financial institutions (Graph III.6, left-hand panel). The sale of loans at their estimated market value had crystallised the loan losses for the selling institutions and once these losses had been dealt with (discussed below), banks were left with clean balance sheets and managements could focus on operational issues. Progress to date has been good. The AMCs in Korea and Malaysia have basically completed the purchase of NPLs from their banking systems, in both cases at an average discount slightly above 50%. The Indonesian agency had by May 1999 taken control of 48 failed banks and had stakes in about 200 companies. In Thailand, where the crisis first affected the non-bank financial sector, the government formed two agencies to buy and liquidate bad assets from closed finance companies. By early this year, both agencies had largely completed the sale of all core assets acquired. However, commercial banks were left to deal with their NPLs mainly on their own, resulting in relatively slow disposal and leading several banks to establish their own AMCs.

Use of AMCs to take over NPLs ...



... did not prevent closures and mergers

The AMC approach has not been trouble-free. The losses realised on the sale of loans to the AMCs led to widespread solvency problems, which forced shareholders to write down their equity and raise additional capital. When sufficient capital could not be raised, governments intervened through closures, forced mergers and, in some cases, nationalisations. Thus, the Thai government closed 53 finance companies and one bank by the end of 1999, the Indonesian government closed 67 banks, and the Korean government closed five commercial and 17 merchant banks. In all countries, a large number of mergers were consummated, including the creation of 10 “anchor” banking groups in Malaysia as part of a nationwide merger programme. Local banks were also required to raise external capital and Indonesia, Korea and Thailand now allow full foreign ownership of local banks. As a result, foreign financial institutions have acquired all or part of 18 East Asian banks since January 1998.

Capital injections have been costly but necessary

Public capital injections to recapitalise banking systems complemented the activities of AMCs. The Korean Deposit Insurance Corporation issued government bonds worth \$13 billion to recapitalise banking institutions while Malaysia injected fresh capital into 11 banks that account for about 20% of banking system assets. The Thai government offered to recapitalise banks which adopted new loan classification and provisioning rules, but only a few banks complied with the stringent conditions imposed. By contrast, the Indonesian government selected eight private banks for recapitalisation after due diligence audits. Owners who wanted to keep managing these banks had to inject about 20% of the new capital required after writing down their previous equity to zero, and were given the first right to buy back government shares within three years. Reflecting the scale of the banking crisis and the government’s guarantee of deposits, the cost of recapitalising the Indonesian banking system is estimated at 50–60% of GDP, compared with about 40% in Thailand, 15% in Korea and 12% in Malaysia.

Strategies for NPL disposals involve trade-offs

The loan disposal strategies of the AMCs have varied. Korea’s AMC started disposals quite quickly, while its Malaysian counterpart put more emphasis on managing and restructuring assets and only started disposals in the second half of 1999 (Graph III.6, middle panel). By allowing time to restructure the loans and the underlying assets, the latter approach can raise the prices obtained, especially if the economy recovers. However, holding NPLs involves considerable interest costs on bonds issued to the banks in return for NPLs. By contrast, the Thai AMCs disposed of assets acquired from failed finance companies in a “fire sale” at about 25% of face value.

Bank restructuring in China

Elsewhere, progress with bank reform has remained slow. *China* established four AMCs in 1999. These would use bonds to buy, at face value, the bulk of NPLs accumulated from pre-1997 loans thought to have any residual value, while assets with no value would be written off. Though funding arrangements for the AMCs and the debt write-offs are still to be finalised, the AMCs would be expected to maximise asset recovery by selling collateral backing the loans and securitising and auctioning NPLs, including to foreign investors. Debt/equity swaps, which can help enterprises with cash flow that only partly meets current interest charges but not firms unable to cover variable costs, would also be used, implying that bank restructuring will

Indicators of bank performance in the Asian crisis countries								
	Korea		Thailand		Malaysia		Indonesia	
	1996	1999	1997	1999	1997	1999	1997	1999
	at end-year, in percentages and percentage points							
Non-performing loans ¹	4.1	6.2 ²	22.5	38.6	3.2	9.0	7.1	37.0
Return on assets	0.3	3.3 ²	-0.1	-2.5 ³	0.6	-0.2 ³	-0.1	-17.4 ³
Intermediation spread ⁴	3.6	2.2	3.8	4.8	2.5	4.4	1.5	7.7
Capital/asset ratio ⁵	9.1	9.8 ⁶	9.3	12.4	10.3	12.5	4.6	-18.2 ²

¹ As a percentage of total loans of commercial banks; national definitions. NPLs do not include loans transferred to AMCs. ² September. ³ December 1998. ⁴ Short-term lending rate minus short-term deposit rate. ⁵ Risk-weighted. ⁶ June.

Sources: Fitch-IBCA; IMF; national data. Table III.5

require restructuring of the state-owned enterprises as well. Once the transfer of NPLs to the AMCs is completed, banks are expected to focus on commercial lending, with management taking responsibility for future loan losses and agreeing to meet best performance targets.

It is still too early to assess the full impact of these reforms on banks' ongoing operations. The transfer of NPLs to AMCs led to a fairly rapid strengthening of the banks' balance sheets in Korea and Malaysia (Graph III.6, right-hand panel and Table III.5). In Thailand, where banks had to work out the loans on their own, NPLs declined from a peak of 48% of total loans in May 1999 to 38% in January this year, but progress slowed in recent months and there are concerns that the NPL ratio could start climbing again. There was also progress in cutting operating costs as a result of branch closures. Employment in Korean commercial banks declined by about 25% and remaining employees had to accept salary reductions. The profitability of Korean banks also improved in the first half of 1999 as a result of the resumption of economic growth and gains in the stock market. However, as several of the agreed debt workouts of the large chaebol are revisited, banks may have to accept additional losses.

In other countries, banks continued to operate with losses. Thus to sustain the balance sheet improvements, it will be imperative for banks to improve business practices such as risk analysis, loan approval and monitoring procedures, and to enhance profitability by cutting costs and concentrating on core business strengths. The authorities will need to continue to enforce the newly tightened prudential regulations through close supervision, and will also have to decide when and how banks which have been effectively nationalised are to be returned to private ownership. The greater presence of foreign financial institutions could be an important factor contributing to a more permanent change in the culture of Asian banking in the future.

Favourable impact of reforms in Korea, Malaysia and Thailand ...

... but much remains to be done elsewhere

Diverging and unusual performance of countries in Latin America

Macroeconomic developments in Latin America displayed several unusual features last year, not only in relation to other emerging market economies but also compared with historical trends. First, with Mexico as a major exception,

Latin America was in recession through most of 1999 and average growth declined quite sharply compared with 1998. Second, reflecting domestic as well as external factors, growth divergences across countries more than doubled. Third, contrary to historical patterns, depreciating exchange rates or even the abandonment of an earlier peg did not lead to higher inflation.

The influence of external factors

Although most Latin American countries are relatively closed economies, their low and diverging growth rates last year can, to a large extent, be attributed to differences in export performance and terms-of-trade changes (Table III.6). In particular, Argentina suffered a large terms-of-trade shock, mainly as a result of the weakness of food prices. Moreover, export volumes declined due to the depreciation of exchange rates in neighbouring countries, the general slowdown in the region and, above all, developments in Brazil, which takes the bulk of Argentina's exports. In contrast, the growth of export earnings in Mexico was helped by the booming US economy and the rise in oil prices. Other countries, such as Chile and Peru, benefited from the pickup in metals prices while the continued decline of food and beverage prices combined with weak demand in the region to constrain growth in Bolivia, Colombia, Paraguay and Uruguay.

The devaluation in Brazil ...

Domestic factors and policies were also important in explaining the divergent growth performance. One key event was the devaluation of the *Brazilian* real in early 1999 (Graph III.7). It was immediately followed by a worsening of expectations with respect to output growth as well as inflation. However, the abandonment of the almost-fixed exchange rate regime did not trigger a crisis, primarily because demand was already rather depressed and the adoption of a tight monetary policy and new measures of fiscal restraint reassured investors and limited the inflationary response. Moreover, the devaluation did not cause an acute problem in the banking system, since most banks had a favourable balance of dollar-denominated assets and liabilities and well managed derivatives operations. In particular, by virtue of their large holdings of liquid, floating rate and dollar-indexed government securities, banks were able to meet deposit withdrawals and overcome the cutoff of credit lines by foreign banks without suffering severe liquidity problems.

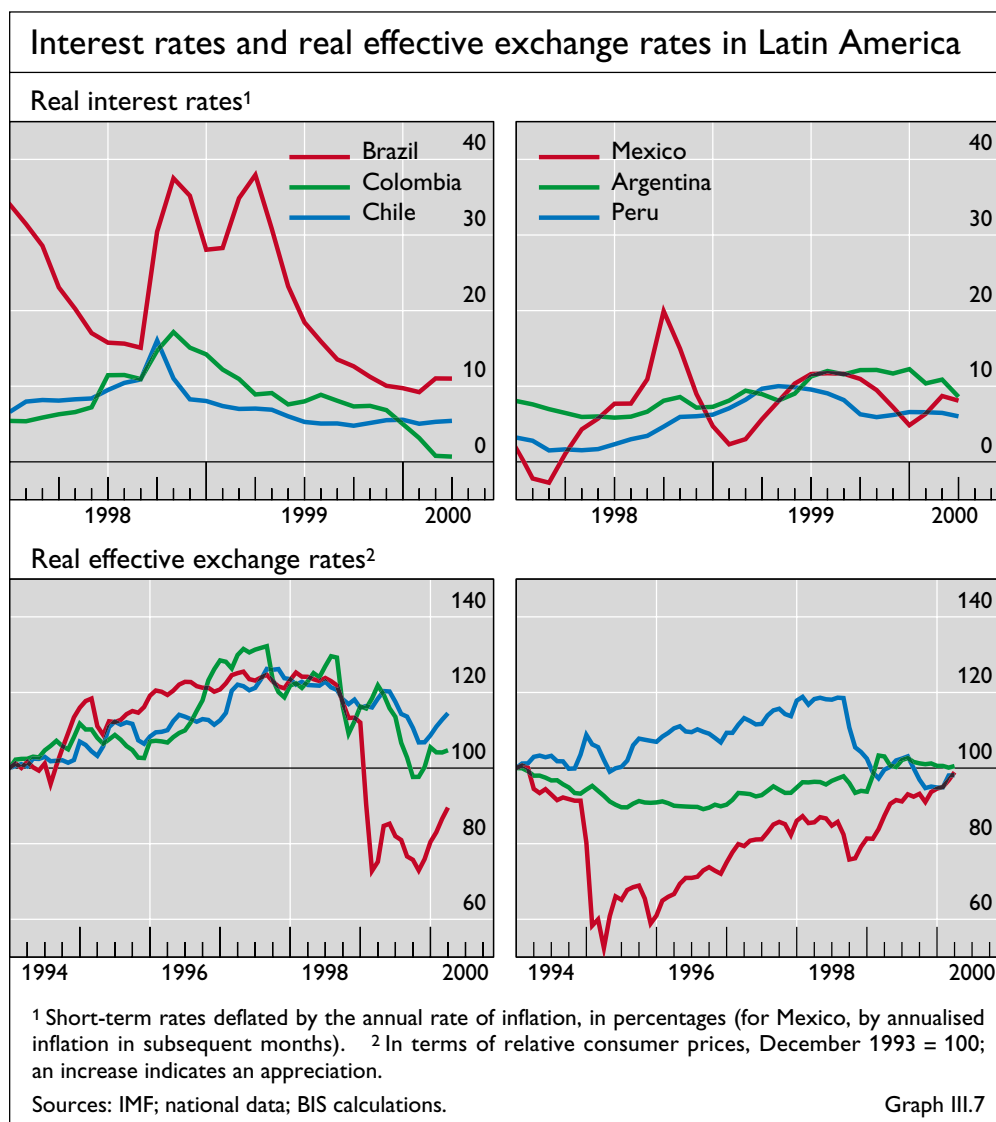
... did not trigger a crisis ...

Once the policy measures were in place, external financial pressure started to ease. The IMF announced a second tranche of financial support in March 1999 and an informal agreement was reached with some of the

	Growth ¹			Destination ²			
	Prices ³	Volume	Value ³	United States	European Union	Asia	Latin America
Argentina	-13.4 ⁴	2.2	-11.5	10.2	20.6	15.5	43.2
Brazil	-11.3	6.4	- 6.1	22.8	28.8	12.0	23.4
Mexico	3.7	12.2	16.4	83.0	3.5	2.2	5.1

¹ Percentage change over 1998. ² As a percentage of total exports. ³ In US dollar terms. ⁴ Up to third quarter.
Sources: IMF; national data; BIS estimates.

Table III.6



international banks to roll over existing credit lines, allowing the authorities to reduce interest rates from the peak of 45% in late March. Together with the shift in relative prices brought about by the currency depreciation, easier monetary conditions led to an expansion of output in the tradable goods sector even though the responsiveness of exports was limited by their concentration on commodities with falling prices and by the recession in neighbouring countries.

The restoration of confidence in Brazil also hinged on reducing the fiscal deficit to a more sustainable level (Table III.7). While the government eventually achieved a primary surplus of just above 3% of GDP, some of the measures taken were temporary or one-off actions since a consensus for far-reaching structural measures could not be found. Moreover, with the nominal deficit still close to 10% of GDP, concerns about fiscal stability led to renewed uncertainty in the foreign exchange market. To limit the weakening of the exchange rate, the government again relied on issuing dollar-indexed bonds and agreed with the IMF on a reduction of the minimum level of net international reserves. These measures, even though they may have increased

... though the fiscal deficit was a concern

longer-term vulnerabilities, eventually allowed interest rates to be reduced further.

Strong growth performance in Mexico ...

In contrast to most other countries, the contagion from Brazil to Mexico was rather limited. Strong export growth, facilitated by the continued buoyancy of the US economy, limited the downturn in early 1999, while domestic demand was the main source of growth during the second half. Boosted by high employment growth and the income effects of the higher oil price, private consumption grew strongly while investment was stimulated by a further easing of monetary policy. It is also worth noting that, over the last four years, domestic demand has expanded by a cumulative 25% without any increase in bank credit. In part, this reflects a lack of loan demand as business investment was largely financed through FDI inflows. However, it also resulted from banks' reluctance to lend to risky sectors and from the slow progress in restructuring banks' balance sheets and changing the legal system within which banks operate.

... but deep recession in Argentina

The recession in Argentina should not be attributed to external factors alone. Because of the convertibility law and Argentina's growing dependence on external financing, changes in external conditions had a direct impact on domestic policies. Thus interest rates were driven up following the Brazilian devaluation. Subsequently, as tax revenues declined in response to lower

Fiscal balances and public debt									
	Nominal balance			Interest payments			Public debt		
	1996	1998	1999 pe	1996	1998	1999 pe	1996	1998	1999 pe
as a percentage of GDP									
Asia									
China	-0.8 ¹	-1.2	- 2.1	0.8 ¹	1.0	...	7.4 ¹	9.9	...
Hong Kong	2.2	-1.8	- 0.1	-	-	-	-	-	-
India	-4.7	-5.9	- 5.7	4.2	4.4	...	47.9	49.8	...
Korea	0.3	-4.2	- 2.9	0.5	0.8	...	12.0	19.5	22.2
Singapore	14.7	16.7	10.1	-	-	-	73.7	83.1	87.4
Taiwan	-3.3	0.7	- 0.9	1.6	1.5	1.4	22.9	24.0	25.5
Indonesia	1.1	-2.5	- 2.7	2.0	2.4	3.8	27.3	73.9	60.0
Malaysia	0.7	-1.9	- 3.4	2.7	2.6	2.8	35.9	38.3	40.0
Philippines	-0.3	-1.8	- 3.6	3.4	3.6	3.4	...	...	...
Thailand	3.0	-2.9	- 3.4	0.2	0.2	1.0	13.5	22.1	37.1
Latin America									
Argentina	-2.2	-1.4	- 2.6	1.7	2.2	2.9	35.7	37.7	43.1
Brazil	-5.9	-8.1	-10.0	5.8	8.1	13.1	33.3	42.4	47.0
Chile	2.3	0.4	- 1.5	0.6	0.7	0.4	38.4	35.3	34.2
Colombia	-1.7	-3.4	- 4.3	3.5	4.2	3.8	13.9	21.6	29.8
Mexico	-	-1.3	- 1.1	4.4	2.9	3.6	30.5	27.9	25.3
Peru	-1.1	-0.6	- 2.5	2.2	1.7	1.9	25.4	20.4	20.6
Venezuela	0.7	-4.2	- 2.8	5.0	3.0	3.3	48.8	28.9	29.5

Note: Comparisons across countries should take account of the fact that different definitions of the public sector are used.
¹ 1997.
Source: National data. Table III.7

nominal incomes and debt service increased, there was growing uncertainty as to whether the fiscal targets agreed with the IMF would be achieved. The uncertainty and the associated upward pressure on interest rates were compounded by fears that the government might encounter difficulties in financing even a moderate rise in the deficit (1.2% of GDP), since it was already issuing debt heavily in international capital markets to finance the current account deficit and amortisation payments (Table III.4). Although the announcement of more stringent fiscal measures by the end of the year provided some relief, the need to support the exchange rate meant that interest rates had to be kept high. Indeed, the absence of any domestic instrument to cushion the effects of adverse external developments was manifest in the 2% decline of consumer prices during 1999.

Unlike Argentina, *Chile* was able to ease monetary conditions in response to the externally induced recession early in the year and its solid fiscal position made it possible to use fiscal policy countercyclically. By contrast, in *Ecuador* and *Venezuela*, which both benefited from the rise in oil prices, uncertainty about policies and other domestic events led to a steep decline in output.

Inflation developments

A notable development in Latin America last year was the containment of inflation at low levels in most countries. The average inflation rate in the region declined to 9% and the median rate to just 4%. Moreover, some traditional high-inflation countries (Colombia, Uruguay and Venezuela) recorded their lowest inflation rates in decades. This achievement was all the more remarkable, given the background of lower nominal exchange rates in many countries and an earlier history of depreciations inducing sharply higher rates of inflation.

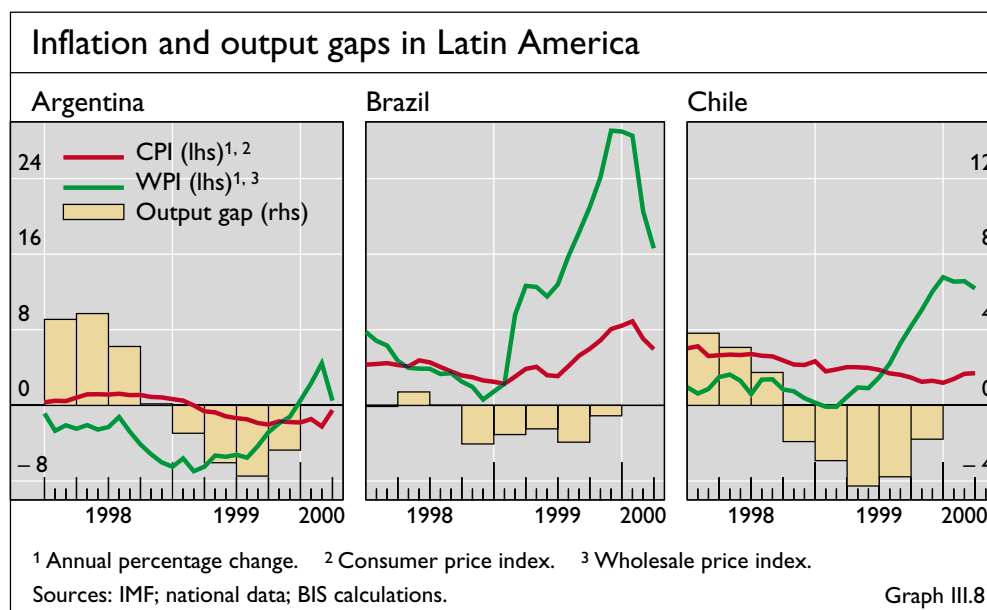
Containment of inflation ...

Some of the disinflationary influences in 1999 might prove only transitory. First, disinflation was imported from the rest of the world through lower import prices in US dollars and, in the case of Mexico, an appreciation of the peso against the dollar. Second, most economies were operating at low levels of capacity utilisation and in a recessionary environment such that firms tended to reduce margins and workers restrained wage demands. In Brazil, for instance, profit margins in most manufacturing industries had already contracted before the devaluation and real wages had fallen by 8% by end-1999. Moreover, weak demand contributed to a relatively low pass-through of changes in import and wholesale prices into consumer prices. In other countries, a similar compression of profit margins and a low pass-through of exchange rate and import price movements also seem to have taken place (Graph III.8).

... could be only transitory ...

However, there are several reasons to believe that the current low inflation prevailing in Latin America could become a permanent feature. Deregulation has led to more competitive economies and trade liberalisation has opened domestic markets to more foreign competition, even if imports still account for only a small fraction of total expenditure. Indexation mechanisms have also been removed as low inflation has become established. Moreover, since most countries now allow their currencies to float, and exchange rates

... but might become permanent



have indeed been moving in both directions, firms may become more cautious in revising their prices in response to exchange rate changes. Finally, aware of the risks of a rebound of inflation, the authorities in most countries have kept interest rates at relatively high levels and also refrained from using fiscal policy to ease the recession. Such prudent policies probably helped to dampen expectations of inflation and, by partially reversing nominal depreciation, may also have facilitated the control of actual inflation.

Large external imbalances

Large current
account deficits ...

Although output declined or stagnated in the region, current account deficits remained at high levels, notably in Argentina and Brazil, where they continued to exceed 4% of GDP. While external imbalances narrowed significantly in Chile and Colombia, they remained rather high in Mexico and other countries, particularly given the stage of the economic cycle and relatively favourable global conditions. An important factor was that several countries were severely affected by the slow recovery or continued decline of non-oil commodity prices. Moreover, despite their immediate contribution to financing current account imbalances, FDI inflows in the form of greenfield investment may have led to a widening of those imbalances. For instance, foreign investment in the assembling companies that conduct most of the trade between Mexico and the United States leads directly to higher imports of capital goods. In addition, such inflows tend to increase domestic income and thus raise imports further. Foreign investment in the non-tradable sectors might also be accompanied by wider current account imbalances to the extent that firms earn profits without having increased either export or import-substituting capacity.

... raise concerns
about sustainability
of FDI inflows ...

Another, and perhaps more important, issue is whether FDI flows are sustainable at the level experienced in the last few years. Privatisation-induced inflows have been important in Argentina, where they represented half of total flows last year. However, there are obvious limits to this process and, in Brazil, the share of FDI associated with privatisation actually fell in 1999. Mergers and

acquisitions were important as well and may have been boosted by the fact that local companies appeared less expensive due to the lower exchange rate. But FDI flows into Latin America have also been driven by structural reforms allowing foreigners to invest in an increasing number of sectors, the effects of which might well be felt for several years. Moreover, in cases where the initial entry of foreigners came through privatisation, mergers or acquisitions, these moves were often followed by expansions of the capital stock.

Notwithstanding the relative ease with which current account deficits were financed, the further rise in foreign debt/GDP ratios last year implies that most Latin American countries remained highly exposed to changes in international financial conditions, including higher interest rates in the industrial countries.

... and exposure to foreign interest rates

Africa

Despite the pickup in global demand and the associated improvement in financial conditions, economic growth in Africa slowed to some 2½%, from more than 3% in 1998. Once again, Africa's basic structural weakness (ie its low degree of integration in the world economy and excessive reliance on agriculture and exports of primary commodities) has made its macroeconomic performance relatively insensitive to changes in global demand conditions but highly vulnerable to terms-of-trade movements. In addition, because of poor governance, a rudimentary financial structure and low saving, the resistance to domestic shocks is weak and, as a result, variations in growth rates across countries are typically much larger than for other groups of emerging market economies. For instance, higher prices for industrial commodities, themselves a product of higher global growth, supported real income in many African countries in 1999. However, civil strife and loss of monetary control in Angola and the Democratic Republic of Congo, deflation in Burkina Faso and Chad and adverse weather conditions in other countries (eg Morocco) all took their toll on output, causing average GDP growth in Africa to decline.

Structural weaknesses contribute to lower growth

With growth lower than expected, many countries made further progress in reducing inflation. Disregarding the two countries which lost monetary control, average inflation fell to around 7% and the median rate to only 4%, the lowest for the 1990s. As in the past, inflation was lowest in the CFA countries; in fact, half of the countries in this group experienced either falling prices or price increases of less than 1%. By contrast, in Malawi and Zimbabwe inflation rose to 45% and 60% respectively, while Zambia, Ghana and Sudan recorded inflation rates ranging up to almost 30%.

Progress in reducing inflation

The divergences in economic performance could also be observed across regions last year (Graph III.9). For instance, lower growth in the northern region was mainly due to the significant slowdown in Morocco, while the relatively high growth recorded by the western region can be attributed to a pickup in Ghana which more than offset the weaker performance in Côte d'Ivoire. The slowdown in the central region is, however, puzzling as three of Africa's oil-exporting countries (Cameroon, Gabon and Nigeria) are in that area. In other cases, a significant degree of heterogeneity within regions

Marked growth divergences across regions

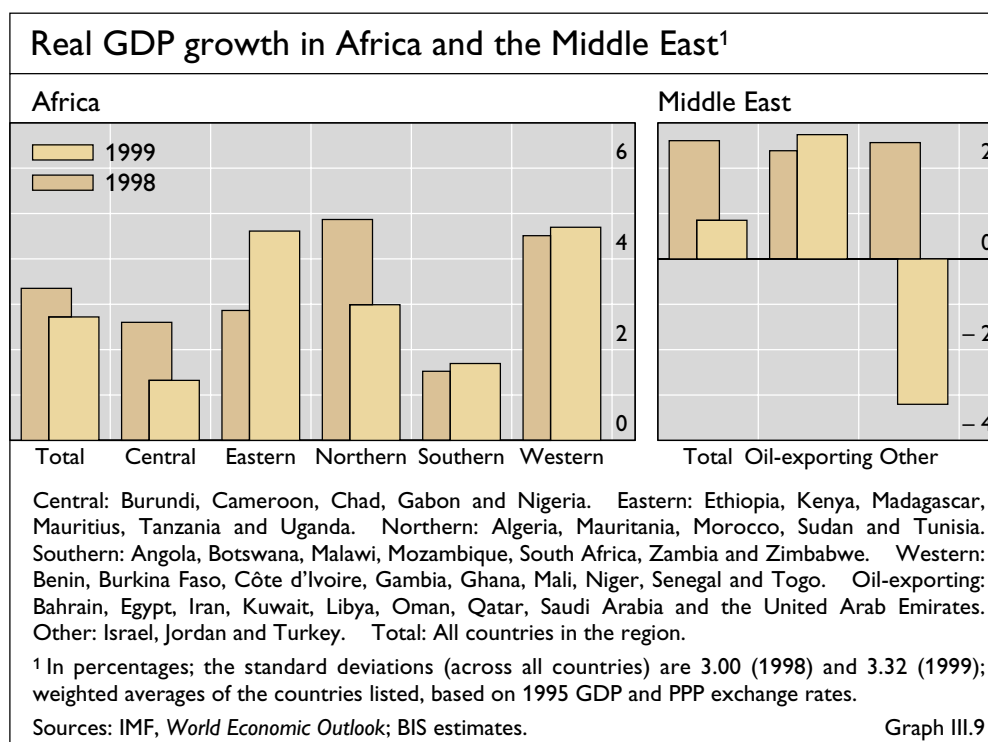
causes differences in country performances to “even out”. For instance, the eastern region experienced a marked improvement in output performance as the resumption of growth in Ethiopia more than offset the effects of the persistent weakness of agricultural commodity prices in Kenya, Tanzania and Uganda. Similarly, the low growth in the southern region can mainly be attributed to the deteriorating performance of Zimbabwe and continuing slow growth in South Africa.

The need for higher and more labour-intensive growth in South Africa

During the 1990s, *South Africa's* GDP growth averaged only 1% while the rate of unemployment increased to nearly 40%. Even though the actual jobless rate is somewhat lower, as many unemployed work in the informal sector or take unregistered contract work, several years of high and stable growth would seem necessary to reduce unemployment and generate a more equal distribution of income. To ensure higher output and employment growth, it is crucial that the investment/GDP ratio be raised substantially from the current level of only 15%, but also that there be some moderation of real wages to induce firms to install more labour-intensive equipment. While the introduction of an inflation targeting framework for monetary policy could help to reduce inflation and inflation uncertainty, this is probably not sufficient to make South Africa more attractive to foreign direct investment. In the last decade South Africa actually recorded a net FDI outflow as greenfield investment in particular has been discouraged by sluggish productivity growth and relatively high unit labour costs.

Obstacles to FDI inflows

Lack of competitiveness may, however, not be the only reason why the worldwide surge in FDI flows into emerging market economies has largely bypassed South Africa, and indeed the continent as a whole. Political uncertainty and weak legal systems are even more important problems in some countries. Greater diversification of production and export structures



Monetary indicators for Africa ¹								
	Broad money		Credit to the government		Credit to the private sector			
	as a percentage of GDP						as a percentage of total domestic credit	
	1992–94	1995–98	1992–94	1995–98	1992–94	1995–98	1992–94	1995–98
Central	20	15	18	6	9	9	33	58
Eastern	36	39	15	12	17	22	47	66
Northern	65	59	28	19	21	29	34	44
Southern	40	43	2	2	48	53	84	85
Western	23	22	9	9	15	12	64	61

Note: For an explanation of the country groupings, see Graph III.9.
¹ Annual average for the three- and four-year period respectively.
Sources: IMF; national data; BIS estimates.

Table III.8

would also render African economies more attractive as host countries for FDI. Moreover, the lack of financial depth and the smallness of markets continued to impede the necessary mobilisation of both foreign capital and domestic saving. Thus financial sectors in Africa have remained small compared with the more advanced Asian and Latin American economies. Taking the ratio of broad money to GDP as a measure of the depth of the financial system, only Algeria, Kenya, Mauritius, Morocco, South Africa and Tunisia have relatively developed systems (Table III.8). Moreover, the rise in financial intermediation, as measured by credit to the private sector relative to GDP, has been only modest.

While the establishment of a well functioning financial system could play a key role in attracting foreign investment, Africa is confronted with several structural and political problems in this respect. First, the economic structure of most countries (a high share of agriculture with investment largely self-financed) tends inherently to produce a low degree of financial intermediation. Second, large state-owned banks have hampered the development of a more efficient and competitive financial sector. Third, up to the mid-1990s, African countries typically favoured the “real” sector of the economy through preferential credits to selected activities. During the second half of the 1990s, policies did shift increasingly towards financial liberalisation, including interest rate deregulation, the granting of independence to central banks, the chartering of new banks and, as a consequence, a larger role for financial institutions in allocating capital. However, the effects of these reforms have been relatively limited to date.

Structural impediments to financial sector development

Middle East

The instability of oil prices over the past decade undoubtedly depressed economic growth and investment in the Middle East. However, in more recent years, there were signs of recovery, notably in countries where a shift towards more market-oriented policies could be observed. For instance, following the adoption of a unified exchange rate in the early 1990s and the introduction of

Reform policies improve performance in Egypt

wide-ranging structural reforms, *Egypt* achieved average growth of about 5% in the last five years while, over the same period, the rate of inflation gradually declined to 3%. *Saudi Arabia* has also announced measures directed at opening the economy to foreign investment and diversifying away from oil. However, the improvement in the overall economic performance recorded last year can mainly be attributed to the strength of oil prices which helped to reduce the fiscal deficit to about 6% of GDP and the current account deficit to 3%.

Output shocks in Turkey ...

The *Turkish* economy suffered three major shocks in 1999: the loss of important export markets, the withdrawal of foreign capital in the wake of the 1998 Russian debt moratorium, and the earthquake in August which caused huge damage to the economy. High real interest rates, aimed at reducing inflation, exacerbated the recessionary tendencies in the first half of 1999 and real output dropped by an estimated 5%. Economic activity in *Israel* was also rather weak during the first half of 1999. However, the announcement of fiscal restraint and a 3–4% inflation target for the next two years, in conjunction with stronger global demand, seemed to have a favourable effect on expectations and confidence. As a result, the second half saw GDP growth rising to a 5% annual rate, driven by exports and consumption. Moreover, despite the surge in activity, the rate of inflation declined to only 1.3% by end-1999.

... but a rebound in Israel

Central and eastern Europe

Output and foreign trade developments

Quick recovery in Poland and Hungary ...

While Russia recovered more quickly from the financial crisis of mid-1998 than had generally been expected, the crisis, combined with the fallout from the Kosovo war, had negative effects on neighbouring countries. The Hungarian and Polish economies recovered rapidly from the slowdown, with growth rates of 4–4½%. In Hungary, the industrial recovery was driven by the electronics sector and strong growth in exports (Graph III.10). Industrial production was also a major source of strength in Poland while real earnings growth, combined with continued brisk lending to households, supported consumption growth.

... while others suffer output losses ...

The recession in the Czech Republic actually started with the currency crisis of 1997 and was later exacerbated by fiscal restraint. Unemployment rose rapidly, causing nominal wages as well as market prices to moderate or decline. Being still very dependent on exports to Russia, output in the Baltic states slowed by up to 4%. The Romanian economy, suffering from a host of domestic problems, contracted by 4% in 1999 and Croatia by 2%. In contrast, Bulgaria seems to have been relatively little affected by the crises in neighbouring countries and continued to reap the benefits of its currency board, including output growth of 2½%, a fall in inflation to only ¼% and lower interest rates. Equally surprising were the solid growth performance and relatively stable macroeconomic conditions in most CIS countries, many of which benefited from low imported inflation and the higher oil price.

... though not Bulgaria and the CIS countries

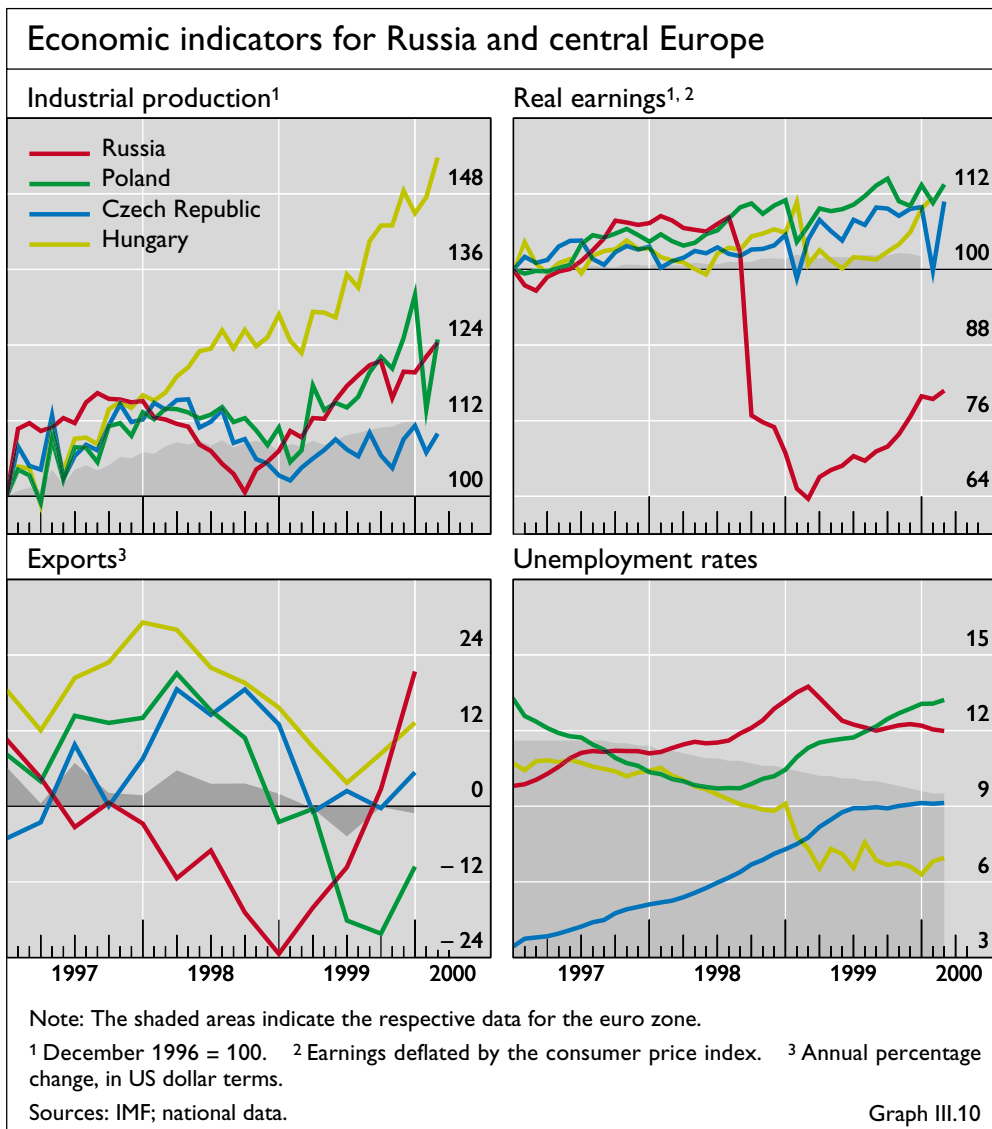
Uneven development in foreign trade

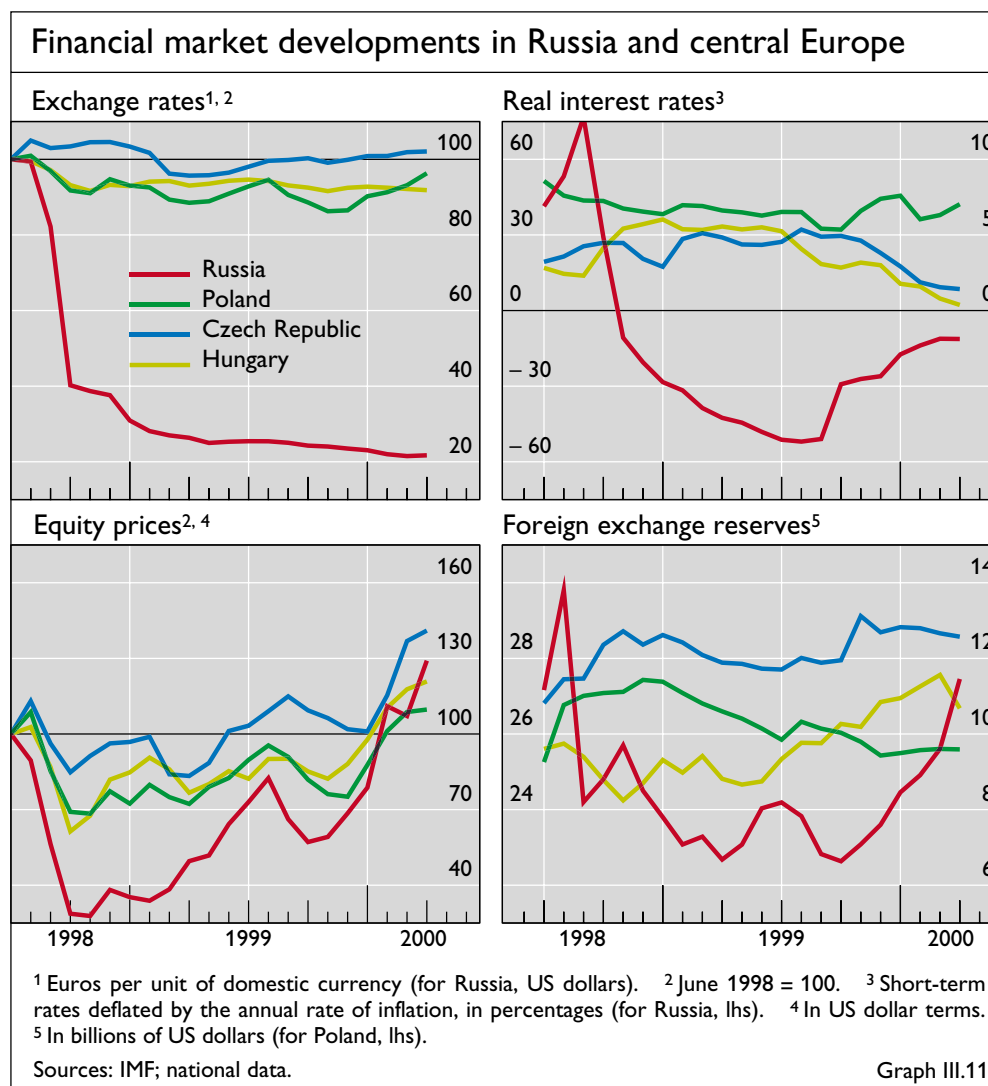
Owing to differences in the commodity composition and geographical distribution of exports, as well as variations in domestic demand growth, developments in foreign trade and current account imbalances were quite

uneven last year. Hungary's exports had already started to recover by mid-1999 and its current account deficit declined. The Czech Republic also saw an improvement in its current account, though mainly due to weak import demand. In contrast, Poland's current account deficit widened to 8% of GDP owing to a major loss of competitiveness in export markets. Downward exchange rate pressures were generally less pronounced in the region than in 1997–98, even in the Baltic states, Slovakia and Croatia, where current account deficits remained at or above 6% of GDP (Graph III.11).

The resumption of growth in *Russia* in 1999 was mainly due to favourable external developments. The substantial increase in the price of oil and import substitution effects induced by the large devaluation in August 1998 were reflected in a trade balance shift of \$17 billion and a rise in GDP of 3.2%. Moreover, a revival of the manufacturing sector helped to halt the upward trend of unemployment. Other positive developments included better tax collection and the containment of inflationary pressure as fears of hyperinflation waned and a less volatile rouble/dollar exchange rate became established. However, the containment of inflation has, in part, been at the

Stabilisation in
Russia





expense of steeply falling real earnings and household incomes. By the end of 1998, real earnings had declined by about one third compared with the pre-crisis level and only a fraction of that loss was recovered last year.

Inflation and the adoption of new monetary policy regimes

Widening inflation gap vis-à-vis the euro zone

Although inflation in central Europe had continued to moderate under the influence of weak economic growth during the first half of 1999, the gap between central European and euro zone inflation rates started to widen again. In several countries, wage growth in excess of productivity was the major threat to price stability, while in others large currency depreciations or liberalisation measures were the principal inflationary forces. Partly in response to these developments, Poland implemented an inflation targeting framework for the conduct of monetary policy from the beginning of 1999, while the Czech Republic had already done so following the currency crisis of 1997.

The adoption of inflation targets in Poland ...

Poland initially set a target range for CPI inflation of 8–8.5% for end-1999, with the longer-term aim of reducing inflation to below 4% by 2003. While the range was lowered in March 1999, the actual rate (9.8%) turned out to be higher than targeted, partly due to the rise in oil prices but also reflecting

unexpectedly strong consumer demand. The central bank attempted to rein in inflationary pressure by raising policy rates by 3 percentage points while continuing to monitor the exchange rate. The zloty's already large fluctuation band was widened further from $\pm 12.5\%$ to $\pm 15\%$ in March 1999 and, consistent with the shift to an inflation targeting framework, the authorities decided to float the zloty in April this year. In contrast to the Polish experience, the net inflation target was significantly undershot in both 1998 and 1999 in the *Czech Republic*. The large gap between net inflation, which excludes the impact of changes in indirect taxes and administered prices, and headline inflation for a time threatened credibility as expectations of inflation appeared to lean more heavily on the latter. However, in response to the undershooting of the net inflation target and to weak economic growth, interest rates were lowered substantially last year with broad popular support.

... and the Czech Republic

Due to their short exposure to a more market-oriented environment and to the process of transition itself, central European economies which chose to introduce an inflation targeting framework faced some specific challenges. Among these were the need to model the transmission mechanism of monetary policy and to estimate the impact of large movements in exchange rates on inflation and expectations of inflation. In addition, the time series data on output and productivity are relatively short, complicating the calculation of output gaps. Moreover, most transition economies have not yet fully liberalised all administered prices. The Czech government is committed to liberalising all regulated prices by the end of 2002 and such a move could add up to 3 percentage points per year to headline inflation. Although the central bank is targeting net inflation, this development could still lead to tighter monetary policy if inflation expectations and wage demands rise in consequence. Finally, consumption patterns have probably not yet settled, creating a risk of potential measurement errors in both headline and underlying price indices.

Challenges to inflation targeting in transition economies

IV. Monetary policy in the advanced industrial countries

Highlights

Last year marked a turning point in the interest rate cycle, with many central banks initiating a process of tightening in the light of emerging price pressures. In the three major economies monetary policymakers faced different sources of uncertainty. Moreover, central banks felt it increasingly important to recognise explicitly the constraints arising from such uncertainty in designing policy and in communicating with the public. One advantage of being transparent about the difficulties that confront those conducting monetary policy is that it may help policymakers maintain credibility even in the face of policy reversals.

In the United States, there was uncertainty in particular with respect to the rate of potential growth as well as the state of financial markets. Further evidence accumulated that long-run productivity growth might be increasing, complicating the assessment of inflationary pressures, and employment continued to grow at rates previously thought unsustainable. While increases in the federal funds rate target in mid-1999 largely reflected an unwinding of the rate cuts undertaken following the turmoil in global financial markets in 1998, increases later in the period under review reflected a growing concern that excess demand might exacerbate inflationary pressures. As in recent years, the Federal Reserve continued to face the question of how best to incorporate asset prices into policy deliberations. In particular, equity markets continued to post strong gains, with uncertain implications for consumption. The need for monetary policy to take account of potential reactions in financial markets was further highlighted when the Federal Open Market Committee (FOMC) began announcing the bias in its policy stance immediately after its meetings.

Uncertainty was also a prominent theme in Japan. The principal question was whether the policy measures already taken would be sufficient to prevent a severe recession from developing deflationary tendencies; and, if not, what further steps could be taken to stimulate activity given that nominal policy rates were effectively zero. With real GDP having fallen for five consecutive quarters from the fourth quarter of 1997 onwards and with consumer prices in the latter half of 1998 declining for the first time in three years, the Japanese economy faced considerable downward momentum at the beginning of 1999. In the event, economic and financial conditions improved somewhat, although there was little evidence that the economic recovery had become self-sustaining.

The experiences of the Eurosystem last year bore witness to the policy problems that arise when a new and rapidly changing economic and financial landscape affects both the transmission mechanisms of monetary policy and

exchange rate perceptions. The Eurosystem conducted policy much in the pragmatic way it had announced it would, eschewing attempts at fine-tuning given uncertainty about the transmission mechanism, and relying on M3 growth as a policy indicator only in situations in which its information content was deemed unaffected by temporary factors. While the Eurosystem's interest rate decisions were generally well received by the public, criticism was directed at its policies regarding the public disclosure of information. These were seen by some observers as providing an insufficient degree of transparency, despite the great emphasis placed on clarity and openness by the Eurosystem from the outset.

As in the United States and the euro area, a tightening of monetary policy occurred in all of the inflation targeting countries as the year progressed. In general, the combination of greatly increased domestic demand, higher world growth and rising oil prices initiated more generalised price increases and generated upward revisions in medium-term forecasts of inflation, thus justifying the raising of short-term interest rates.

United States

Two sets of issues figured prominently in decision-making by the Federal Reserve last year. The first involved the behaviour of productivity growth and tightness in labour markets, and an assessment of their impact on the outlook for inflation. The second concerned the state of financial markets, specifically the interaction between monetary policy and asset prices. Both issues were a source of uncertainty for policymakers. Productivity growth has at times in recent years been above rates seen in the 1970s and 1980s, suggesting that the productive capacity of the economy may have permanently increased. However, identifying with certainty a break in trend productivity growth at a mature stage of an expansion remains difficult. Equally challenging and closely related is isolating the effects of monetary policy on asset prices, and their effects in turn on consumption, economic growth and measured productivity.

Uncertainty about productivity growth and asset prices

In this regard, it may be instructive to consider the experience of Japan in the 1980s. At that time, Japan enjoyed low inflation and strong growth for several years, which made it difficult for policymakers to separate trend from cycle. Moreover, these developments occurred against a backdrop of an appreciating yen, high rates of investment and accelerating productivity growth, as well as large increases in stock and real estate prices. The question faced by the Bank of Japan was whether it needed to tighten monetary policy and, if so, how to garner public support with inflation benign and productivity growth remaining at an elevated level. Furthermore, little was known then, as now, about how rapidly rising asset prices might respond to a tightening of monetary policy. These conditions seem similar to the recent US experience. In significant respects, the US situation appears more stable since the increase in real estate prices has been considerably smaller and the banking system seems much stronger. However, unlike Japan before, the United States is an external debtor with a large current account deficit. Thus, the balance of risks remains difficult to assess.

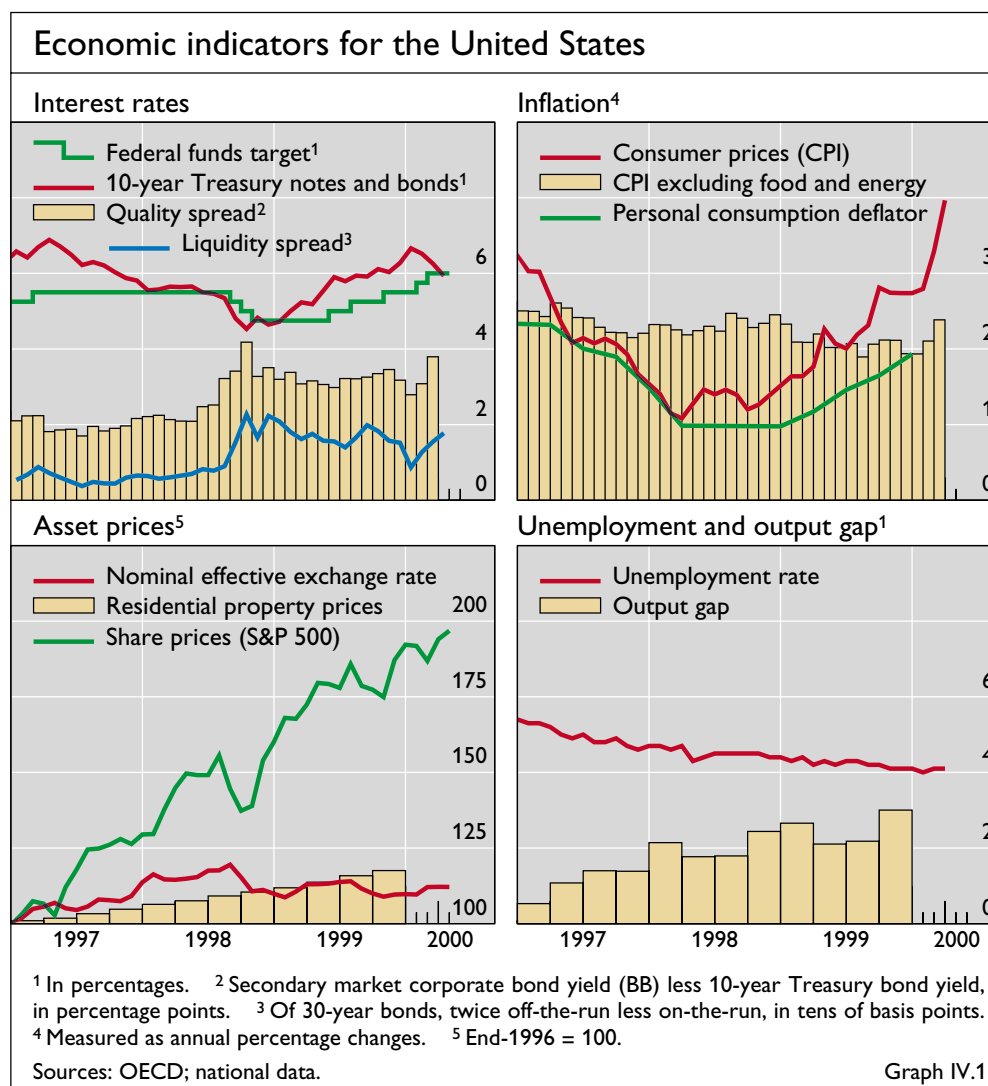
Similarities and differences compared to earlier Japanese experience

Debt markets stabilise ...

In the early part of the period under review, financial market considerations played a predominant role in policy deliberations. To understand their impact, it is useful to recall the events of late 1998. At that time, a series of international financial crises with implications for the US economy induced the Federal Reserve to lower interest rates three times. It was feared that widespread retrenchment of credit could lead to financial markets seizing up, resulting in a recession. Symptomatic of the turbulence in financial markets were sharp increases in the spread between twice off-the-run and on-the-run 30-year Treasury bonds and between lower grade corporate debt and 10-year Treasury bonds. By the middle of 1999, however, these fears had been allayed somewhat, as it appeared financial markets were functioning more normally again. The focus of policy then became the timely unwinding of cuts in the target federal funds rate commensurate with more stable financial market conditions.

... and policy begins to tighten

With this unwinding already under way, emphasis shifted during the year to avoiding an inflationary outburst and an untimely end to the expansion. Whether the wealth gains from equity markets were to prove permanent or temporary, the Federal Reserve felt that their effects would be inflationary by



pushing current domestic demand above current supply. The combination of a declining personal savings rate and high stock prices implied that capital gains were indeed fuelling consumption, which became the main engine of growth well into the expansion. The Federal Reserve thus faced a situation in which inflation was expected to increase if left unchecked, but a hard landing could ensue if monetary policy moved too aggressively and stock prices were significantly affected. The likelihood of a large stock market decline would presumably depend in part upon whether or not increases in stock prices reflected a bubble or were justified by a permanent upward shift in productivity growth. In the latter case, the Federal Reserve could be less concerned about a steep fall in asset prices and tighten policy more vigorously in the face of inflationary pressures.

Standard economic indicators also provided conflicting signals throughout the year, complicating the conduct of monetary policy. Nine years into the expansion, with real GDP growth of over 4%, the level of real GDP more than 2% above traditional estimates of potential output and unemployment reaching a 30-year low, there was increasing concern that underlying inflationary pressures were building up in the US economy. The rising current account deficit clearly indicated that domestic demand was outstripping domestic supply. In addition, two key elements which had contributed to the benign inflation performance of recent years, an appreciating US dollar and declining world oil prices, subsided. In contrast, productivity growth continued to exceed expectations and unit labour costs remained low, even falling in the latter part of 1999. The possibility that a trend break in productivity had occurred became more plausible. Moreover, the expansion had been supported in no small measure by substantial investment in restructuring and advanced technologies, which lent added credence to the “new economy” view. Nevertheless, overall, even though the main economic indicators provided conflicting signals about future inflation developments, it became increasingly likely that further tightening would be required. With the federal funds rate target back at 5.5% by November 1999, the FOMC continued to raise policy rates through the early part of 2000.

Productivity growth remains high, but labour markets tighten

Asset prices, financial stability and monetary policy

Assessing the role of asset prices in the conduct of monetary policy raises a range of issues. A strategic question is whether asset prices should represent an independent objective of monetary policy. In many countries, central banks are charged with promoting financial stability. Since asset price cycles can trigger systemic banking failures and, along with credit cycles, often precede sharp economic downturns, some contend that it might be provident to target financial variables directly. However, unlike a target for inflation, it is difficult to quantify financial stability, and therefore it is not easy to know when asset prices threaten that stability. Moreover, there is the obvious difficulty of determining exactly what asset price should be targeted among the many potential candidates and, once chosen, what its target level should be. Still more fundamentally, such a policy would logically imply pursuing less vigorously the more traditional objective of consumer price stability.

Role of asset prices not well understood

Regardless of the extent to which asset prices might sometimes be allowed to constrain the pursuit of the traditional objectives of monetary policy, the effect of asset prices on those objectives is clearly of interest to policymakers. However, there remain many unresolved practical issues concerning how policy should react to asset price movements. For instance, it is not clear that policymakers can respond to changes in asset prices without at least taking a stand on whether they are too high or too low relative to an appropriate level. Second, there is considerable uncertainty about the role of asset prices in the monetary transmission mechanism, which limits their usefulness in policy assessments. For example, neither the timing nor the magnitude of the effects of changes in monetary policy on asset prices are well understood.

Potential dangers in responding to asset prices

The uncertain effects of monetary policy on asset prices are a feature of both monetary easing and monetary tightening. As to the former, liquidity infusions in times of apparent financial distress could contribute to moral hazard and promote future situations in which markets are under even greater stress. Indeed, such actions could inadvertently validate current high prices in other strongly performing asset markets. The Federal Reserve's rate cuts in late 1998, needed to stabilise fixed income markets, may have encouraged the stock market to rally at the same time. As for the latter, it might seem clear against the backdrop of the Japanese experience in the 1980s that an early tightening of policy would restrain asset prices and stem an expanding bubble. However, in practice, slightly tighter monetary policy might instead instil further market confidence in the sustainability of the expansion by signalling the central bank's anti-inflationary resolve. This could nullify the intended consequences of policy actions. It may therefore be difficult to deflate asset price bubbles gently. In fact, policymakers can arguably only eliminate perceived bubbles by tightening policy aggressively. Aside from other considerations pertaining to the targeting of asset prices, policymakers will have a natural aversion to such policies in the absence of certainty that a bubble exists. Since such certainty may only emerge well into the cycle, at that point it may be too late for policymakers to insulate the economy from the consequences of an asset price adjustment.

Announcement of the bias

The need to consider the interaction between financial market perceptions and monetary policy was also highlighted last year by the Federal Reserve's decision to announce the bias in its policy stance immediately following FOMC meetings. Before May 1999, the bias was revealed to the public only when minutes of FOMC meetings were published. The new procedure reflects a still greater willingness by the Federal Reserve to be open about its operations.

Meaning of the bias unclear

From its inception, the meaning of the bias had never been fully clear to the public. One interpretation is that it helped to achieve a consensus among members of the FOMC on the adopted rate target by providing an outlet for dissenting views. A second is that it gave the Chairman authority to initiate discretionary changes in policy between meetings. A third is that it signalled the direction in which future federal funds rate changes were actually expected

to occur. In spite of this lack of clarity, it appears from the examination of movements in federal funds futures rates around FOMC meetings since May 1999 that the markets were neither surprised by nor reacted strongly to the bias when it was announced simultaneously with the policy stance. Nonetheless, while bond market behaviour did not appear to change either, the announcement of the bias seemed to cause short-lived reactions in equity markets. In order to dispel any possible confusion, the Federal Reserve revised its disclosure procedure again in February 2000, making clear that the bias is meant to convey the FOMC's consensus view of the uncertainties surrounding future economic growth and inflation, over a horizon that extends beyond the next FOMC meeting.

Japan

With consumer prices constant or declining somewhat, and the output gap large and growing, monetary policy in Japan focused last year on preventing the economy from developing further deflationary tendencies.

Since overnight interest rates had already been reduced effectively to zero in March 1999, further relaxation of policy through the traditional interest rate channel was not feasible. With long-term interest rates rising sharply in late 1998 and early 1999, in response to announced fiscal measures to support economic activity amid perceptions of reduced public sector demand for long-term government bonds, the Bank of Japan announced in April its intention to maintain short-term interest rates at zero until deflationary concerns subsided. This measure, which was designed to put downward pressure on bond yields, led to a decline in 10-year yields during the spring. Evidence of an improving economic outlook as the year progressed led in the summer to speculation that the zero rate policy might be abandoned, and triggered a rise in long-term bond yields to just below 2%. Moreover, and more worryingly, the yen started to appreciate abruptly, which exerted a contractionary effect on activity. Only as perceptions shifted near year-end towards the economy being weaker than earlier believed was the appreciation partially reversed.

While fiscal policy remained crucial in underpinning activity, evidence also accumulated suggesting that the steps taken in the preceding year to stabilise the financial system had begun to bear fruit. The adoption of credit guarantees, the expansion of lending through public financial institutions, the closure of insolvent financial institutions and the recapitalisation of several major banks were all intended to support credit growth and public confidence. The reduction of credit risk premia in the banking system, the gain in lending attitudes and higher equity prices provided welcome indications that perceptions of the health of the financial system were indeed improving. Despite this change in sentiment, however, there was little firm evidence that underlying financial conditions had significantly strengthened. Bank lending, for instance, continued to fall, reflecting a combination of weak credit demand by larger borrowers and creditor concerns regarding the financial position of smaller borrowers in particular.

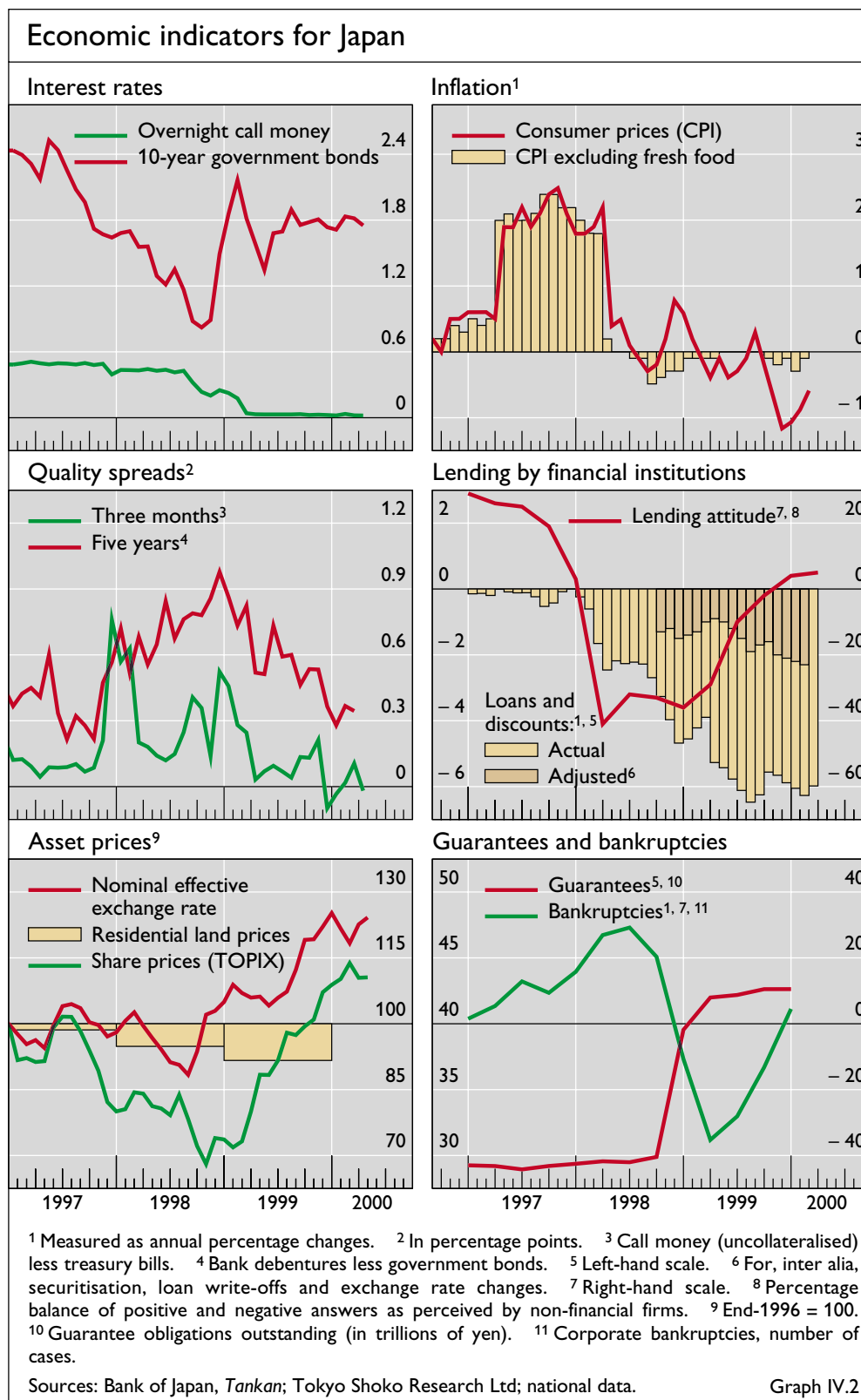
By reducing call money rates to zero, the Bank of Japan fully committed its main policy instrument to supporting the economy. The extent to which

Zero interest rate
policy ...

... is maintained

Anxiety about
financial institutions
reduced

additional and exceptional policy measures could be used to further ease monetary conditions remained highly uncertain. Some observers, including the Bank of Japan itself, argued that further efforts to expand the monetary base, whether through money market operations or unsterilised foreign exchange intervention, would be ineffective because financial institutions would



redeposit any additional liquidity with the central bank. Indeed, it was suggested that such measures could be counterproductive if they compromised the independence of the Bank of Japan and led to a rise in long-term interest rates. However, other commentators felt that increases in the monetary base might lead financial institutions to purchase higher-yielding assets, including corporate debt obligations and longer-term government bonds, which could possibly lower their yields and stimulate activity. It has also been argued that the Bank of Japan could expand the range of its operations along the term structure and could even engage directly in operations in a broader range of instruments. However, this would raise important issues regarding asset quality and the appropriate degree of interest rate risk, with potential effects on the independence of the Bank of Japan if large losses were sustained.

Whether the declaration of an explicit inflation objective would be helpful in raising inflation expectations in Japan and pushing expected real interest rates below zero was also the subject of public debate last year. The Bank of Japan noted that proposals to introduce inflation targeting in Japan had come in two forms. Some observers had suggested setting a numerical objective well in excess of the price stability range. Given the costs of inflation, the difficulties of controlling an inflationary outburst, and the fact that the economy already showed some signs of recovering, the Bank did not favour this option. Other commentators had suggested the Bank should adopt a more standard inflation targeting strategy. The Bank took the view that this proposal also raised broader issues of how to enhance the transparency and accountability of monetary policy, and announced that it would consider these issues in detail. No country has yet adopted inflation targeting in an attempt to raise inflation, so the Japanese situation differs in a crucial way from that faced by other countries. Moreover, the adoption of inflation targeting in the current setting could raise credibility problems since it might be difficult to persuade the public that the central bank had sufficient tools to raise inflation to the targeted band if prices actually started falling.

Inflation targeting considered

The recent experiences of Japan provide a rare opportunity to assess the importance of the fact that nominal interest rates cannot fall below zero, the so-called “zero lower bound” (ZLB). Some observers have argued that the constraint imposed by the ZLB implies that it would be inappropriate to gear monetary policy to achieving a level of inflation as low as zero. In such circumstances, it would be very difficult to engineer negative real interest rates if these were required for conjunctural purposes. The historical record suggests, however, that this conclusion can be questioned. One reason is that short-term real interest rates have only rarely been negative, indicating that central banks have not frequently felt the need for negative rates to stimulate the economy. Similarly, there have been virtually no occasions on which central banks have felt compelled to cut nominal interest rates to the vicinity of zero. Indeed, historical episodes of zero nominal interest rates have been limited essentially to the United States in the late 1930s and Japan last year, both of which occurred in situations where massive dislocation in the financial sector exerted sharp contractionary pressures on the economy.

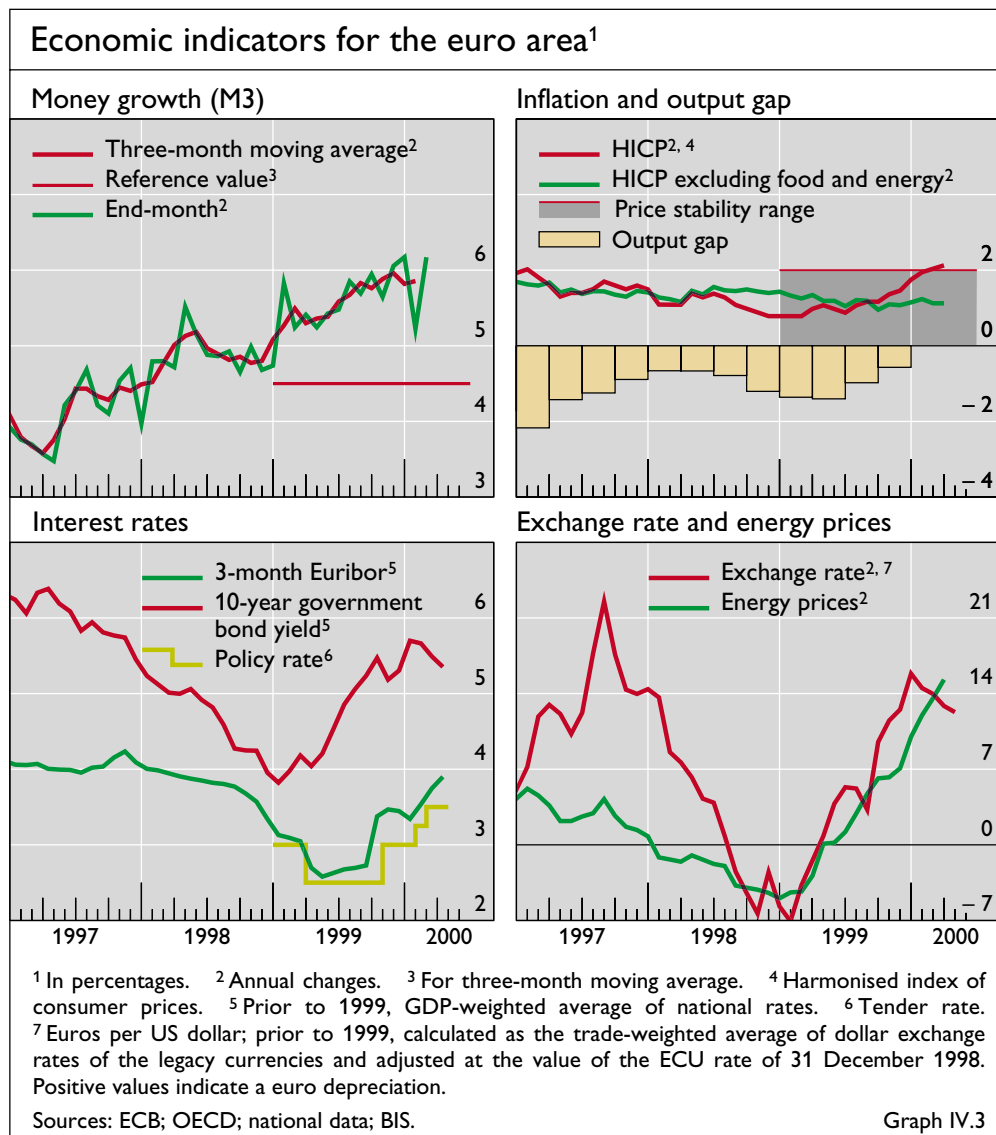
“Zero lower bound”

These episodes are therefore arguably better interpreted as highlighting the importance of maintaining a sound financial system, rather than as clear evidence that aiming for zero inflation would necessarily be associated with poor macroeconomic performance.

Euro area

Uncertain environment

The Eurosystem faced an uncertain environment during the euro's first year of existence. Following the weakness of global demand in the aftermath of economic crises in many emerging market countries, the economic momentum in the euro zone had slowed sharply in 1998. With confidence deteriorating, real growth decreasing, consumer price inflation declining and industrial producer prices falling, conditions in early 1999 were weak, leading to concern that deflationary pressures could emerge. While economic conditions suggested a need for monetary easing, political pressure on the Eurosystem to reduce interest rates led to a situation in which doing so might have had detrimental effects on its credibility. In the event, the Eurosystem took action in April 1999



and reduced its policy rate by 50 basis points to 2.5% in an effort to promote recovery.

This decision was taken in the context of conflicting signals from the two “pillars” used by the Eurosystem in setting policy, the first being M3 growth and the second a broad-based assessment of the outlook for inflation. In presenting its policy strategy, the Eurosystem had indicated that it would not react automatically to deviations of money growth from the reference value. Rather, such deviations would prompt further analysis to determine whether price stability was at risk. Thus, although M3 growth exceeded the reference value of 4.5% in early 1999, the overall analysis of monetary developments did not signal rising inflationary pressures, and more importance was therefore attached to the second pillar in setting policy.

Different signals from the two pillars

Following the improvement in the external environment and with the euro depreciating, economic activity gradually strengthened during the year. Reflecting these developments and a sharp increase in commodity prices, headline measures of inflation, as captured by the harmonised index of consumer prices (HICP), increased from about 1% in the first quarter of 1999 to 2% in early 2000. While the Eurosystem has defined price stability as inflation below the 2% threshold, it has emphasised that temporary price rises above this level should not be seen as incompatible with price stability. Moreover, core inflation, calculated by excluding food and energy prices from the HICP, continued to decline during the year. However, given that the balance of risks to the inflation outlook had shifted during the autumn, the Eurosystem raised its policy rate repeatedly between November 1999 and April 2000 by 125 basis points in total to 3.75%, which reduced the degree of accommodation of monetary policy. These decisions were taken on the basis of the information stemming from both pillars, and in the light of the continued depreciation of the euro, which signalled risks to price stability through its effect on import prices.

Credibility and transparency

Arguably the greatest test the Eurosystem faced last year was to demonstrate its commitment to, and ability to achieve, price stability in an environment characterised by change. Although the clarity of its mandate and the degree of independence given to it by the Maastricht Treaty were designed to facilitate this process, the conduct of policy in pursuit of this objective nevertheless proved complicated. One problem was that there was little historical precedent for a central bank suddenly being mandated to conduct monetary policy in a large, rapidly evolving and economically diverse area. Moreover, the introduction of the euro brought about a marked change in the economic environment in individual member countries and triggered structural changes of unknown import. It was therefore inevitable that the monetary transmission mechanism in the euro zone would remain poorly understood for some time.

Monetary transmission mechanism changing

A further source of uncertainty was related to the framework of monetary policy. There is little question that the core components of the framework – the clear statement that price stability is the overriding objective of policy, together with a numerical definition thereof to render it operational – were

Framework of policy complicated as a result

Potentially conflicting information

well understood and enjoyed firm public support. Nevertheless, the use of two pillars appears to have been more difficult to explain. With one of the pillars being a numerical reference value for M3 growth, the framework was in some circles misunderstood as being tantamount to monetary targeting despite the Eurosystem's clarifications to the contrary. While the indications provided by the two pillars should normally have the same implications for policy, at various times they were contradictory, which rendered monetary policy decisions more opaque. Moreover, the pronounced movements in the exchange rate raised further credibility issues, despite repeated statements by the Eurosystem that the exchange rate enters the policy framework only through its impact on the broad-based inflation outlook. Further clarification of the relative importance of the two pillars will be an ongoing task whose importance will diminish only once the Eurosystem has built up a strong record of price stability.

Public scrutiny intensified

As a new central bank, the Eurosystem attracted an understandable, but at times perhaps excessive, degree of public scrutiny. The adoption of practices, including those regarding transparency and open methods of communication with financial markets, that in some respects even go beyond those of other respected central banks has gone unnoticed or sparked a surprising degree of controversy. For instance, it was not always appreciated that, while many central banks publish a thorough analysis of economic developments on a quarterly basis, through the release of a bulletin, the Eurosystem does so monthly. Similarly, little attention was paid to the fact that, in contrast to the Federal Reserve and the Bank of Japan, the Eurosystem has publicly adopted a numerical definition of price stability.

Need for a single voice

Public understanding of the Eurosystem's conduct of policy was not enhanced by seemingly contradictory comments by individual members of the Governing Council and even elected politicians regarding appropriate levels of interest and exchange rates. While it is desirable that those entrusted with the setting of interest rates publicly explain their views of economic conditions and the transmission mechanism, comments that were misunderstood as signalling near-term policy intentions may have added to, rather than reduced, uncertainty.

Minutes and voting records not published ...

During the year significant criticism was directed at the Eurosystem's decision not to make public the detailed minutes of the meetings of the Governing Council, including voting records. Although a consensus has emerged that clarity is critical to the effectiveness of policy, there are many dimensions to transparency. While central banks have promoted increased clarity with respect to their objectives, policy instruments, decision-making procedures, policy decisions and the main reasons for taking them, many still refrain from publishing minutes and voting records. One reason for this is a perception that some restrictions on transparency serve to keep monetary policy apart from the political process. This may buttress central bank independence and reduce the potential for political interference in the setting of monetary policy. Public support for monetary policy is also crucial to its effectiveness. By promoting the recognition of monetary policy as a technical matter pursued in an apolitical fashion, such support is more easily achieved.

Such considerations may be particularly important for the Eurosystem, which faces an unusually complex political environment in which revealing the positions of national representatives through the publication of minutes and voting records might leave them exposed to pressure from national interest groups.

... in a complex political environment

Publication of forecasts

The Eurosystem has also been criticised for not publishing its internal inflation forecasts. While it has stated its intention to adopt this practice, how best to do so remains a subject of debate among central banks both inside and outside the euro zone. One issue that arises concerns the “ownership” of forecasts. For these to be seen as representative of their views, it is essential that the members of the policymaking group be actively involved in their preparation. For reasons of geography, this will be difficult in the case of the Eurosystem since most members of the Governing Council reside in their home countries. An alternative would be for the Eurosystem to release staff projections, which policymakers might, or might not, choose to rely on in setting rates. In this case, releasing a forecast would not necessarily enhance transparency about the factors influencing policy decisions. Releasing forecasts could also be problematic if they influenced economic processes in undesirable ways; for example, forecasts of wage growth could become a floor for centralised negotiations.

“Ownership” of forecasts

A further issue concerns how best to communicate forecasts to the public. The crux of the problem is that forecasts typically assume constant policy rates over the projection horizon and may predict undesirable paths for inflation and output. They could thus be the basis for future interest rate changes which influence economic conditions, potentially making the forecasts internally inconsistent. While the forecasts could be based on endogenous monetary policy responses, this would make the inflation forecasts themselves irrelevant, since they would always be on target at the horizon over which the central bank acts to achieve its goals. Public interest would therefore shift to the implied sequence of policy rates embedded in the forecasts. However, central banks may not be willing to release projections of future short-term interest rates, since this runs the risk that any deviation of policy rates from the forecast level, even if caused by new information, could be seen as game-playing by the central bank and harm its credibility. Finally, information regarding the expected path of interest rates is not necessarily useful to the public unless it is specified how short-term interest rates are determined in the first place. Knowledge of the authorities’ reaction function is essential to determine the implications of new information for policy instruments.

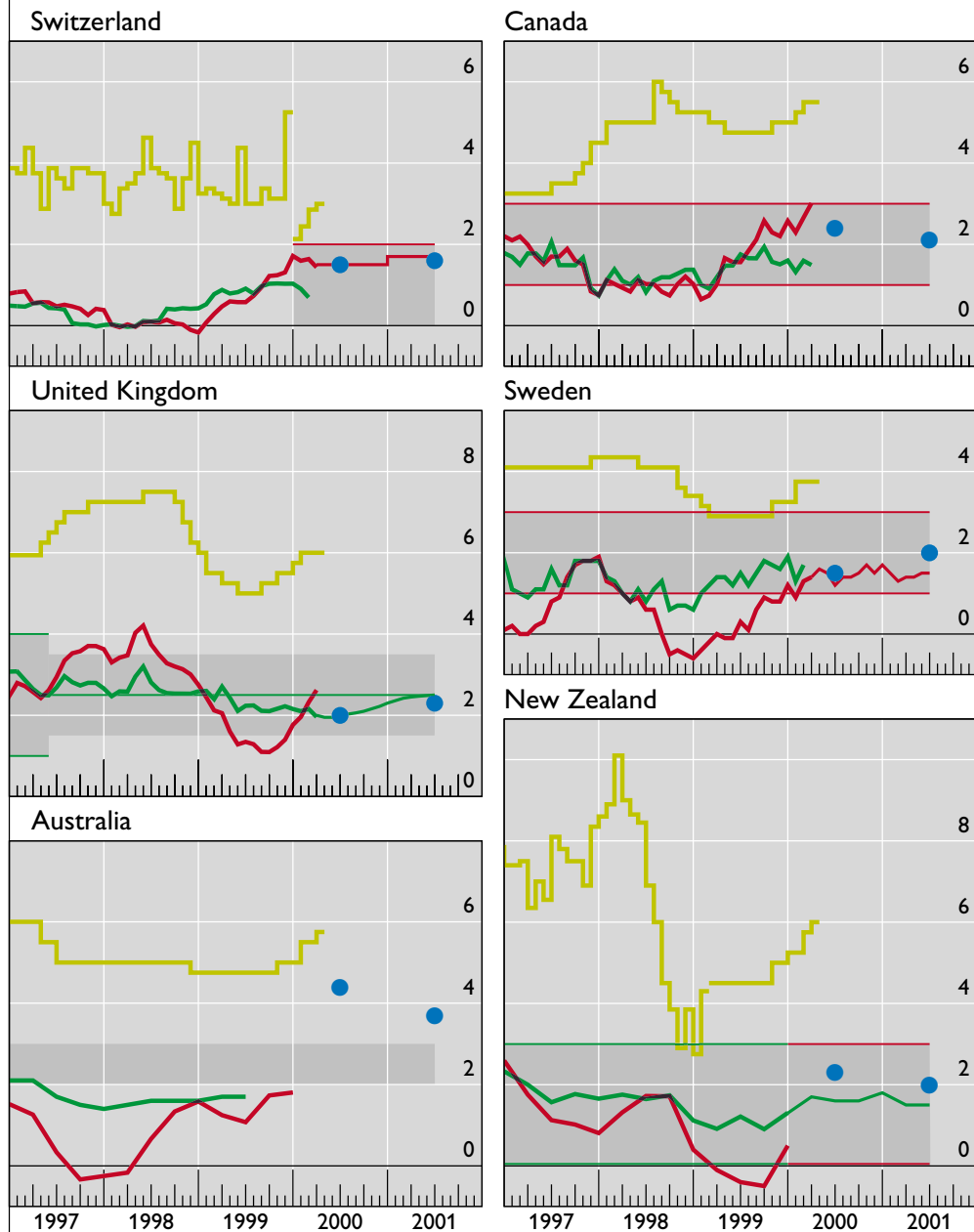
Complications in communication

Inflation targeting countries

In the first half of the 1990s, several industrial countries adopted explicit inflation targets, including New Zealand, Canada, the United Kingdom, Sweden and Australia. Last year, Switzerland adopted a similar broad-based strategy for achieving price stability centred upon inflation forecasts. The trend towards

Inflation and policy rates in countries with inflation targets¹

— CPI inflation — Central bank inflation forecast Inflation target
— Underlying inflation² ● Market inflation forecast³ — Policy rate⁴



Note: Switzerland does not target inflation but instead uses a broad-based inflation forecasting strategy primarily focused on a numerical target for price stability.

¹ Inflation rates are measured as annual percentage changes. CPI inflation is targeted by Canada, Sweden, Australia (since October 1998) and New Zealand (since 2000), while underlying inflation is targeted by the United Kingdom (and previously also by Australia and New Zealand). ² For Switzerland and Canada, CPI excl food and energy prices (for Canada also excl indirect taxes); for the United Kingdom, retail price index excl mortgage interest payments; for Sweden, CPI excl indirect taxes, subsidies and house mortgage interest expenditure; for Australia, CPI excl seasonal food, petrol, mortgage interest payments, public sector charges and other volatile prices (publication suspended in June 1999); for New Zealand, CPI excl credit services. ³ Of annual CPI or, for the United Kingdom and New Zealand, underlying inflation; surveys conducted in April 2000. ⁴ For Switzerland, actual three-month Libor (the target band is set 50 basis points above/below Libor); prior to 2000, lombard rate. For Canada, ceiling of the operating band; for the United Kingdom and Sweden, repo rate; for Australia, cash rate; for New Zealand, cash rate (prior to March 1999, call rate).

Sources: © Consensus Economics; national data.

Graph IV.4

strategies focused upon explicit inflation targets is also evident in emerging market economies; witness Brazil, Poland, the Czech Republic and South Africa, all of which recently announced such targets.

In the industrial countries which target inflation, policy rates generally eased in 1998 and early 1999, mainly in response to inflation falling close to the lower end of target ranges owing to slower world growth and sharp declines in commodity prices. In contrast, as the past year unfolded, world growth picked up, oil prices rose sharply, other commodity prices levelled off or rose slightly, and policy in these countries was tightened accordingly.

Widespread tightening

In the light of sharp increases in recorded productivity growth in the United States, one issue faced by the industrial countries targeting inflation was whether they might soon achieve similar gains, hence reducing the need to raise policy rates as much as might otherwise seem warranted. In each of these economies, price/earnings ratios reached record highs, consistent with higher productivity gains being expected. However, while labour productivity growth was variable across the countries that target inflation, as a whole they did not experience a prolonged period of elevated gains. Indeed, productivity increases were generally no more than slightly above average. The capital deepening in the United States, which may have contributed to measured productivity gains, occurred at a much faster rate than elsewhere.

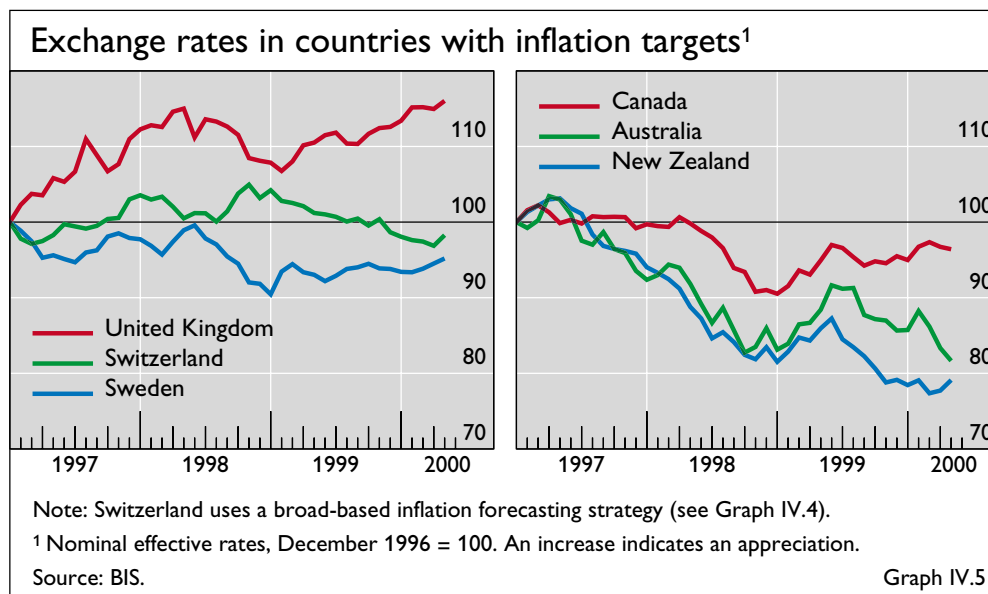
Large productivity gains yet to be realised

The Bank of Canada raised its key policy rate three times during the period under review, after a series of easings which ended in May 1999. Although these rate changes in November 1999 and the early part of this year followed rate increases in the United States, a negative Canadian/US interest rate differential remained. Even so, the Canadian dollar was stable, reflecting in part higher commodity prices, which allowed the Bank of Canada to focus on other forces driving inflation. In particular, the economy was thought to have reached potential, as evidenced in a wide range of indicators including domestic demand and the unemployment rate. Consistent with this judgment, both headline and underlying inflation increased, the latter rising to just below the 2% midpoint of the Bank's target range. This slight uptick in inflation, combined with strong demand and potential inflationary spillovers from the United States, led the Bank of Canada to raise rates.

Canada

In the United Kingdom, the real economy was weak in the early part of 1999 and underlying inflation remained below the point target. This motivated the Bank of England to continue its easing into June. However, by September 1999, a sharp economic turnaround was apparent. Output growth rose above its long-run average of about 2.5% and one headline measure of unemployment fell to its lowest level in 20 years, indicative of the increasing pressure on the economy's capacity. Sterling gradually appreciated during the year, however, providing some relief through lower import prices. On balance, underlying inflation remained below the target of 2.5%, although the Bank forecast in late summer 1999 that inflation would increase in 2000 and 2001. These considerations led to a rate reversal in September 1999, with the repo rate subsequently being increased in steps to 6%. Conditional on this higher rate, inflation was then forecast to return to target gradually by 2001.

United Kingdom



A further explanation of the repo rate increases might have been concern in the Monetary Policy Committee (MPC) about asset prices. The price/dividend ratio reached a historical high, and real estate prices increased sharply throughout 1999. For example, the Halifax housing survey indicated that prices were already rising at an annual rate of nearly 10% by late summer. Unlike in the United States, policymakers in the United Kingdom were not comforted by accumulating evidence that unexpected productivity growth would reduce future inflationary pressures.

Two main sources of uncertainty in the UK inflation outlook were the likely course of future exchange rate movements and possible increases in the degree of domestic competition. Forecasts which assumed that the exchange rate would evolve according to interest rate differentials led to a prediction that inflation two years hence would be more than 1/2 percentage point higher than forecasts based on an unchanged exchange rate (ie a random walk model). While both of these forecasting models have their justification, neither is very reliable. A second source of uncertainty was whether there had recently been a marked increase in the degree of domestic competition that firms face. If so, then the UK economy might have been benefiting from a one-time reduction in inflationary pressures.

Sweden

In Sweden, inflation also picked up in the latter part of 1999, prompting a rise in the repo rate, the first change in policy since the series of easings ended in March 1999. In fact, forecasts for 2001 had inflation rising above the target of 2% due to strong domestic demand and increases in import prices. Despite the repo rate increases and a stable krona, faster world growth led to upward revisions in the outlook for domestic growth, which was expected to raise output above potential into the next year.

Australia

The Australian and New Zealand dollars were relatively stable in 1999, in contrast to the previous year when declines in commodity prices led to sharp depreciations of both currencies. This meant that policymakers in the two countries directed their attention primarily to other factors affecting inflation,

which for most of the period were judged benign. Nevertheless, the Reserve Bank of Australia felt it necessary to raise rates in November 1999 and again in early 2000. The reasons for the rate increases were similar to those in Canada, the United Kingdom and Sweden: unexpectedly high domestic demand and unexpected world growth. The surge in domestic demand was supported in part by wealth effects resulting particularly from large increases in Australian house prices. Consequently, consumer price inflation was expected to be in the upper half of the target range by the middle of 2000.

In New Zealand, the Reserve Bank left the official cash rate unchanged for most of 1999. Policy was deemed to be consistent with forecasts of inflation remaining on target, while still allowing demand growth of about 3%, such that output could converge upwards towards potential. In November, the Reserve Bank raised rates by 1/2 percentage point in response to robust second half growth and a depreciating dollar, which had eased monetary conditions somewhat. In early 2000, there continued to be signs that the economy was starting to overheat, which prompted further rate increases.

New Zealand

While the primary goals in an inflation targeting regime are low and stable inflation, the short-term stabilisation of other economic factors is not precluded. Indeed, in December 1999, the New Zealand Treasury and the Reserve Bank signed a new policy targets agreement that formally sets out ancillary goals of avoiding unnecessary short-term fluctuations in output, interest rates and the exchange rate, but in such a way as to avoid conflicting with the well established longer-term inflation targeting strategy. In principle, the new agreement serves to shift the weight in short-term stabilisation objectives partially away from inflation towards these variables. However, it is difficult to assess what the direct impact of this change will be on the way monetary policy is conducted in practice since there are grounds for believing that the Reserve Bank has tried in the past to avoid “unnecessarily” large movements in these variables.

The Swiss National Bank announced during the year the adoption of a new policy strategy centred upon its inflation forecasts. Under the new framework, forecasts of inflation for the subsequent three years are published at each year-end and policy is adjusted accordingly. Historically, the Bank conducted policy using intermediate monetary targets, while under the new regime a whole range of inflation indicators formally condition policy decisions. One element that remains unclear concerns the response of monetary policy to movements in the franc against the euro. It was noticeable that, while the franc underwent sizeable appreciations and depreciations earlier in the 1990s, fluctuations of the currency in 1999 were contained in a narrow band (see Chapter V).

A new policy strategy in Switzerland

Accompanying the new strategy was an explicit definition of price stability as CPI inflation of less than 2%. This definition is comparable to the Eurosystem’s interpretation of price stability, and its level is similar to those in countries with explicit inflation targets. In addition, the Swiss National Bank changed the way in which policy is implemented in order to increase the transparency of its operations. Its main instrument is a target range for three-month Swiss franc Libor rather than the rate of growth of base money.

Definition of price stability

Monetary policy and uncertainty

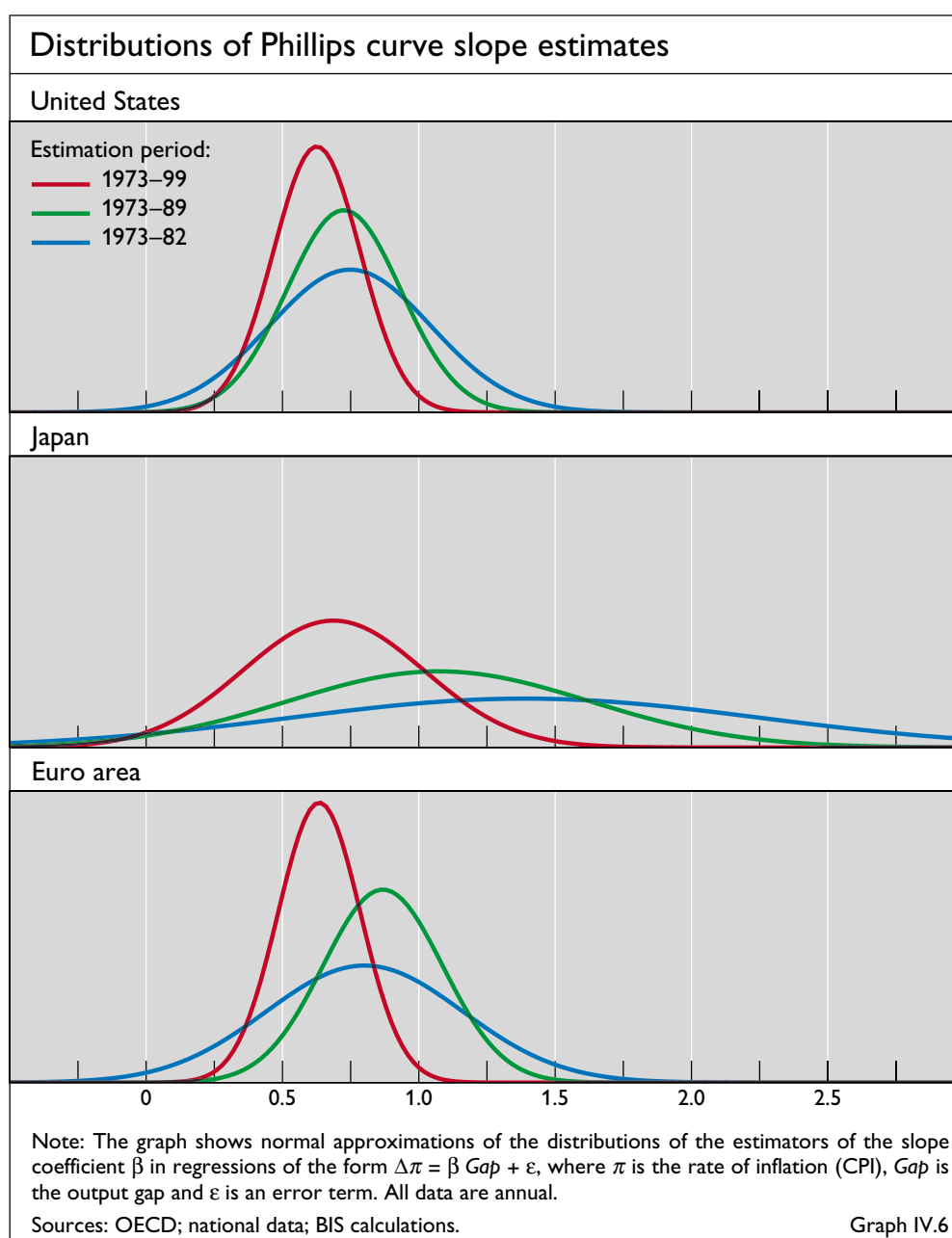
Increased emphasis on uncertainty

Uncertainty is intrinsic to the economic environment, and central banks have increasingly emphasised the constraints it imposes on the design and conduct of monetary policy. In doing so, they have been mindful of the importance of distinguishing between different sources of uncertainty.

Sources of uncertainty

Uncertainty regarding the structure of the economy ...

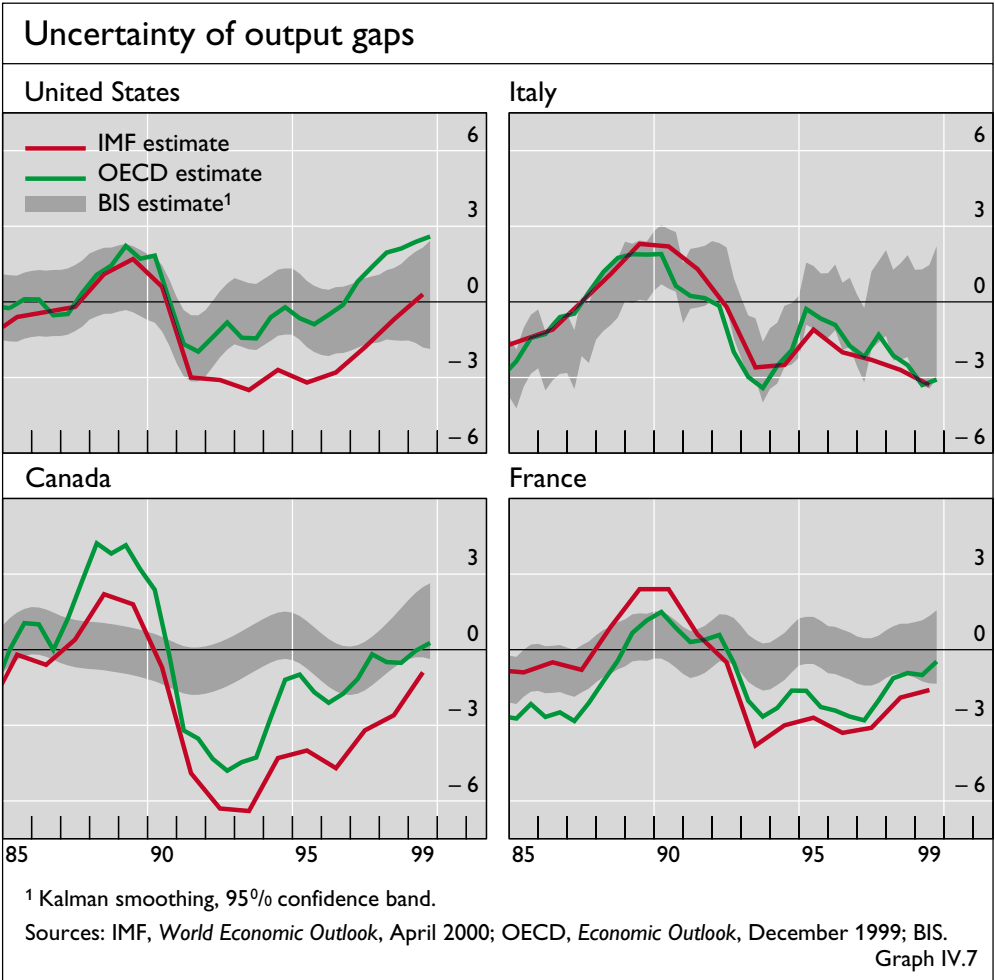
Uncertainty arises from a variety of sources. Most obviously, there is uncertainty about the structure of the economy. For instance, last year there was a significant degree of uncertainty about the Bank of Japan's ability to influence interest rates beyond the short-term segment of the yield curve. But even when there is broad agreement on the structure of the economy,

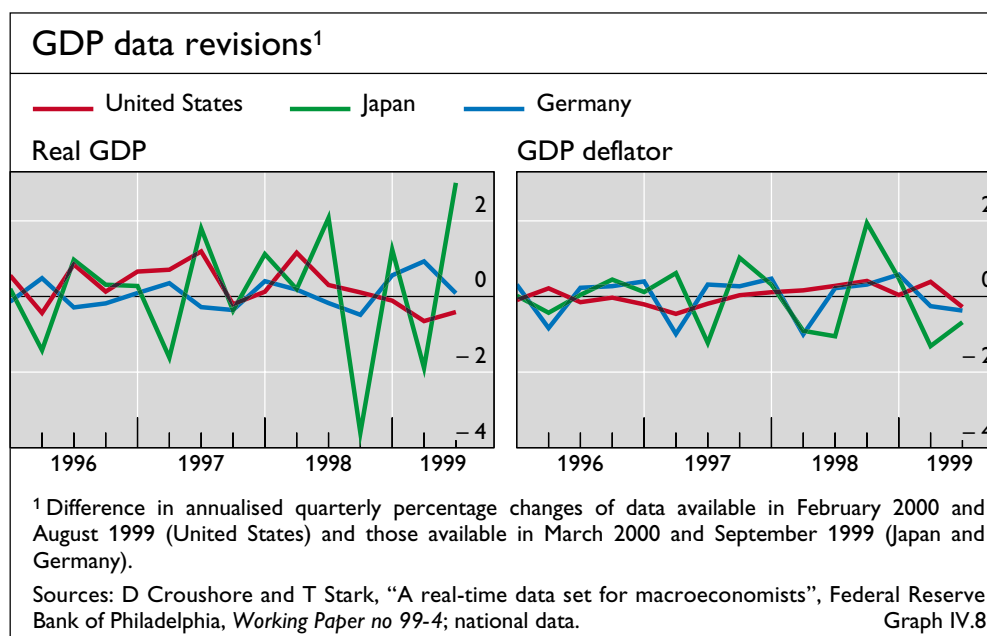


considerable uncertainty may remain regarding the exact quantitative strength of individual relationships. For instance, in relatively closed economies, such as the United States or the euro area, assessing the amount of slack in the economy and how it feeds into inflation is a critical part of formulating policy. Yet estimates of this relationship, commonly known as the Phillips curve, are typically imprecise and tend to vary over time.

... parameter estimates ...

Graph IV.6 shows estimated probability distributions for the impact of output gaps on inflation using data for the United States and Japan, and synthetic data for the euro area. Although the graph disregards the important issue of how to estimate output gaps and should only be seen as illustrative, it is nevertheless suggestive of the problems at hand. In particular, the fact that the distributions are wide implies that the impact of output gaps on inflation is uncertain. For instance, while in all three cases GDP 1% higher than potential is associated with a rise in inflation of about 0.6 percentage points (see also Chapter II), the estimates for the United States and the euro area suggest that the impact may range between 0.25 and 1 percentage point. In Japan, the impact is still more uncertain: it could be negligible or considerably larger than in the other two economies. Moreover, the fact that the peak of the distribution shifts as increasingly longer sample periods are considered suggests that the economic relationship is evolving over time in perhaps unpredictable ways.





... unobservable variables ...

Uncertainty also arises from the fact that many important macroeconomic variables are unobservable, in particular expectations. Such expectations nevertheless play a critical role in the determination of asset prices, including exchange rates and bond yields, and in the setting of goods and services prices. This lack of observability makes it difficult to determine the sources of asset price movements and, more broadly, the impact of policy measures on economic variables of interest.

A further illustration of the difficulties that confront policymakers when dealing with unobservable economic series is provided by comparing measures of the output gap. This variable is unobserved but is commonly assigned an important role in judging inflationary pressures. Graph IV.7 shows three estimates of the output gap for four countries. At times there are large discrepancies between the estimates. The fact that a 95% confidence interval around one estimate often does not encompass alternative point estimates further demonstrates the extent of uncertainty.

... and data

Another source of uncertainty stems from the data. After a preliminary data release, many economic time series are revised, sometimes frequently, in the light of additional incoming source data, shifts in seasonal adjustment factors and redefinitions of variables. The recent adoption in many countries of new methods for constructing the national accounts has, in some cases, led to substantial changes in real GDP and its components.

To illustrate the degree of data revisions that policymakers face, Graph IV.8 shows differences between GDP observations available at a recent point in time and observations for the same historical dates that were available six months earlier. As can be seen, the reported values for quarterly real GDP growth changed by as much as 3.6 percentage points (annualised rate) in the course of this brief period. In these samples, real GDP data in Japan underwent the largest revisions, but the US and German data also changed significantly. Revisions in GDP of this magnitude may complicate, for example, the use of recently reported values for the output gap as a basis for policy decisions.

Implications for the communication of policy decisions

Central banks have in recent years emphasised the degree of uncertainty in the design of policy. For instance, in defining their objectives, they are taking greater account of the constraints arising from uncertainty. The Eurosystem, for example, in defining price stability as inflation below 2%, explicitly recognised the uncertainty arising from measurement errors in the HICP index. Furthermore, many central banks with explicit inflation targets express them in terms of a range, and may specify them in terms of a measure of core inflation, which is less subject to unpredictable movements. Similarly, in communicating their views about the future direction of the economy, some central banks have started to publish estimated probability distributions for expected inflation and real GDP. By de-emphasising, or even not providing, point forecasts, the degree of uncertainty can be communicated to the public. Moreover, some have chosen to release the minutes of policy discussions, notwithstanding other problems noted earlier, in part because they serve as a means to describe the difficulties policymakers have in interpreting current economic conditions and the near-term outlook.

Ranges for targets ...

... and forecasts

In communicating with the public about monetary policy issues, several factors have contributed to this heightened focus on the implications of uncertainty. One is the increased emphasis on central bank transparency and accountability. The more open the conduct of policy, the more important it is that central banks acknowledge the limitations they face, since otherwise they could be vulnerable to unwarranted criticism that could damage their credibility. The increasingly common practice of numerically defining price stability and adopting it as the overriding policy goal has made it vital for central banks to be able to explain the reasons for any failure to meet this objective. Second, as central banks have moved away from such intermediate targets as monetary aggregates and exchange rates, policy has taken on a more comprehensive forward-looking orientation, with forecasts playing a pivotal role. Since forecasts are inherently imprecise, with risks to the outlook frequently asymmetric, uncertainty has naturally come to the forefront both in policy discussions and in the communication of policy decisions to the public. Third, as evidenced by the examples given above, there is considerable uncertainty about many elements in key economic relationships such as the Phillips curve. In fact, the measures of uncertainty expressed in these examples understate the true extent of uncertainty that policymakers face because they presume that the structure of the economy is stable. Structural change due, for example, to financial liberalisation or productivity-raising technological innovations in the high-technology sector further contributes to the degree of uncertainty. Finally, given the marked uncertainty regarding the appropriate level of asset prices, their responses to interest rate changes and other policy measures, and their potential impact on broad economic conditions, the degree of unpredictability faced by central banks has arguably increased in recent years.

Emphasis on transparency ...

... increased importance of forecasts ...

... structural change ...

... and the role of asset prices

V. Foreign exchange market developments

Highlights

The strength of the yen, the weakness of the euro and the intermediate position of the US dollar were the salient features in the major foreign exchange markets in 1999 and early 2000. The movements in the main exchange rates seem to have been primarily determined by the interaction of current and prospective relative cyclical positions, along with technical factors as well as portfolio and foreign direct investment (FDI) flows. Market perceptions of changes in underlying structural characteristics of the three major economies may also have played a role. In emerging market countries, foreign exchange markets returned to calmer conditions after the periods of turbulence in 1997, 1998 and early 1999. Local stock markets moved closely with US equity prices and with the dollar exchange rate of the domestic currency.

Over the last two years, foreign exchange markets have been affected by significant structural changes, including the introduction of the euro, the trend towards concentration among market players and the increasing role of electronic broking. While these changes were also accompanied by a general reduction in trading activity, it is too early to determine their impact on general patterns of exchange rate volatility.

The price of gold trended downwards in the first three quarters of 1999 but rose sharply in late September following an agreement limiting official gold sales over the next five years. While there were occasions when news about central bank gold sales seemed to influence the gold price, this relationship was by no means systematic.

The dollar, yen and euro

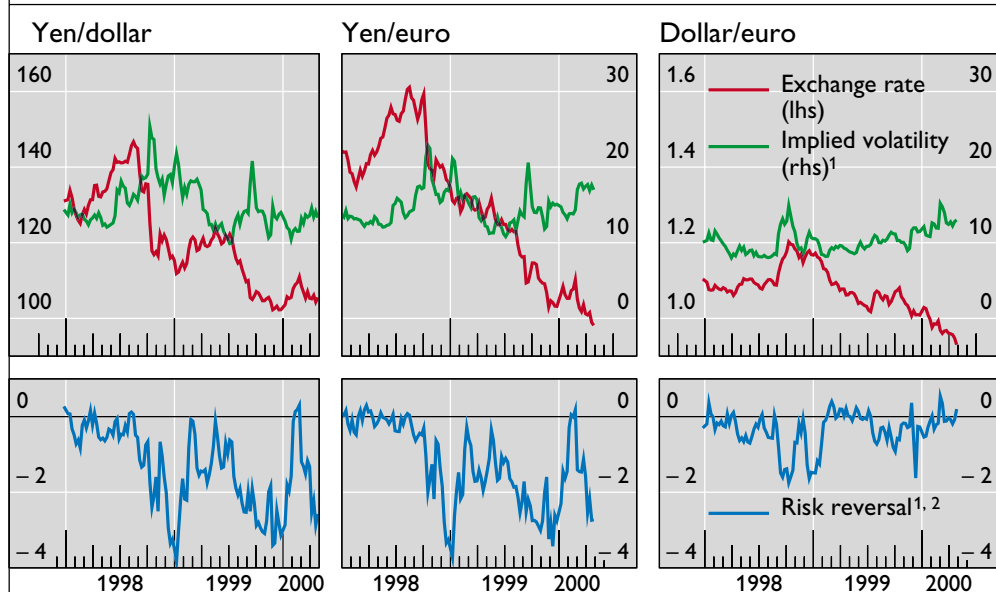
The movements of the main currencies in 1999 and early 2000 were influenced by cyclical factors and associated expectations of monetary policy adjustments in the United States, Japan and the euro area, but also by technical factors and portfolio and FDI flows. The euro's exchange rate may also have been influenced by negative market sentiment based on views about lagging structural adjustments in continental Europe.

Key developments and long-term perspectives

The major exchange rates swung substantially during the period under review (Graph V.1). In the first half of 1999, the dollar strengthened by about 14% against both the yen (from ¥109 to ¥124) and the euro (from \$1.18 to \$1.03). By contrast, it was the yen which appreciated markedly during the second half of 1999, reaching ¥102.30 per dollar and ¥102.70 per euro by year-end.

Wide exchange
rate swings

Exchange rates, implied volatilities and risk reversals of the dollar, yen and euro



Note: Prior to 1999, the euro exchange rate is calculated as the trade-weighted average of bilateral rates of the legacy currencies and adjusted at the value of the ECU rate of 31 December 1998.

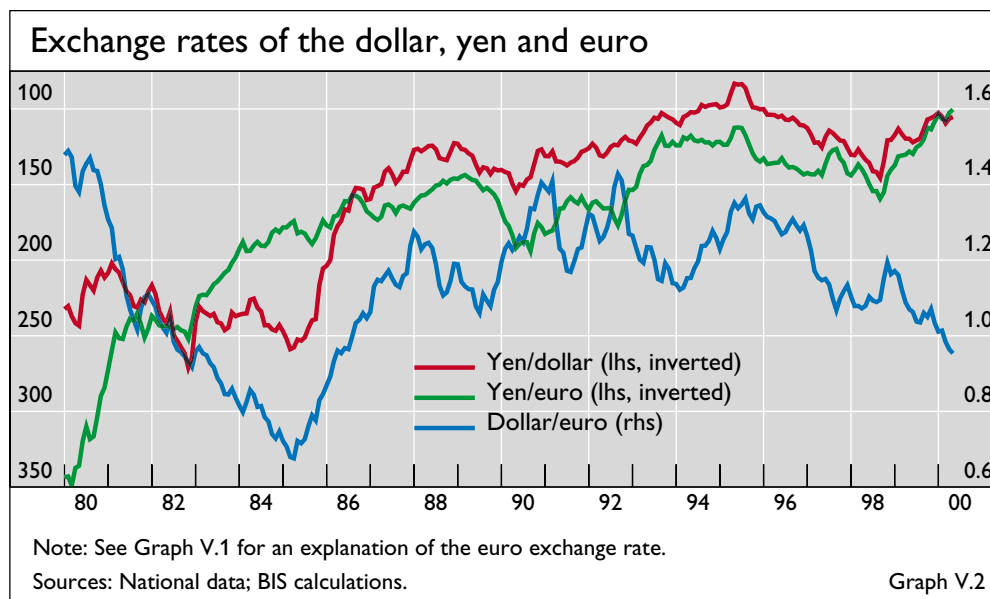
¹ One-month, in percentages. ² A positive value indicates a bias towards dollar strength in the left- and right-hand panels, and towards euro strength in the centre panel.

Sources: ECB; Reuters; BIS calculations.

Graph V.1

Although the euro recovered some ground against the dollar between June and September, it weakened again in the last quarter of 1999. In the first four months of 2000, the yen's appreciating trend became more muted, while the euro fell significantly below parity with the dollar. The euro's weakness throughout the period confounded earlier general expectations that it would trend upwards. Moreover, risk reversals suggest that, even during most of 1999, option traders were willing to pay more for exposure to (or insurance against) a much stronger rather than a much weaker euro vis-à-vis the dollar (Graph V.1, lower panel).

From its lows in 1998 to its highs in early 2000, the yen posted an almost 45% gain against the dollar and a 65% appreciation against the euro. The amplitude of these swings in the major exchange rates was noteworthy, but not unprecedented. At the levels reached in early 2000, the yen appeared to be very strong by historical standards, having reached values against the dollar that were exceeded only in 1995. Moreover, taking a "synthetic" euro as the benchmark, the yen posted a record high against the euro (Graph V.2). Using the same benchmark, the euro touched a 13-year low against the dollar in March 2000, but was still trading well above its all-time low reached in the mid-1980s. The dollar's intermediate course – a depreciation against the yen accompanied by an appreciation against the main European currency – was last seen in summer 1997, when the yen rose significantly against the dollar and even more against the mark following a turn in sentiment (in the event erroneous) about a prospective recovery of the Japanese economy.

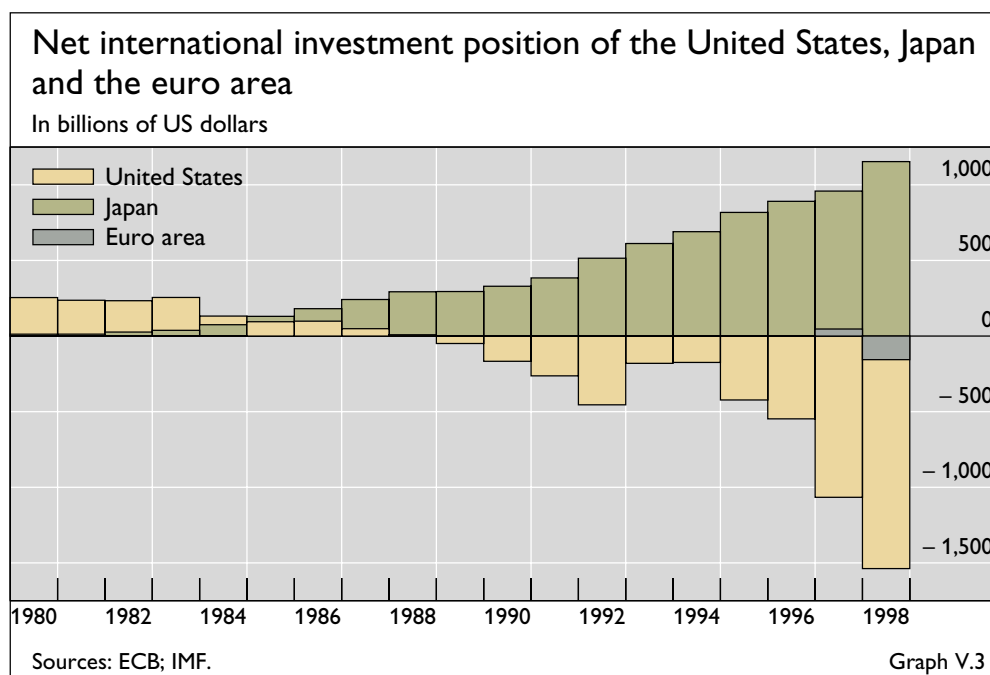


Short-run ...

From the viewpoint of redistributing world aggregate demand from the strongly growing US economy to economies with insufficient demand, the dollar's continuous appreciation against the euro and, during the first half of 1999, against the yen was desirable for the global economy. Conversely, the strengthening of the yen from June 1999 is likely to have restrained demand for Japanese products at a time when the economy was not yet showing signs of self-sustaining growth.

... and long-run perspectives

In a longer-term perspective, the widening US current account deficit and the build-up of US external liabilities (Graph V.3) raised the issue of the sustainability of current exchange rate levels. Evaluating the longer-term appropriateness of exchange rate levels is generally difficult in the absence of precise estimates of long-term equilibrium exchange rates. In terms of their real effective exchange rates, in 1999 the dollar exceeded by 11% and the yen



Official foreign exchange reserves					
	1996	1997	1998	1999	Amounts outstanding at end-1999
in billions of US dollars					
	Changes, at current exchange rates				
Total	172.3	62.4	58.4	127.5	1,746.0
Industrial countries	69.6	-12.0	-10.5	46.1	704.7
Asia ¹	64.4	8.5	62.2	79.1	642.0
Latin America ²	18.4	16.5	- 8.4	-8.0	124.7
Eastern Europe ³	-2.6	4.9	5.1	0.8	74.3
Other countries	22.5	44.5	9.9	9.4	200.3
	Changes, at constant exchange rates ⁴				
Total	200.3	121.2	21.0	159.4	1,746.0
Dollar reserves	161.7	87.6	40.2	191.1	1,358.9
Non-dollar reserves	38.7	33.7	-19.2	-31.7	387.1
<p>Note: Flows calculated for 1999 exclude the reduction in reserves due to the disappearance of holdings of legacy currency reserves of EMU member countries.</p> <p>¹ China, Hong Kong, India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand. ² Argentina, Brazil, Chile, Colombia, Mexico and Venezuela. ³ Bulgaria, Croatia, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Russia, Slovakia and Slovenia. ⁴ Partly estimated; valued at end-of-year exchange rates.</p> <p>Sources: IMF; national data; BIS.</p>					

Table V.1

by 4% their respective averages over the last decade, while the euro appeared to be about 4% below its 1990s average.

Estimates of the fundamental equilibrium exchange rate (FEER), which try to identify the real exchange rate level that is compatible with a stable ratio of external debt to output in the long run, can vary considerably and can therefore provide only very tentative evidence. According to FEER calculations, the yen/dollar exchange rate observed in April 2000 was close to its long-term equilibrium level, while the dollar appeared substantially overvalued vis-à-vis the euro. The latter finding must, however, be further qualified in that net income on the US external position turned negative only in recent years and is still very small in terms of GDP, as US investments abroad have traditionally yielded higher returns than foreign investment in the United States.

Private and official investors apparently remained more than willing to finance the current account deficit in the United States, which rose to \$339 billion in 1999. Official foreign exchange reserves held in dollars rose strongly, particularly in Asia (Table V.1). Private investment flows into the United States also surged (see Chapter II), with FDI equivalent to about 40% of the US current account deficit, which reduced the country's overall dependence on portfolio inflows. However, the sharp increase of international flows to US equity markets raised concerns about the impact of possible strains in these markets on the future financing of the external deficit (see below).

Factors driving exchange rate movements

The dollar's strength against the euro and its appreciation against the yen during the first half of 1999 were consistent with the strong performance of

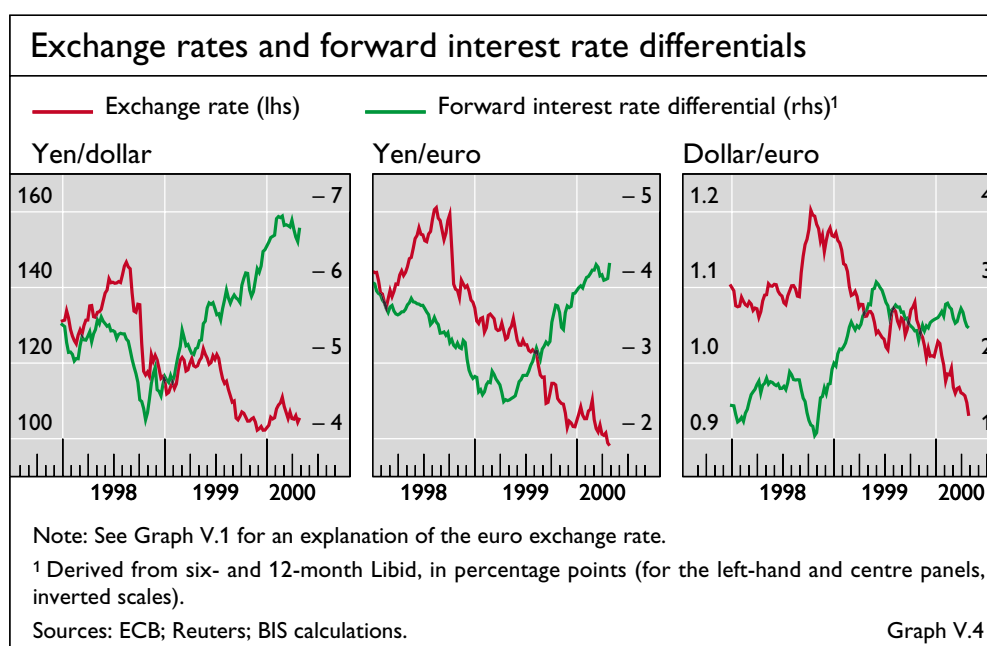
Changing views about the cycle

the US economy compared with slower growth in the other areas. Moreover, continuing positive surprises about US growth in 1999 contrasted with more mixed signals in the euro area and Japan, and underpinned the widening of short-term interest rate differentials in favour of the dollar (Graph V.4).

The yen's sharp rise after June 1999 can to some extent be attributed to a narrowing of expected growth differentials between the United States and Japan (Graph V.5). By contrast, the euro continued to weaken in late 1999 in spite of unchanged expectations regarding differences between euro area and US growth. It is also true that, particularly in the second half of the year, the euro did not seem to respond in a systematic fashion to positive news about macroeconomic developments. In part this may have reflected a persistent and excessive focus by foreign exchange market traders, as well as portfolio managers, on developments in the German economy, on which they had traditionally tended to concentrate their attention. On 28 January 2000, for example, the euro fell several cents and broke dollar parity, although on the same day there were several positive macroeconomic data releases in other euro area countries. From January to March 2000, the euro weakened further in spite of a narrowing of forward rate differentials between the euro area and the United States.

Technical factors influence short-term dynamics

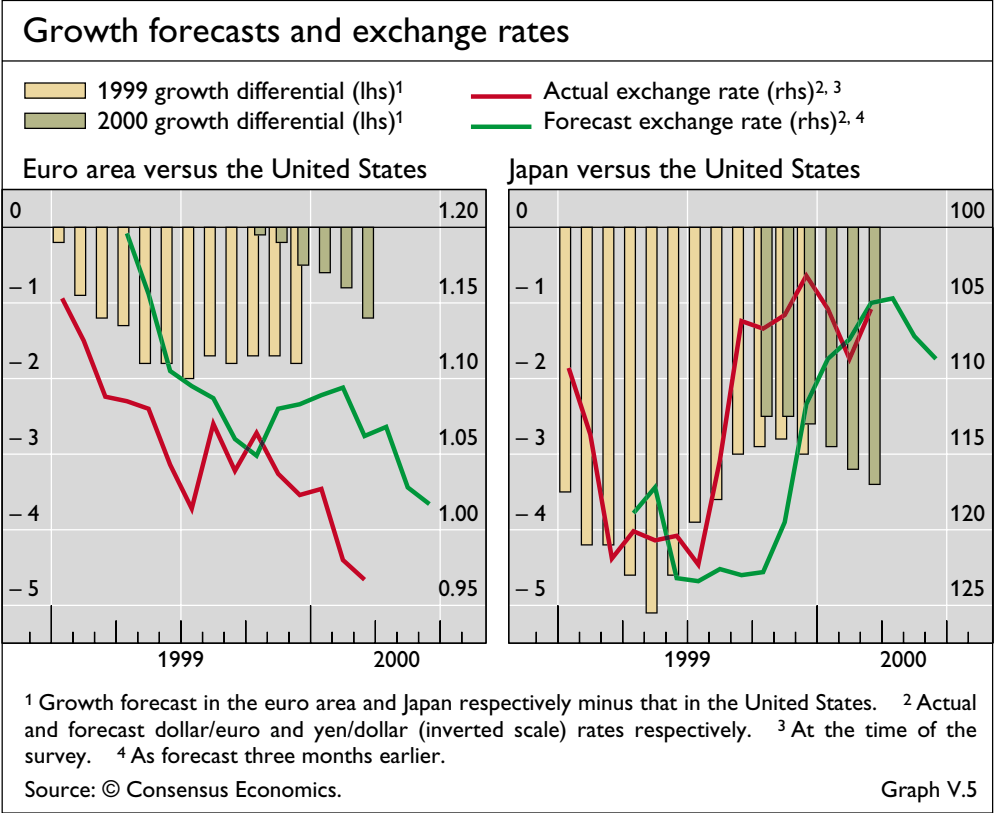
Technical factors might also help explain part of the exchange rate dynamics of the three major currencies during the period under review. The unwinding of yen carry trades, possibly by hedge funds, as the yen trended upwards after June 1999 may at times have intensified the yen's appreciation. Stop-loss orders around symbolic levels such as euro/dollar parity or an implicit mark/dollar exchange rate of DM 2.00 appear to have reinforced the momentum of the euro's depreciation. The dynamics of traders' expectations may occasionally have played a role in early 2000. Dollar/euro risk reversals give an indication of option traders' balance of weight on a much stronger and a much weaker euro against the dollar with respect to the forward rate. These

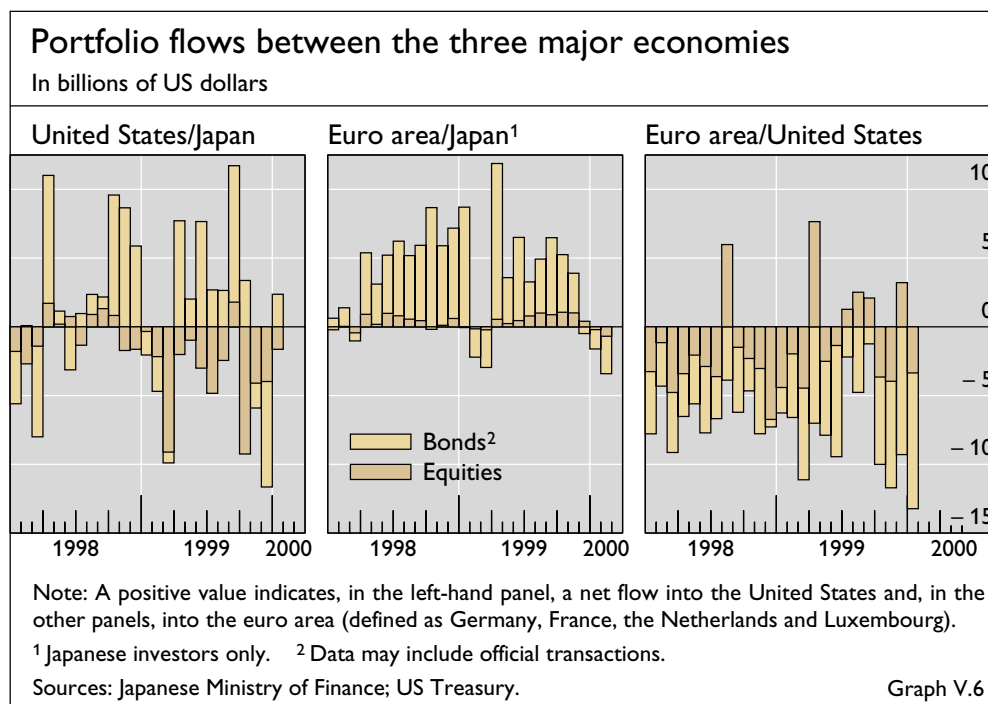


risk reversals suggest extrapolative fears about the euro at times when the currency fell sharply (Graph V.1). The repatriation of funds by Japanese institutions ahead of the fiscal year-end in March 2000 may also have reinforced the yen's strength. On 28 February 2000, the limited size and liquidity of the euro/yen market magnified a sudden jump in the value of the yen vis-à-vis the euro, leading to a temporary exchange rate change of about ¥3 in the space of a few hours.

Nevertheless, while such technical factors can have an important influence on short-term exchange rate dynamics, their influence is typically short-lived. It is therefore likely that the medium-term swings of the major exchange rates were driven by other determinants, such as the dynamics of international investment flows, that were only partly related to cyclical considerations. The large-scale net purchases of Japanese equities by US investors in 1999, which outweighed net purchases of US bonds by Japanese investors, may have contributed to the dollar's depreciation against the yen (Graph V.6). Likewise, the dollar's strength against the euro is consistent with substantial portfolio investment flows from the euro area to the United States in 1999 and early 2000. These were the result of net purchases of US bonds and equities by euro area investors, as well as net sales of euro-denominated assets by US investors. The influence of portfolio flows on the euro was compounded by the even greater flow of foreign direct investment, with FDI inflows of \$130 billion into the United States compared to outflows of €147 billion from the euro area in 1999 (see also Chapter II). However, while the direction of net flows related to mergers and acquisitions involving US and European companies is consistent

The role of portfolio flows and FDI





with the euro's weakness against the dollar, announcements of such deals or reports of cash transactions did not seem to have a systematic impact on the exchange rate.

The broad movements of international investment may have been affected not only by cyclical considerations but, in particular for FDI, also by the perception that structural changes were proceeding more rapidly in some currency areas than others. The direction of net portfolio flows away from continental Europe towards Japan is consistent with market participants' optimistic views about corporate restructuring in Japan. These contrasted with the markets' more sceptical assessment of progress on structural reforms in the euro area. Portfolio outflows from the euro area in part may also reflect US investors' disappointment about losses on euro-denominated assets in 1999 and surprising gains on Japanese assets. On the other hand, Japanese investors bought euro-denominated assets during the period under review, except in the months preceding the 1999 fiscal year-end.

In the case of the euro, the influence of international investment flows was compounded by the attitude of liability managers. A strong increase in issuance in euros in 1999 in comparison with its predecessor currencies could be observed in both the private and the official sectors (see Graph VII.4 on page 128). While the lack of information on hedging by liability managers makes any inference from this issuance with regard to exchange rate movements difficult, the imbalance between the responses of borrowers and lenders to the introduction of the euro may have been an additional factor weighing on the new currency.

Stock markets and exchange rates

The role of portfolio flows in recent exchange rate movements coincides with a shift in international investment from bond to equity markets (Table V.2). This

Co-movement ...

Cross-border transactions in bonds and equities ¹								
	1975–79	1980–89	1990–94	1995	1996	1997	1998	1999 p
as a percentage of GDP								
United States								
Bonds	4.0	36.5	94.0	110.2	129.0	163.6	166.3	125.8
Equities	1.9	6.7	14.7	22.4	27.2	44.3	56.5	53.1
Japan								
Bonds	2.2	63.3	74.5	55.2	66.1	78.3	72.4	56.0
Equities	0.6	9.7	9.8	9.6	13.4	17.1	18.2	29.1
Germany								
Bonds	5.3	25.0	87.3	148.8	171.0	211.6	259.1	250.9
Equities	1.6	7.3	15.2	18.5	24.8	44.7	69.8	83.4

¹ Gross purchases and sales of securities between residents and non-residents.
Source: National data. Table V.2

raises the broader issue of the relationship between equity markets and exchange rates, given the concern that a fall in US equity markets coupled with a weakening dollar could potentially exert a deflationary influence on the rest of the world.

The extent to which stock markets and exchange rates move together varies widely across countries. Over the last 25 years, the correlation of monthly returns on stock market indices and changes in the value of the domestic currency, measured in terms of the nominal effective exchange rate, is positive in Australia, Canada, Japan, Italy and the United Kingdom, but negative in the United States, Germany and some other continental European countries (Table V.3). Over this horizon, stock market returns generally explain between 5 and 20% of monthly exchange rate returns in the countries considered.

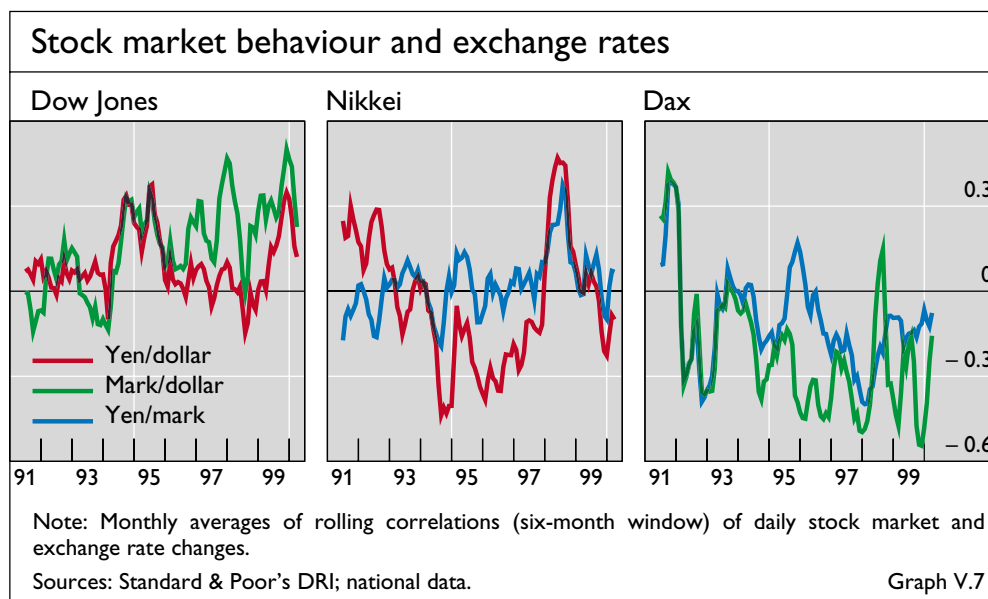
... varies across countries ...

The sign and strength of the statistical relationship between stock market returns and exchange rate changes also vary considerably over time (Graph V.7). Daily returns on the US stock market moved quite closely with changes in the value of the dollar vis-à-vis the yen and the mark in the mid-1990s. The co-movement of US equity markets and the dollar intensified again during 1999, when almost half of the daily movements in US stock prices were matched by changes in the yen/dollar or mark/dollar exchange rates. However, this correlation weakened considerably in early 2000, when episodes of falling US stock prices were not accompanied by a depreciation of the dollar. It is noteworthy that the same pattern shown for the Dow Jones index in Graph V.7 can

... and over time

Stock markets and exchange rates in selected industrial countries ¹									
AU	CA	JP	IT	GB	FR	US	SE	CH	DE
0.20**	0.17*	0.11*	0.10	0.06	-0.02	-0.06	-0.08	-0.09	-0.15**

Note: For an explanation of the country codes, see Graph II.2. * and ** mean statistically significant at the 95% and 99% level respectively.
¹ Correlation coefficients over the period 1975–2000 of monthly returns on stock market indices and nominal effective exchange rates defined as log differentials.
Sources: National data; BIS; BIS calculations. Table V.3



also be observed for the broader S&P index and the Nasdaq index, which gives more weight to shares in the high-tech sector.

The pattern of correlations of daily movements of the Japanese and German stock markets with the yen and the mark (or euro) looks different. Returns on the Nikkei and on the yen vis-à-vis the dollar moved together in 1996 and 1997, when a downward trend in Japanese equity markets was accompanied by a weakening of the yen. Contrary to the Dow Jones and the dollar, however, daily changes in the Nikkei and the yen were not closely correlated in 1999. Results for the German stock market and the mark are even less clear-cut, as upward movements in the Dax during the last five years have often been positively correlated with changes in the mark against the dollar, but not against the yen. Moreover, the euro's depreciation in 1999 contrasted with the upward trend of the Dax (and other stock market indices in the euro area).

Overall, these results suggest that the relationship between exchange rate movements and stock market returns is weak. The movements of the major bilateral exchange rates do not appear to be influenced to any significant extent by the performance (be it absolute or relative) of the US, Japanese and German stock markets. Moreover, the time pattern of these correlations does not support the conclusion that they were broadly driven by key macro-economic fundamentals, such as the cyclical performance, or by the relative monetary policy stance.

Developments in other foreign exchange markets

Movements of the major European currencies outside the euro area were to a large extent driven by cyclical factors. Currencies of other industrial countries responded, in addition, to changing trends in commodity prices. In emerging market economies, currencies remained fairly stable, reflecting improved domestic conditions, higher commodity prices and ample global liquidity

Overall, the relationship is weak

conditions. Local stock markets in these countries moved fairly closely with US equity markets and with the dollar exchange rate of the domestic currency.

European currencies

The pound sterling has experienced a prolonged period of sustained strength, against the background of an economy operating near full capacity and high short-term interest rates relative to other industrialised economies. Between January 1999 and March 2000, the currency appreciated by about 15% against the euro (Graph V.8) while remaining fairly stable against the dollar, and in real effective terms came close to the record level set in 1980. In both its broad swings and its daily movements, the pound is maintaining an intermediate position between the dollar and the euro, as it did with the mark in the past, when sterling tended to share about one half of the daily changes of the dollar against the mark.

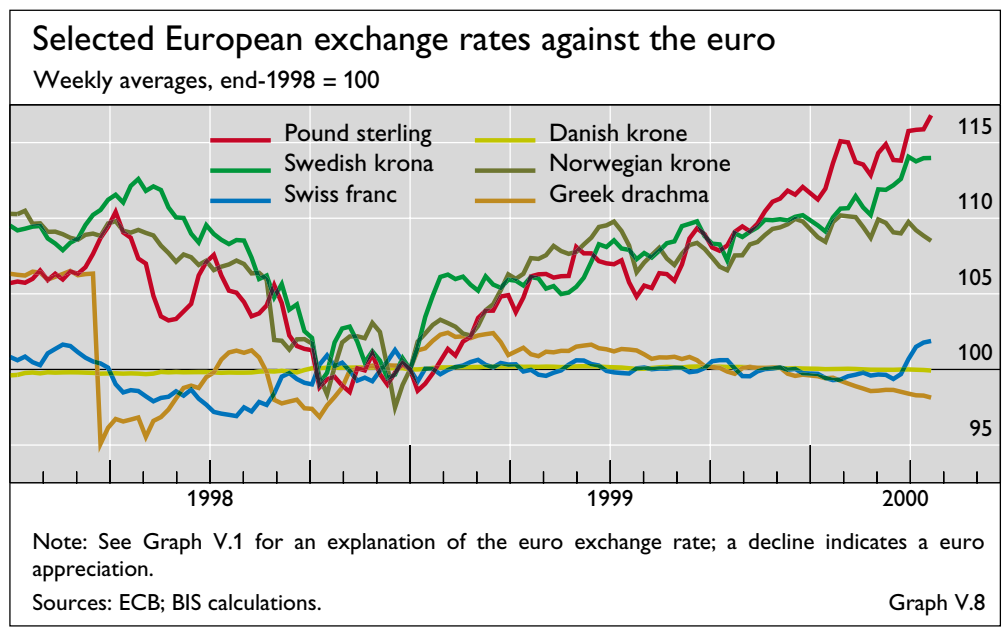
Cyclical developments supported the pound ...

Somewhat like sterling, the Swedish krona appreciated steadily vis-à-vis the euro during the period under review, against the background of positive growth differentials between Sweden and the euro area (see Chapter II). Overall, the co-movement of the krona with the euro appears similar to its past link with the mark. On average, for every 1% depreciation of the euro against the dollar, the krona tended in 1999 to depreciate by about 0.7% against the dollar.

... and the krona

In 1999, the Swiss franc moved mostly within a narrow range of 1.59–1.61 against the euro and on average matched the euro's daily changes against the dollar. The closer co-movement of the Swiss franc and the euro was associated with fairly synchronous monetary policy moves during the year. This contrasted with the behaviour of the Swiss franc observed in the past, when it tended to depreciate (appreciate) against the mark when the German currency weakened (strengthened) against the dollar. The large shift in trading volumes away from the euro's most heavily traded legacy currency, the mark, towards the dollar confirmed foreign exchange traders' view that a tighter link

The changing link between the Swiss franc and the euro

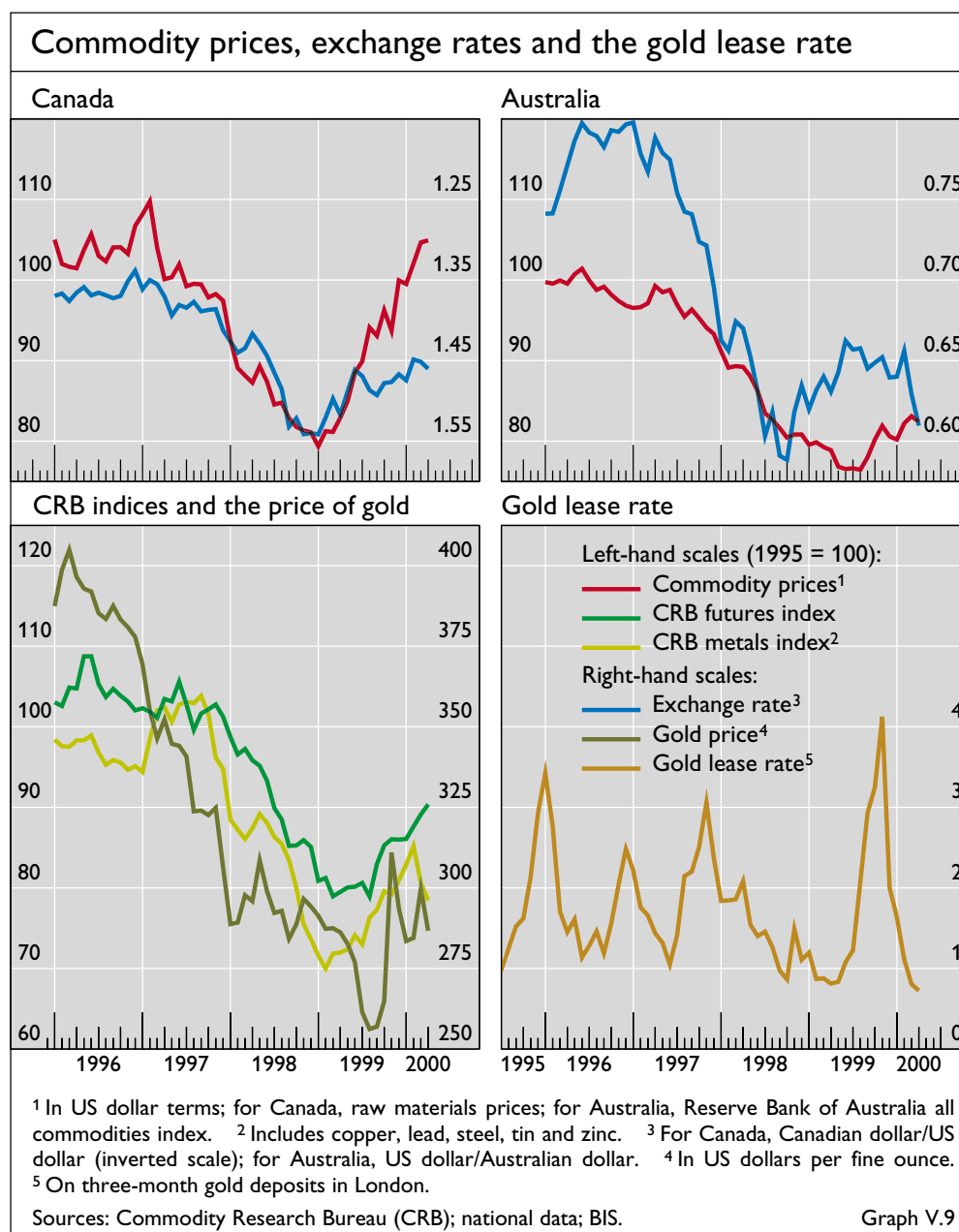


between the Swiss franc and the euro had reduced profit opportunities in this market. In late March 2000, however, the Swiss authorities tightened monetary policy much more than did the ECB and in the weeks that followed the Swiss franc gained 2.5% against the euro.

Currencies of other industrial countries

Commodity prices have traditionally been regarded as an important determinant of the Canadian dollar and, to an even greater extent, the Australian dollar. Foreign exchange traders outside the two countries are generally believed to associate both currencies with the Commodity Research Bureau (CRB) index, which has risen by 10% since mid-1999. This link appears to have weakened last year. As commodity prices rebounded in the summer after having declined for several years, the Canadian dollar strengthened while the Australian dollar depreciated against the US dollar (Graph V.9). In part this

Divergent paths of the Australian and Canadian dollars



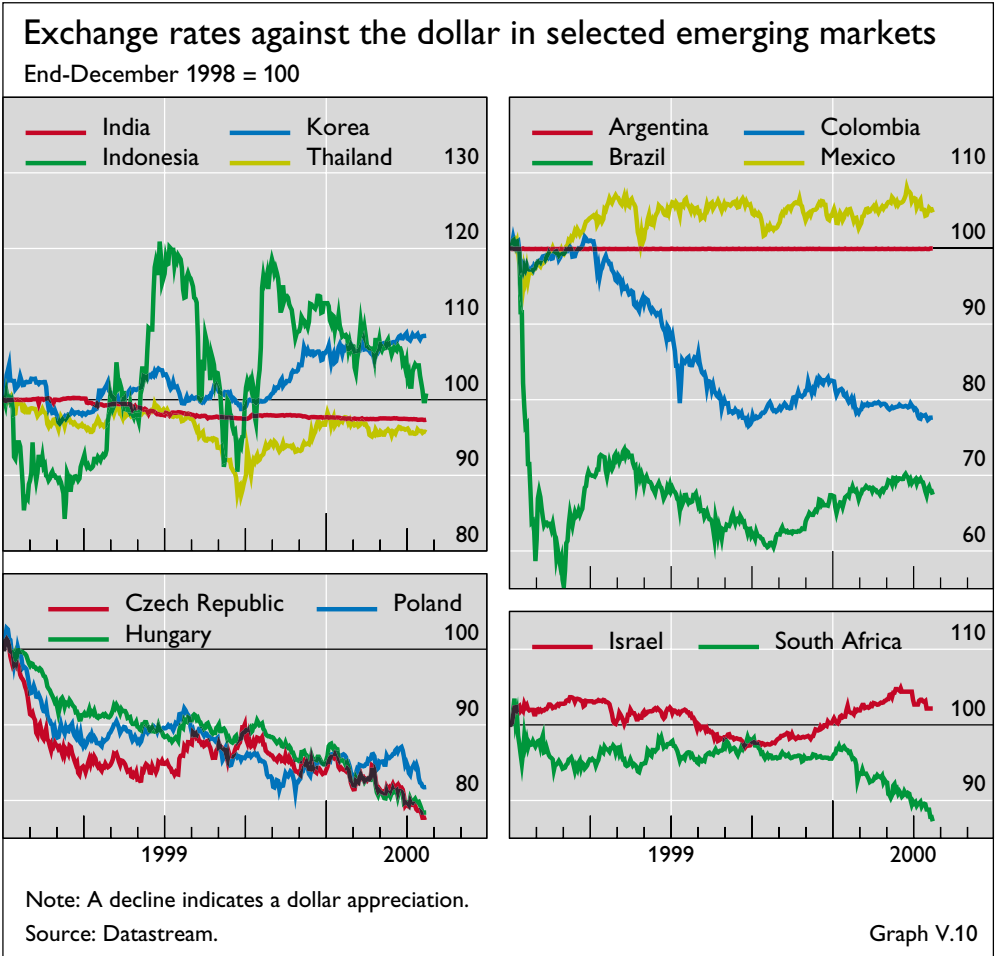
divergence may be explained by traders starting to focus on the different commodity composition of Australian and Canadian exports, as the commodity index that is relevant for Canada rose sooner and much more sharply than the corresponding index for Australia. It may also have reflected expectations of slower growth in Australia, compared to signs of a continuing robust expansion in Canada.

Market commentary attributed the weakness of the Australian foreign exchange and stock markets in the first few months of 2000 to offshore investors' focus on the modest weight of high-tech shares in the local stock market. This would tend to brand Australia as an "old" rather than a "new" economy, in contrast to Canada. However, it is much too early to assess the impact of the high-tech sector on foreign exchange markets. Moreover, while the Australian economy is not heavily involved in high-tech production, the strong growth in productivity in Australia suggests that it is a heavy user of new technology.

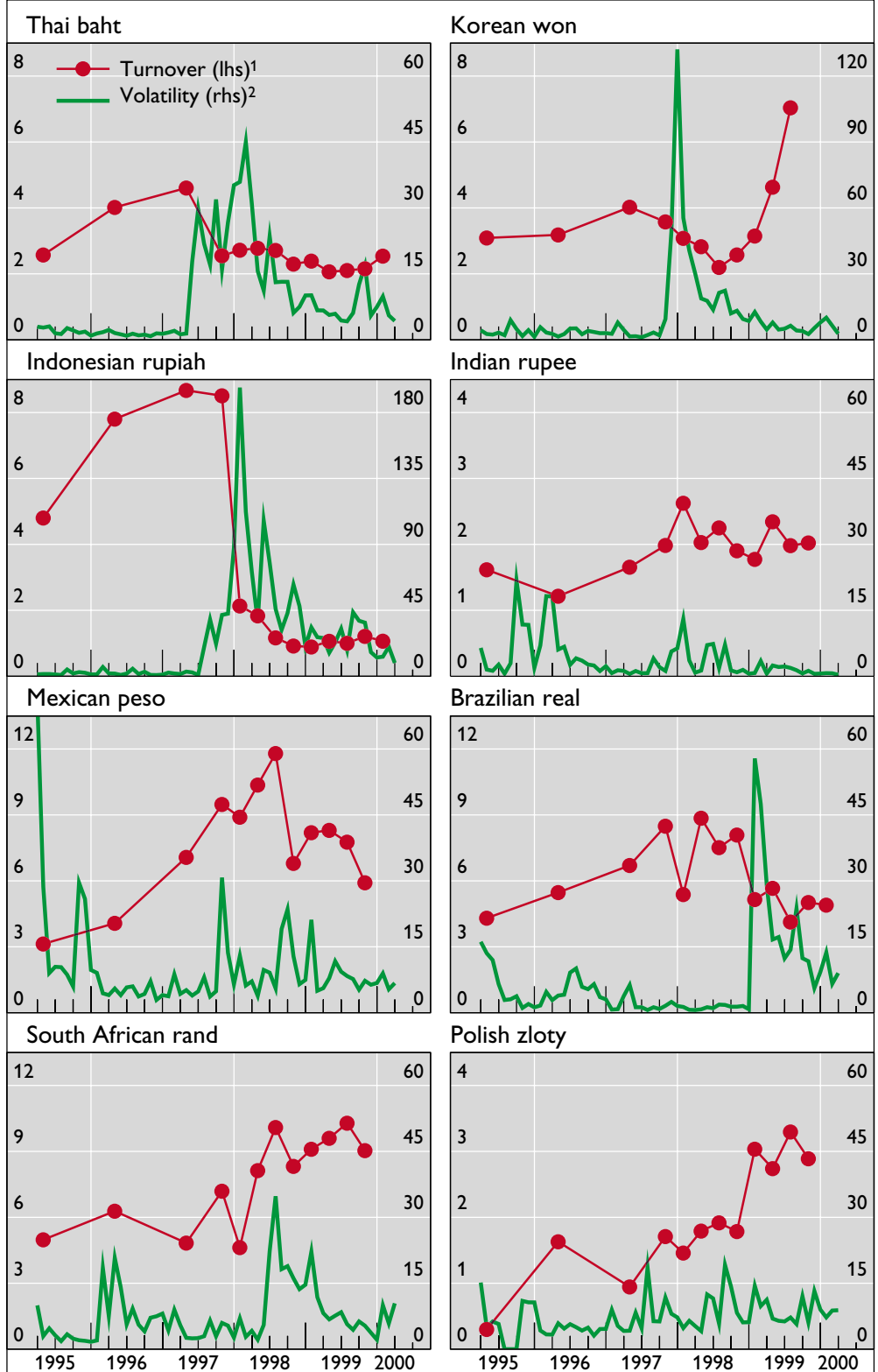
Emerging market currencies

In contrast to recent years, foreign exchange markets in emerging market countries remained fairly calm during the period under review. Most Asian currencies remained broadly stable or strengthened in 1999 and early 2000 (Graph V.10). In the second half of 1999, the won appreciated by about 7%

Markets remained broadly calm



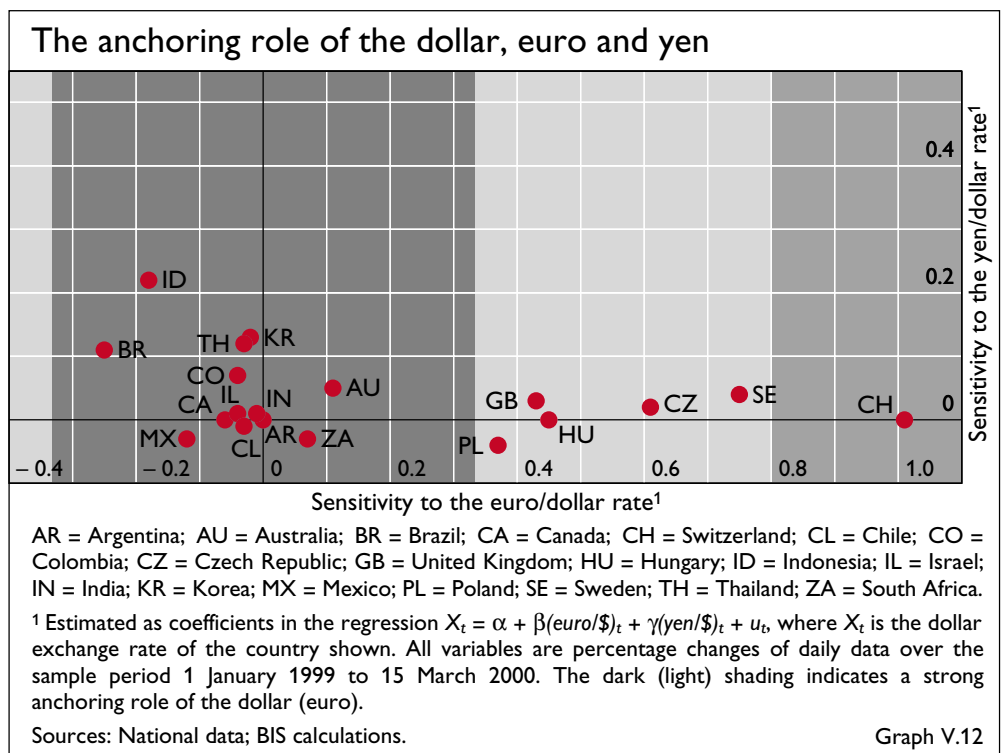
Turnover and volatility in selected emerging markets



¹ Estimates of local turnover in the domestic currency as reported by the respective central banks, net of double-counting, per trading day in the month shown (in billions of US dollars) except: for Mexico, Brazil and South Africa, including other currencies; for Indonesia and Poland, on a gross basis; for Thailand, 1995 second half and 1996 annual averages; for Indonesia, 1995 and 1996 annual averages. ² One-month annualised standard deviation of daily percentage changes in the exchange rate against the US dollar.

Sources: Central banks; Datastream; BIS calculations.

Graph V.11



against the dollar, while the baht and the rupiah first depreciated but then regained the ground lost. In the months following the speculative attack on the real and its subsequent floating, Latin American markets suffered some pressure, particularly Colombia, where the peso fell markedly between April and July 1999, and Ecuador, where dollarisation was officially introduced in early 2000. Foreign exchange markets in the region were, however, sheltered from major turmoil. Eastern European currencies generally remained stable against the euro and weakened by about 20% against the dollar. Elsewhere, the rand experienced some pressure in early 1999 and again in January 2000 as monetary policy was eased.

The volatility of exchange rate movements in Asian and some Latin American markets generally continued to decline but in some countries remained above values seen before the Asian crisis in 1997 and 1998 (Graph V.11). Local trading volumes were stable or increased, although in many cases they were still far below the levels reached in the mid-1990s. The Korean foreign exchange market was a notable exception: trading activity surged in 1999, accompanying a boom in local equity markets, which received a \$5.2 billion inflow from abroad in 1999 and a further inflow of more than \$6 billion from January to mid-March 2000.

To a large extent, these generally improved conditions reflected domestic factors, such as the recovery in growth. In some Asian countries, substantial current account surpluses combined with capital inflows put upward pressure on the exchange rate, and in certain cases the monetary authorities intervened in the foreign exchange market to stem the appreciation of the domestic currency.

During the period under review, currencies in Asia and Latin America remained heavily influenced by the behaviour of the dollar and tended to

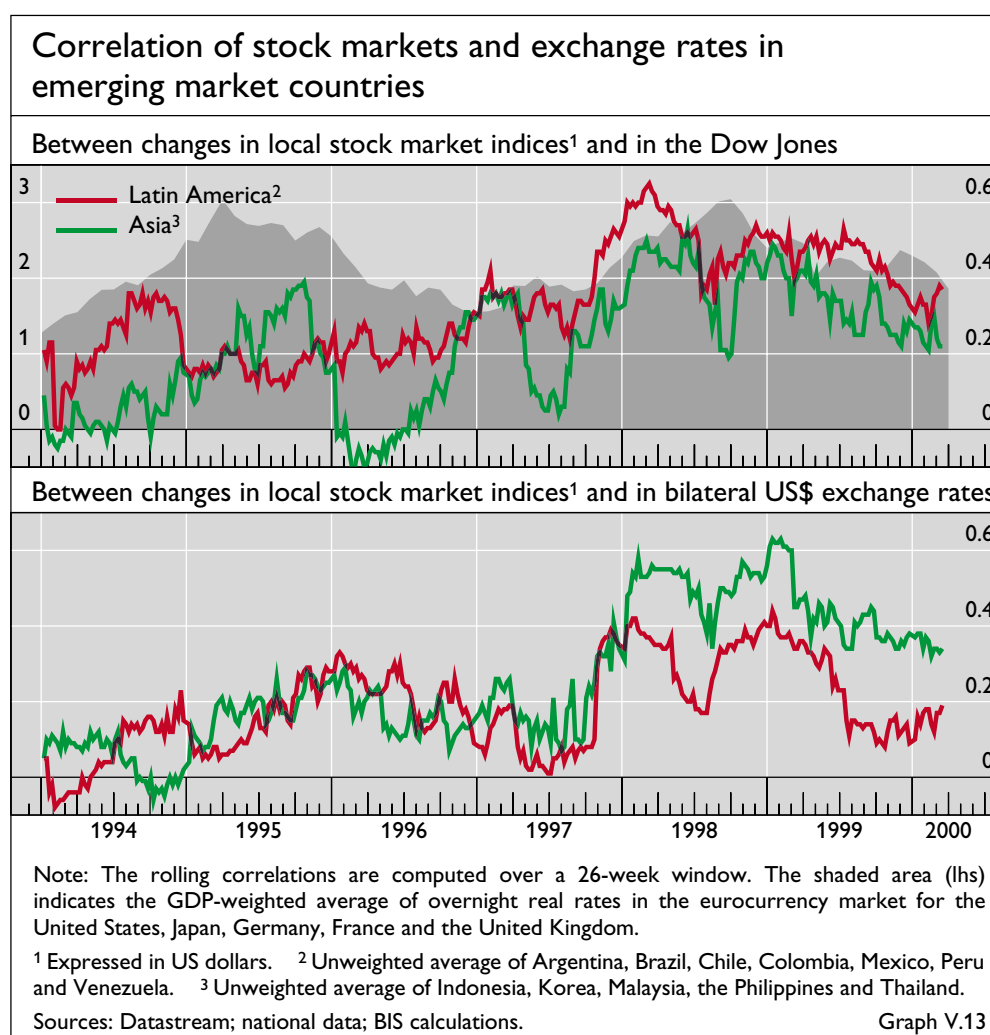
The role of the dollar ...

... and US stock markets

track very closely its movements against the yen and the euro (Graph V.12). In contrast, the yen continued to play a minor role, even in the Asian region, while the euro's influence closely matched that of the mark.

A related factor in the improved performance of emerging market currencies may have been the rally in US stock markets, which appeared to exert an important positive influence on local stock markets. While low interest rates in these countries may have favoured equity purchases by domestic investors, it is also true that local stock markets have moved quite closely with US equity markets over the past few years (Graph V.13). Moreover, changes in local stock markets and in the dollar exchange rate of the domestic currency appear to have been highly correlated over the same period. Given the tight link of emerging market currencies in Asia and Latin America with the dollar, the correlation appears to be explained in part by the broad influence of US monetary policy changes.

Several other external factors also had a positive impact on emerging market currencies in 1999 and early 2000. The rebound of commodity prices in summer 1999 helped the currencies of countries that traditionally rely on commodity exports. More importantly, continued ample liquidity in international financial markets (see the shaded area in Graph V.13) was generally beneficial for emerging markets.



Structural changes and trading activity in foreign exchange markets

The period under review was characterised by subdued overall foreign exchange market activity. Informal estimates by market participants suggest there had been a sizeable decline in turnover in the major centres, which can be traced back to autumn 1998, when activity had fallen sharply in response to the broad financial market turbulence and the associated global decline in liquidity. While short-term developments may have kept trading volumes low, activity may also have been influenced by major structural changes that have affected foreign exchange markets in the last few years. An important question is whether the reduction in trading volumes was also reflected in continuing low levels of liquidity.

Subdued global activity ...

European markets began to shrink several years ahead of the introduction of EMU. Figures from the 1995 and 1998 triennial central bank surveys of foreign exchange and derivatives markets suggest that the approach of EMU had led to a gradual reduction of about 8% of total foreign exchange turnover. In 1999, this reduction was not reversed by any increase in trading in the euro over that in its predecessor currencies. The share of trading in the euro against the dollar in 1999 roughly matched that of the mark, French franc and lira against the dollar in April 1998. Moreover, the euro/yen market appeared to be as small as the mark/yen market in 1998. Commercial banks' desire to compensate for the anticipated loss of revenue from European trading had supported the rapid growth of foreign exchange markets in emerging market countries. However, with the onset of the Asian crisis, activity also declined in these markets, and thus did not offset the reduction in trading in Europe.

... influenced by EMU ...

Apart from leading to the disappearance of intra-European trading, the introduction of the euro also appeared to influence the level of foreign exchange market activity indirectly by spurring the consolidation in the banking sector in continental Europe (see Chapter VII) and the consequent reduction in the number of market players. This influence was compounded by the increase in mergers and acquisitions in the US and UK banking sectors in recent years.

A further reason for lower trading volumes during 1999 may have been an acceleration of the trend towards concentration among brokers in foreign exchange markets. In the course of the year, electronic broking expanded further in the spot market, to the disadvantage of traditional means of dealing such as voice broking or direct dealing. Between 1995 and 1998, the share of electronic broking in spot foreign exchange market activity increased from about 10% to about 15%. The share doubled in the following two years, and in certain market segments, such as those involving the major currencies, electronic brokers reportedly covered between 50 and 80% of the market.

... and the growing role of electronic broking

The advance of electronic broking owes much to its lower costs, higher efficiency and, most importantly, greater transparency compared to traditional means of dealing. Spot foreign exchange markets have traditionally been opaque, given the difficulty of disseminating price information in the absence of centralised exchanges. Before the advent of electronic broking, dealers had typically to enter into a number of transactions to obtain information on prices available in the market. Traders operating through electronic brokers, by

Volatility in the major foreign exchange markets			
	Yen/dollar	Yen/euro ¹	Dollar/euro ¹
Historical volatility ²			
1980–89	10.1	7.3	11.4
1990–98	10.9	10.4	10.3
Implied volatility ³			
1997	11.6	10.9	10.1
1998	16.1	14.9	9.8
1999	14.5	14.4	10.0
2000 Q1	13.6	16.5	13.5
High-low difference ⁴			
1997	6.9	...	...
1998	17.7	15.8	0.4
1999	14.3	17.4	2.7
2000 Q1	4.6	16.9	21.5

¹ Prior to 1999, yen/mark and dollar/mark. ² Annualised standard deviations of daily returns computed over calendar months. ³ One-month. ⁴ Frequency of days, in percentages, when the intraday difference between high and low was greater than 2%.

Sources: ECB; Standard & Poor's DRI; BIS calculations. Table V.4

contrast, are able to know instantly the “best” price available in the market and to them, depending on their and their counterparties’ credit limits, without having to go through an uncertain price discovery process. This implies that foreign exchange dealers generally need to enter into a significantly lower number of transactions when they use electronic brokers than with traditional means of trading. The same level of market liquidity might therefore be compatible with lower turnover. A further consequence is that bid-ask spreads on the main exchange rates have fallen dramatically, reaching about two to three hundredths of a US cent.

Some impact on volatility

While the expansion of electronic broking has certainly had a negative impact on trading volumes, it is not at all clear from the available evidence that liquidity suffered given the ease and low cost of altering positions using electronic broking. Nor is the influence on liquidity of the other structural changes described above obvious. In recent years, volatility has risen compared to the average of the last two decades, particularly in the dollar/yen and euro (mark)/yen markets (Table V.4). The dollar’s unprecedented fall by 10% against the yen on two days in early October 1998 shows that the amplitude of intraday changes has at times also been greater. Moreover, there are some indications that the frequency of sharp intraday exchange rate movements, such as the ¥3 drop of the euro within a few hours on 28 February 2000, has increased. However, there is no evidence that the persistence of spikes in volatility changed in 1999. Overall, therefore, it is too early to ascertain whether the patterns of volatility have changed significantly.

Developments in the gold market

The period under review was an eventful one for the gold market. In the first three quarters of 1999, the price of gold trended downwards from about

\$291 per ounce in January to a low of \$254 in late August (Graph V.9). The remainder of the period was characterised by two major events. The first occurred in the two weeks after the joint central bank statement of 26 September 1999, when the gold price rose by about a quarter. In the following weeks, the gold price surrendered part of its gains in a very volatile market. The second took place on 7 February 2000, when it leaped by about \$20 per ounce within a few hours of the decision of a major gold mine to alter its hedging strategies. This change was, however, reversed over the next few days.

Long-term, cyclical and more technical factors weighed on the gold price during the period under review. The global lowering of inflation expectations had reduced gold's attractiveness as a store of value and dampened its price over the preceding decade. In the last few years, the price of gold suffered in addition from the broad decline in commodity prices and depressed demand in the Asian region. The substantial fall in 1999 can also be attributed to a surge in forward sales by gold producers. In order to lock in current prices so as to gain protection against future declines, gold mines stepped up their hedging sales by more than 400% in the first three quarters of the year, an increase equivalent to about 10% of the total annual gold supply. A sharp rise in the gold lease rate in summer 1999 put pressure on banks that would normally buy gold forward from gold producers at long maturities and hedge their exposure by borrowing gold at short maturities and selling it on the spot market. In 1999, gold producers appear to have started to lock in their output prices at longer maturities (10–15 rather than 5–10 years), while banks in response were trying to lengthen the maturity of their gold borrowing beyond three to six months. Although conditions in the gold lease market eased in the autumn, hedging activity also appears to have been behind the temporary rise in volatility in October 1999 and the sharp spike in the gold price on 7 February 2000, when it jumped from \$294 to \$313.

The joint statement on gold, which pushed up the gold price at the end of September 1999, was issued by the central banks of the Eurosystem, the Bank of England, Sveriges Riksbank and the Swiss National Bank, which together hold about half of total official gold reserves (Table V.5). The signatories agreed to limit gold sales to a maximum of about 400 tonnes a year and to 2,000 tonnes over a five-year period. They also stated that gold would remain an important element in official reserves, that only sales that had already been decided could actually be carried out, and that the signatories would not expand their activity in the gold leasing and gold derivatives markets. The central banks' agreement seemed to break the declining trend of the price of gold. After the announcement, the gold price rebounded from about \$260 to more than \$330 in early October. Overall, the gold market has seen a return to calmer conditions since then.

Joint statement supported the price of gold

News about sales of official gold holdings by central banks was also viewed as a factor affecting the price of gold during the period under review. While this argument might be justified on the grounds that such sales alter the balance between the current demand for and supply of gold, these sales were relatively small compared to the size of the gold market. A sale of, say,

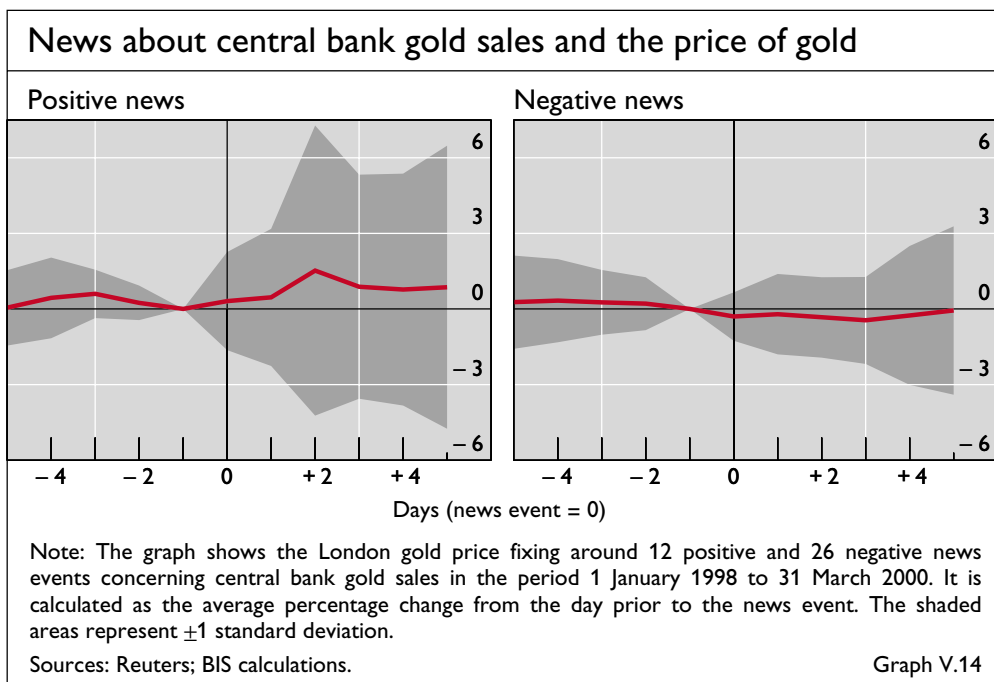
Official gold holdings ¹		
	Tonnes	Share of total (in %)
Signatories ²	15,998	47.6
Germany	3,469	10.3
France	3,024	9.0
Switzerland	2,590	7.7
Italy	2,452	7.3
Netherlands	1,012	3.0
ECB	747	2.2
United Kingdom	665	2.0
Portugal	607	1.8
Spain	523	1.6
Austria	407	1.2
Belgium	258	0.8
Sweden	185	0.6
Finland	49	0.1
Ireland	6	–
Luxembourg	2	–
Others	17,623	52.4
of which:		
United States	8,138	24.2
IMF	3,217	9.6
Japan	754	2.2
BIS	192	0.6
South Africa	124	0.4
Australia	80	0.2

¹ At end-September 1999. ² Signatories to the joint statement on gold of 26 September 1999.
Sources: IMF; World Gold Council; BIS. Table V.5

100 tonnes is equivalent to about 4% of estimated world annual production and represents around 10% of the estimated average daily turnover in the London spot gold market. An alternative explanation for the influence of official gold sales is that, despite their relative size, they provide important signals of future intentions. Central banks are the largest single group of holders together with the IMF, with official gold reserves amounting to about 33,000 tonnes, the equivalent of 13 years' production: hence, should the market start to anticipate future sales, this would probably affect current prices.

Given the impact of the central bank agreement on the gold price, it is instructive to analyse the behaviour of the gold price around all the days on which news about official sales reached the market during the period January 1998–March 2000. While it should be stressed that this analysis focuses on news about official gold sales that reached market participants, rather than actual sales figures, it would be consistent with the signalling argument above that the former is more relevant in determining the market's reaction and hence the gold price. News events can be classified according to whether ex ante they might have a positive or a negative impact on the gold price. Positive news includes decisions to abandon previously planned gold sales and official comments opposing gold sales. Negative news comprises reports of actual official sales or of increased prospects of future sales. Obviously, this

On average, the effect of news about central bank gold sales ...



classification is not incontrovertible. News about a previous sale that is only announced ex post might have a positive effect on the gold price, as the market would be encouraged to learn that a sale had been absorbed.

On average the gold price declined on days marked by the arrival of negative news about gold sales (Graph V.14). However, the decrease was very small (no bigger than 0.25%) and was almost entirely reversed in the days that followed. In the case of positive news, the gold price increased on average, but again only temporarily. It should be noted that this last result appears to have been driven mainly by the central bank agreement of 26 September 1999. When this single item is excluded from the list of positive events, they are on average followed by a small decline in the gold price.

... was not significant

Subject to the caveats mentioned above, this analysis suggests that, over the last two years, while on some occasions news about official gold sales had a substantial impact on the gold price, its average impact was not significant. One interpretation of this apparent puzzle is that, during the period 1998–early 2000, most of this news was backward-looking. That is, it provided market participants with information about sales that had already occurred.

VI. Financial markets

Highlights

While still bearing the scars of recent crises, participants in financial markets turned their attention during 1999 to positive prospects for the future and returned to risk-taking with increasing eagerness. An enthusiasm for digital technology and mounting evidence of worldwide economic growth raised the prices of many stocks to new highs. In the credit markets, a similar appetite for risk overcame episodes of liquidity pressure and gradually brought lending spreads down even in the face of record issuance of private debt securities. A rise in long-term interest rates in Europe and the United States was treated as a welcome sign that monetary policy was on hand to steer economies away from inflation while sustaining growth.

Optimism turned to concern

By the first quarter of 2000, market participants began to sense that their enthusiasm had gone too far. In the stock markets, investors abruptly developed a fear of heights that led to wild swings, particularly in the prices of technology stocks. Data released during the quarter created uncertainty as to how much monetary policy would have to tighten. At the same time, supply shocks in the US Treasury market affected prices to an unusual degree. Arbitrage and market-making activity that would otherwise have absorbed these shocks had apparently not recovered from the losses suffered in autumn 1998. The resulting volatility in long yields not only confounded borrowers and investors who depend on that market for benchmark prices, but also clouded the information normally conveyed about macroeconomic prospects.

Asset price changes led to a reallocation of capital

Changes in relative asset prices had real consequences in the form of a reallocation of capital between economic sectors. In the equity markets, the spectacular performance of high-technology stocks helped start-up companies raise record sums through initial public offerings (IPOs), while the seeming underperformance of other stocks led to large buyback programmes that returned funds to shareholders. In the debt markets, fiscal surpluses in the United States and the United Kingdom and diminishing deficits in continental Europe, supported by the narrowing of credit spreads, made room for a remarkable rise in corporate bond issuance that served to transfer savings from central governments to private borrowers.

Major banks invested in surging debt securities markets

Asset prices also helped determine how the world's current account imbalances would be financed. Stock markets supported capital flows, including cross-border acquisitions paid for with equity. The world's major banks themselves invested strongly in the surging debt securities markets and relegated their traditional international lending activity to the sidelines. Emerging market borrowers for their part had little need for foreign bank loans and in fact accelerated their loan repayments. As a result, the international interbank

market was suddenly flush with funds. However, except for acquisition-related deals, banks began to have difficulty finding new borrowers.

Equity markets

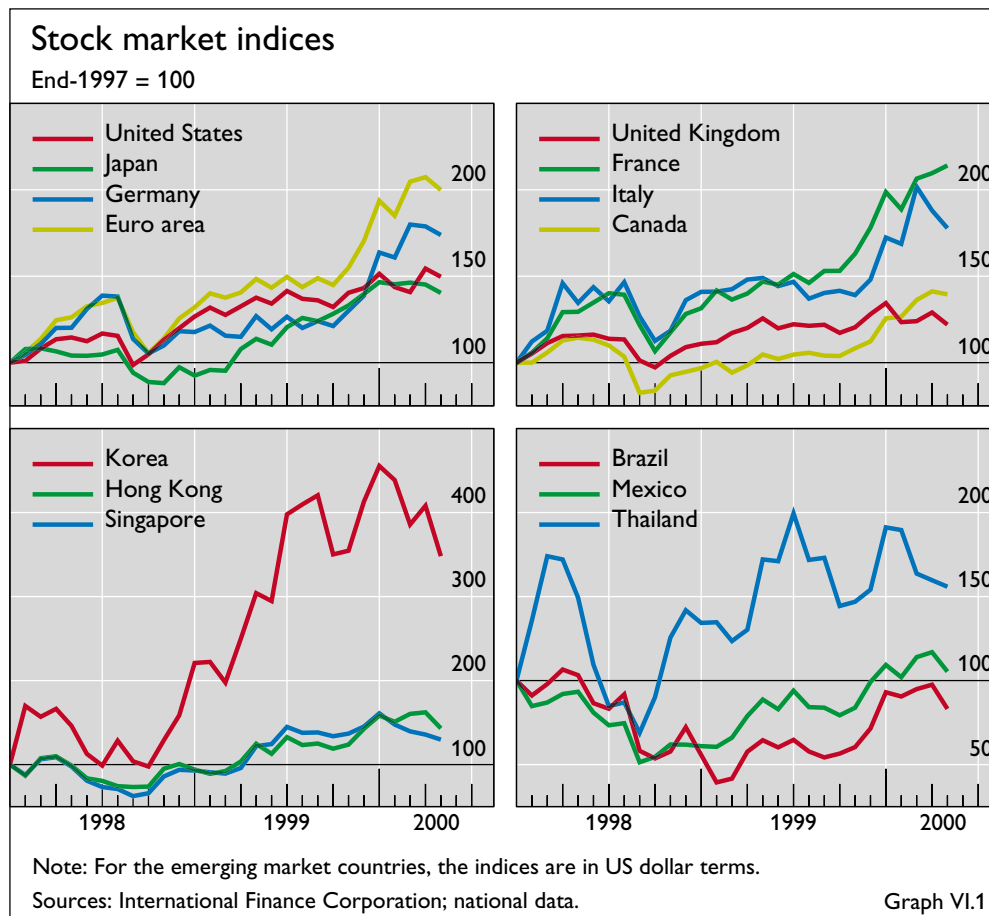
Patterns of performance

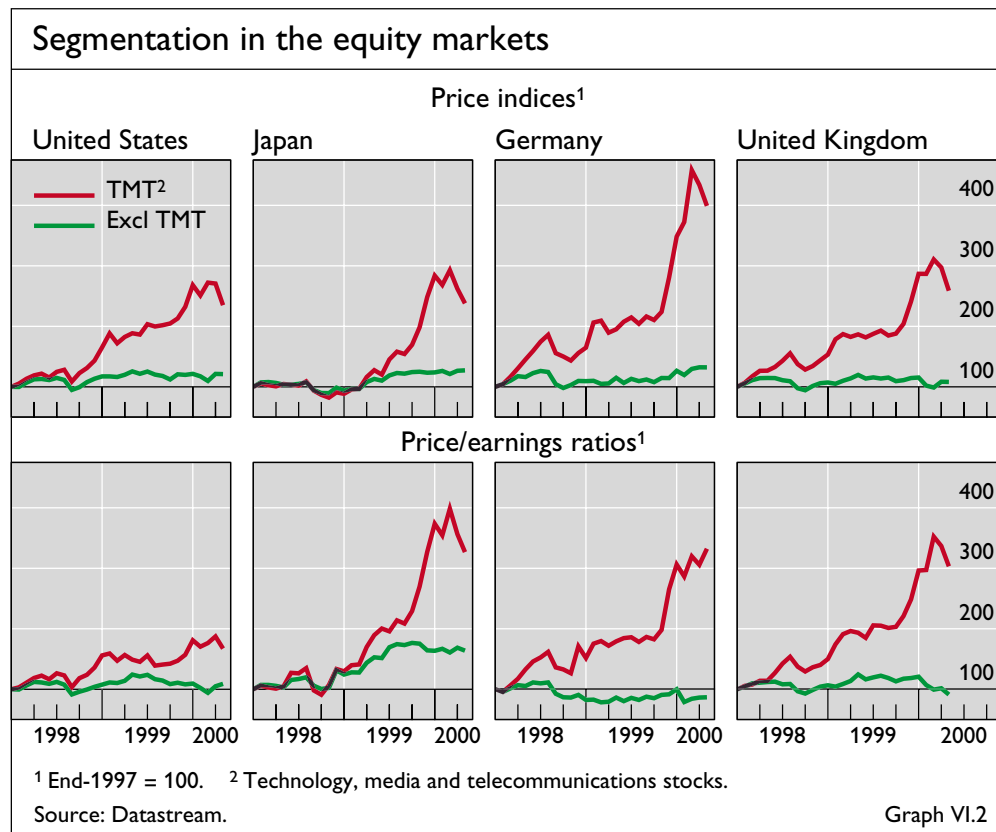
Building on the momentum of previous years, stock markets around the world set new record highs in 1999 (Graph VI.1). The strong gains were particularly noteworthy in that they occurred against the backdrop of increases in US and European interest rates. Even the Tokyo stock market, which had been weak for several years, joined the global trend and erased the losses incurred since the start of the recent Asian financial crises. Brazil, Korea, Mexico and other markets recovering from recession were among the best performers in the world. The global pace of advance reached a peak in the final quarter of 1999 before beginning to falter in the new year.

Stock markets worldwide set new record highs

The strength of broad equity indices in 1999 hid marked differences between the performance of “new economy” and “old economy” shares. In the United States, for instance, fewer than half the companies in the S&P 500 index actually posted positive returns for the year. Worldwide, overall market gains were driven largely by digital technology and telecommunications shares, which virtually doubled in value in the United States, the United Kingdom and Germany and almost tripled in Japan (Graph VI.2). The divergence between the

Market gains were driven by technology shares



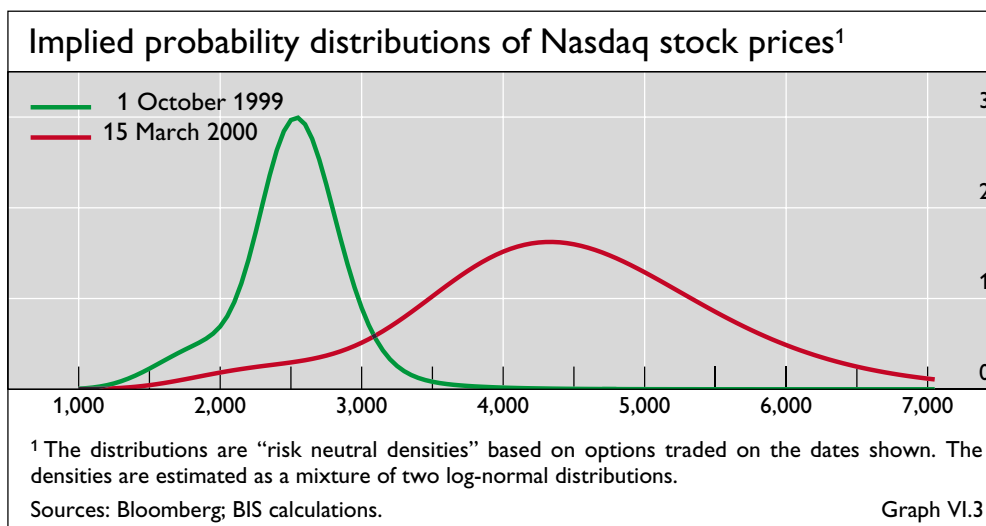


prices of technology and non-technology stocks was most evident in Germany, a phenomenon aided by a takeover premium on telecommunications stocks. The performance of “old economy” sectors also differed between countries. Share prices in these sectors fell in the United States and United Kingdom but rose in Germany and Japan.

The divergence both between national markets and between economic sectors became even more pronounced in the first quarter of 2000 as market volatility rose dramatically. After a brief downturn at the start of the year, equity prices in continental Europe resumed their ascent, while prices in the United States continued to fall. In Japan, the announcement in mid-March that the economy had lapsed back into recession, with a relatively large contraction of output during the fourth quarter of 1999, led to a temporary sell-off of Japanese stocks. In the US market, data releases presented a real economy that seemed impervious to monetary tightening and often triggered wild price swings from one day to the next. Technology and non-technology stocks often played a tug of war, with one sector rising when the other fell. Volatility within the trading day sometimes exceeded what would be normal over several days. On 4 April, for example, the technology-heavy Nasdaq index fell by 13% during the day only to recover most of its losses by the close. The Nasdaq market tumbled a week later, especially after the release of a somewhat high CPI inflation number, and lost \$1.4 trillion of its capitalisation. Without any further significant news, the market rose again at the start of the following week.

The volatility in April was preceded by an apparent rise in market participants’ uncertainty about future stock prices. As reflected in options prices, this apprehension about possible future price changes seemed to

Technology and non-technology stocks played a tug of war



increase even more than realised volatility, particularly for high-technology shares. The prospective volatility priced into exchange-traded options on the Nasdaq index was relatively modest in October 1999, when technology share prices were rising, suggesting a degree of confidence about valuations (Graph VI.3). However, once these share prices started to falter during the first quarter of 2000, the volatility implied by options prices became extraordinarily elevated. As of mid-March 2000, the implied distribution of possible future prices indicated roughly a 25% probability of at least a 20% decline compared to a 15% probability of a such a decline as perceived in October.

Volatility and changing valuations

The roller coaster movement of stock markets raises questions about what has been driving the changing valuations. Since equity represents a claim on a company’s future distributions to shareholders, its price should move to reflect new information about the firm’s earnings, particularly about how fast earnings will grow. In addition, it should reflect the expected return on alternative investments, such as bonds, and an unobservable incremental return that investors demand as compensation for bearing equity price risk, the so-called equity risk premium.

Recent short-term price swings seem to have been triggered by very little new information. This is not in itself highly unusual, since stock prices historically have risen and fallen by more than can be explained by observed movements in earnings. This “excess volatility” may arise from an irrational fickleness in market participants’ behaviour. Movements in the unobservable equity risk premium may capture such behaviour, although it is not clear why the premium should change so much in so short a time. Another possible explanation of why stock prices move as much as they do is the existence of differential information across investors. Some investors may at times hold important private information that they convey to the market only through their trades, so that order flows rather than publicly observed information move the market.

While short-term fluctuations in stock prices are difficult to explain, longer-term movements display empirical regularities that are fairly consistent with economic fundamentals. When valuation indicators – such as dividend

Roller coaster markets raise questions about valuations

Price swings apparently triggered by very little new information

yields and price/earnings multiples – deviate substantially from their normal relationship to the business cycle, the levels eventually revert to the historical average. Typically, low dividend yields or high price/earnings multiples have returned to normal levels as a result of prices falling rather than dividends or earnings rising.

The outlook for equities was not favourable ...

Viewed against the backdrop of the historical evidence, the outlook for equities at the end of March 2000 was not favourable. The continued general increase in share prices had taken valuation measures for stock markets as a whole to extreme levels. For instance, dividend yields in the majority of markets were either at, or very close to, historical lows (Table VI.1). Admittedly, the increased inclination of companies to distribute profits to shareholders through share buybacks, rather than through dividend payouts, served to depress dividend yields independently of shifts in the willingness of market participants to bear risk. Nevertheless, stock markets also appeared overvalued when judged on the basis of price/earnings multiples. Although these multiples had generally declined slightly from recent peaks, they were still high by historical standards and even exceeded the levels seen before the stock market break of October 1987.

... and might depend on the sector

The differential performance between “old economy” and “new economy” stocks during the course of last year suggested that the outlook for equities might depend on the specific sector. While price/earnings multiples on “old economy” shares were below market-wide multiples, valuation indicators suggested that even these stocks might be overvalued. Price/earnings multiples of the non-technology sector in the United States and United Kingdom at the end of March 2000 were 23 and 19 respectively, well above their historical averages, even though these countries were at a stage in the business cycle (see Chapter II) which has, at least in the past, been associated with a reduced

Indicators of valuation of share prices ¹									
	Dividend yields ²				Price/earnings ratios ³				
	Average	Trough		March 2000	Average	Sep 1987	Peak		March 2000
		level	date				level	date	
United States	3.6	1.1	Dec 1999	1.2	15.6	22.3	36.4	Jul 1999	28.3
Japan	1.3	0.4	Jan 1990	0.6	38.8	69.5	85.2	Feb 2000	80.6
Germany	2.7	1.1	Feb 2000	1.2	13.5	14.7	27.4	Jan 2000	22.8
France	4.0	1.6	Mar 2000	1.6	12.5	13.2	30.4	May 1973	26.8
Italy	2.8	1.0	May 1981	1.3	18.3	14.7	36.0	Mar 2000	35.6
United Kingdom	4.7	2.1	Mar 2000	2.1	13.4	15.8	28.6	Jan 2000	28.1
Canada	3.3	1.1	Mar 2000	1.1	12.8	19.5	42.5	Nov 1999	32.8
Netherlands	4.6	1.7	Jan 2000	1.8	11.6	14.5	31.9	Jan 2000	26.5
Switzerland	2.3	0.9	Mar 1998	1.3	13.4	13.9	29.7	Mar 1998	20.1
Sweden	2.5	1.1	Mar 2000	1.1	17.8	23.6	35.6	Mar 2000	34.2
Belgium	4.0	1.3	Jan 1999	2.0	13.3	14.0	29.2	Apr 1973	17.1

¹ Since 1973. ² For Sweden, since 1982. ³ For Italy, since June 1986; for the United Kingdom, since 1980; for Canada, excluding 1991–94, when the ratio was exceptionally high owing to very low earnings due to write-offs (peak in 1994: 504); for Sweden, since 1982.

Source: Datastream.

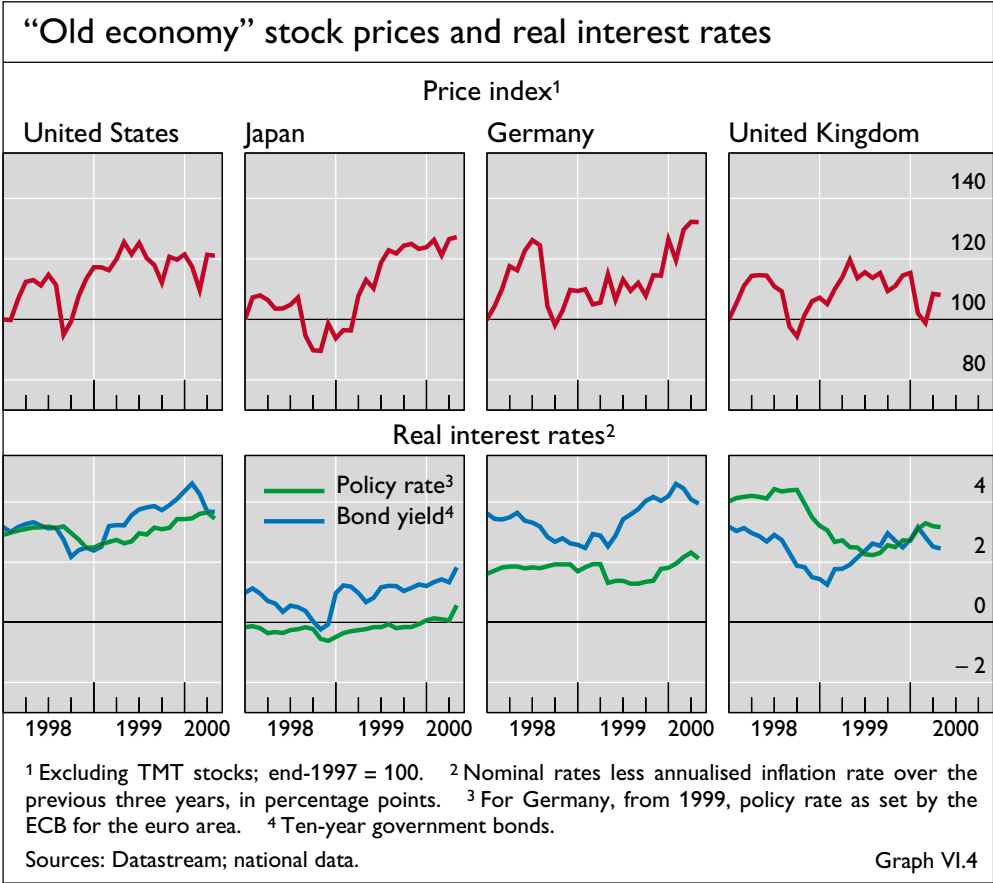
Table VI.1

scope for earnings growth. In addition, “old economy” stocks in the United States did not appear to have fully adjusted to increases in interest rates (Graph VI.4).

Traditional valuation indicators suggested even greater risks for high-technology stocks. The price/earnings multiples of these sectors scaled unprecedented heights. At the end of March 2000, they stood at 53 in the United States and 169 in Japan. Such valuations depend partly on earnings growth, which in the long run must converge to the economy’s growth. Hence differences in valuations depend on how fast investors expect earnings to grow in the near term, on how long the period of fast growth will last, and on the equity risk premium. Based on historical averages for long-run growth and equity risk premia, investors appear to have been very optimistic about the near-term growth prospects for high-technology companies. The expected earnings growth rate of the US technology sector as a whole, as implied by its price/earnings multiple, was 21% per year in real terms for the next decade, more than five times faster than the real growth of the underlying economy. At the same time, the market expected real earnings per share of technology firms in Japan to grow at an average annual 25% rate over the next decade. Even if the equity risk premium is assumed to have fallen to zero, the implied real earnings growth rates over 10 years would be 12% for the United States and 16% for Japan.

Indicators suggested greater risks for technology stocks

While valuation indicators for many stocks reached extraordinary levels given current earnings, other high valuations seemed to rest wholly on



High valuations did not rest on any track record of earnings

assumptions about prospective earnings rather than on any track record. Indeed, many of the recent high-technology IPOs had no earnings to show, and their assumed earnings growth rates relied on new and untested valuation concepts. Some of these concepts drew their inspiration from relationships such as Metcalfe's Law (Metcalfe was the developer of the ethernet, the precursor to the internet), which states that the value of a network company should be proportional to the *square* of the number of subscribers, because that is the number of possible connections. Such a concept might justify an assumption of spectacularly increasing returns that would not be closely tied to interest rates or the general level of economic activity. Valuations seemed to overlook the fact that a network firm is likely to find and connect the most valuable customers first and, in this case, must inevitably run into diminishing returns. Moreover, such concepts as Metcalfe's Law could not apply to all internet companies, such as "dotcom" retailers, or to all companies within an industry, since there are bound to be losers as well as winners.

Valuation risks and potential economic performance

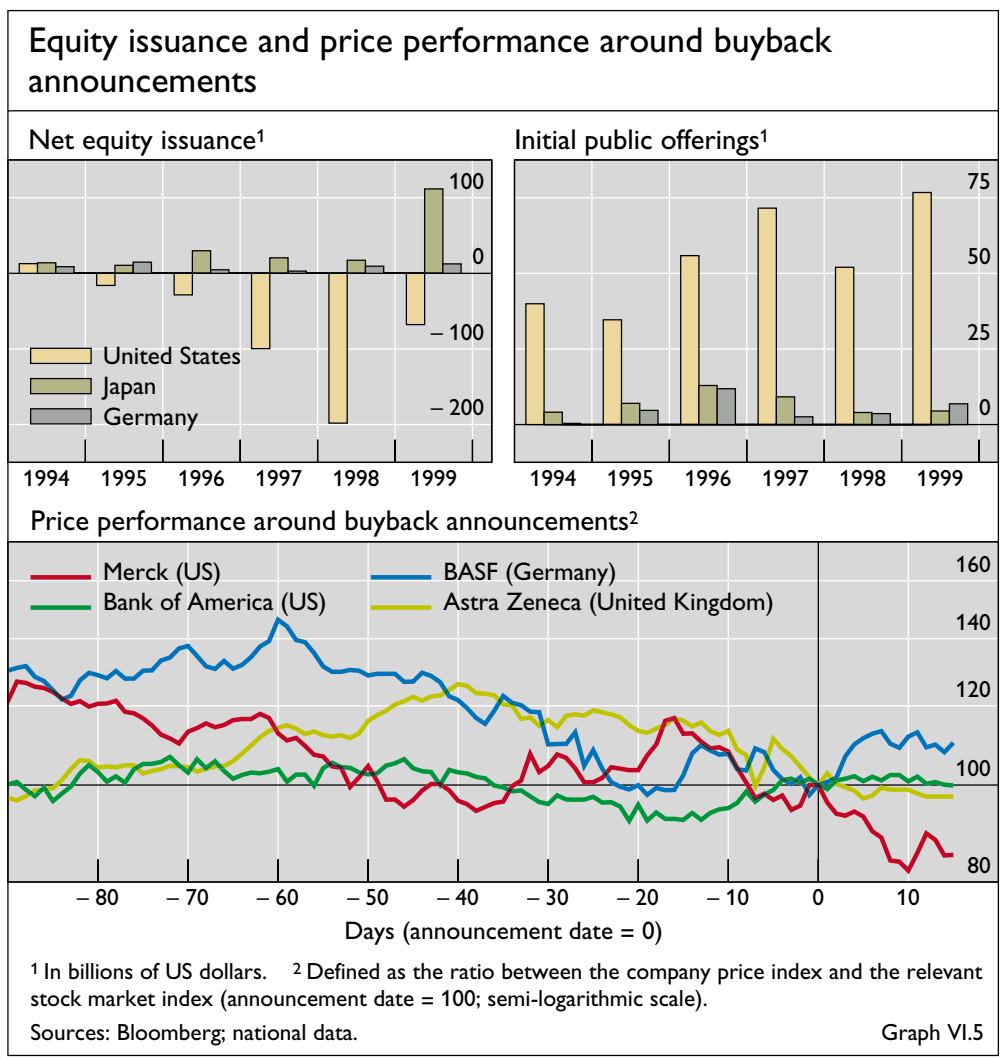
A shift in sentiment requires very little to precipitate it

The historically high valuations of major stock markets clearly pose risks of a sharp market-wide correction. The high-technology sector would appear to be particularly vulnerable. Yet the non-technology sector also displays valuations that are high by historical standards. While for most of the first quarter of 2000 investors alternately favoured one sector over the other, a shift in sentiment that affected high-technology stocks could well have repercussions for non-technology stocks as well. Such a shift in investor sentiment often requires very little to precipitate it. Large sell orders can come without warning and cause further selling as other investors infer adverse information, whether or not the initial trades were actually informative. Historically this has often led to a general loss of confidence as prices fell unexpectedly.

Record sums raised by start-up IPOs

The risks of overvaluation for the real economy are not confined to the possibility that a sharp correction could dampen consumption through a wealth effect or curtail investment through an increase in the cost of capital (see Chapter II). Any misallocation of capital during the expansionary period also implies the need for subsequent adjustment. The real consequences of changes in relative share prices between the technology and non-technology sectors were already evident in the substantial flows of capital between them. In 1999, investors around the world placed more money in IPOs of start-up companies than ever before, most of it in the technology sector (Graph VI.5). At the same time, non-technology companies with stocks judged to be underperforming continued to announce share repurchase programmes that returned capital to shareholders. An overvaluation of technology IPOs would have encouraged too many business start-ups in that sector, and the resulting overinvestment would mean lower productivity later on. If and when a sharp correction takes place, part of the loss in stock market wealth may properly be attributed to a downward revision of expected future productivity.

The reallocation of capital in 1999 also took the form of cross-border acquisitions, often involving wireless telecommunications firms. These acquisitions helped finance the world's major current account imbalances. The



United States and Latin American countries, in particular, financed their external deficits by relying primarily on equity inflows in the form of foreign acquisitions of domestic firms. Indeed, at times the strength of foreign demand for US assets lifted the US dollar even in the face of large deficits. In Europe especially, a wave of mergers and acquisitions swept the telecommunications industry. Unlike the takeover activity of the late 1980s, many of the recent acquisitions around the globe were paid for using the equity of the acquiring company rather than cash. With the advantage of high stock prices, technology companies could take over non-technology companies and potentially use the acquired companies' internal cash flows for their own investment purposes. Whether this reallocation of capital will also have implications for future productivity growth remains to be seen.

Acquisitions were paid for using equity rather than cash

Bond markets

Just as equity markets facilitated a shift of capital-raising from “old economy” to “new economy” sectors, bond markets worldwide accommodated new patterns of borrowing and investment. One particularly important structural trend, which accelerated in the period under review, was the shift of

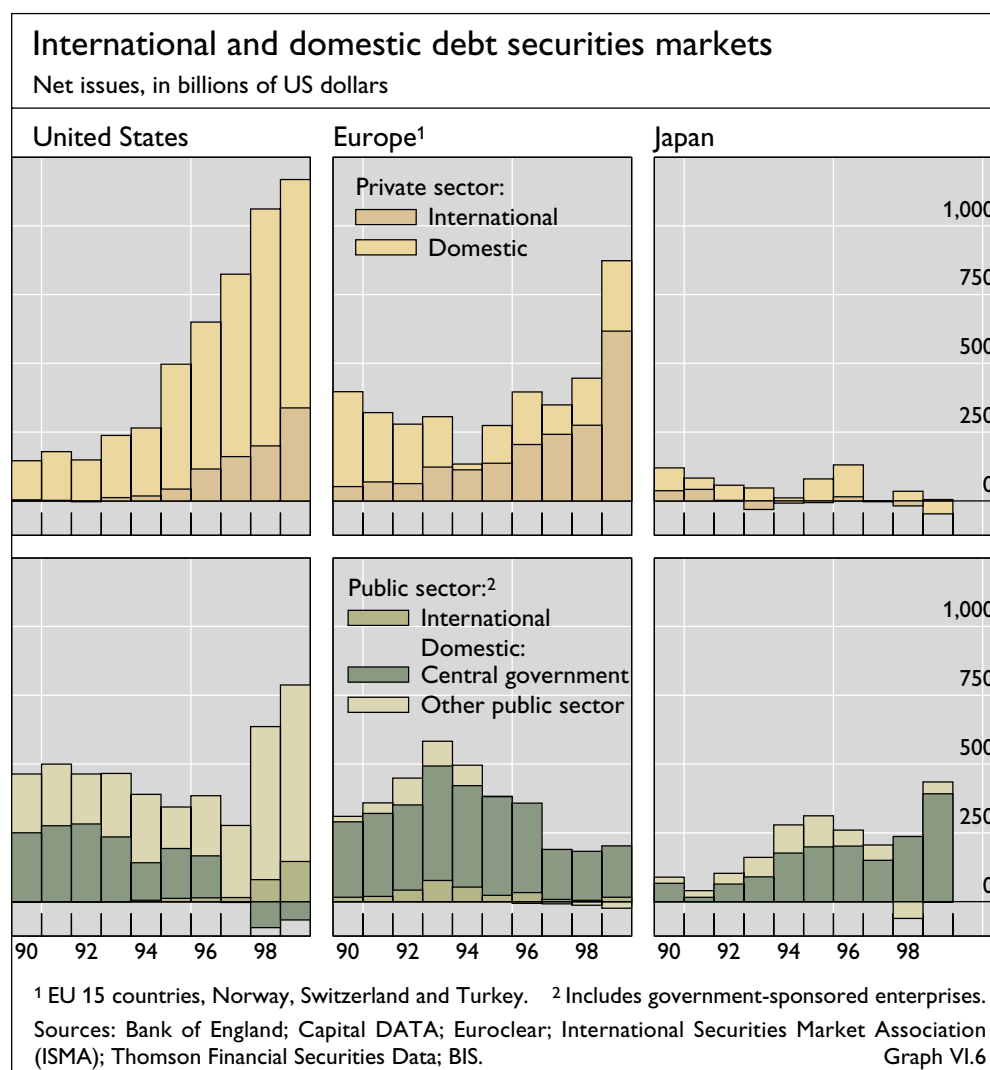
Borrowing shifted from central governments to the private sector

borrowing activity away from central governments to the private sector. Even as markets absorbed a record amount of private sector debt issuance, however, the prospect of declining government debt issuance in North America and Europe led to a withdrawal of market-making capital and to a search for alternative benchmarks in financial markets. At the same time, the losses in autumn 1998 weighed heavily on the minds of arbitrage investors. These factors contributed to periodic bouts of turbulence in various market spreads, blurring distinctions between credit and liquidity premia.

Private sector issuance and credit spreads

The period under review was marked by some easing of traditional measures of credit spreads. However, this was due not only to changing evaluations of creditworthiness, but also to variations in market liquidity and supply side factors affecting both the government debt and interest rate swaps markets.

There was also unprecedented debt issuance by the private sector. As a result of fiscal consolidation, central government issuance in most of the major industrial countries, with the notable exception of Japan, declined or remained flat (Graph VI.6). Any increase in public sector issuance was accounted for by independent agencies and other “quasi-public” entities, such as the housing



finance agencies in the United States. The private sector responded to the new availability of savings by issuing record amounts. Continuing a recent trend, the international debt markets assumed an increasingly prominent role relative to domestic markets. International issuance by private sector borrowers net of repayments more than doubled (Table VI.2). In Europe, international private issuance outpaced domestic issuance, as the introduction of the euro encouraged borrowers to venture beyond their national borders to take advantage of the potential investor pool in the broader euro zone (see Chapter VII).

Private sector responded by issuing record amounts

Booming private sector issuance occurred in the face of steadily rising nominal government yields. Evidence of growth, as well as rising energy prices, led monetary authorities in Europe and the United States to raise policy rates in an effort to pre-empt inflationary pressures. For much of 1999, market expectations of such monetary tightening moves drove up long-term yields. Yields became volatile in the early part of 2000, as market participants reassessed the degree of tightening likely to be needed to forestall inflation and reacted to various liquidity shocks.

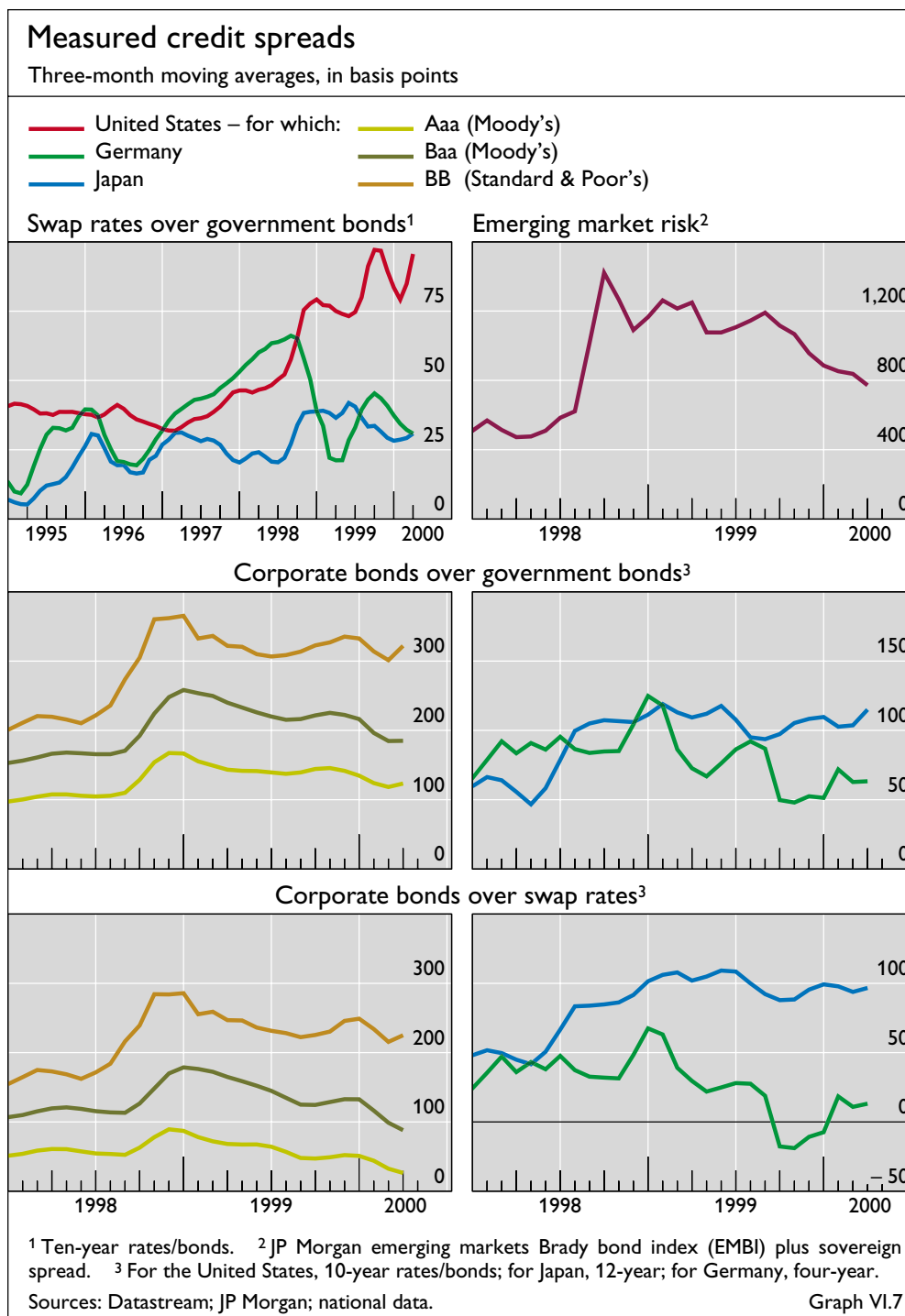
The impact of rising government yields was to some extent counteracted by a gradual, if uneven, decline in yield spreads between private and government

Net issuance of international debt securities ¹							
	1994	1995	1996	1997	1998	1999	Stocks at end-Dec 1999
	in billions of US dollars						
Total net issues	251.8	260.6	532.0	563.2	680.9	1,225.2	5,365.5
Money market instruments ²	4.5	18.7	39.9	14.8	9.8	68.6	260.0
Bonds and notes ²	247.3	241.9	492.0	548.4	671.1	1,156.6	5,105.5
Developed countries	203.1	226.9	404.2	439.0	574.8	1,149.4	4,503.0
United States	22.9	55.4	130.2	176.0	280.3	484.5	1,310.8
Euro area	126.5	132.1	177.3	172.0	210.7	494.0	1,746.5
Japan	-6.9	-3.8	17.1	-1.3	-17.4	4.1	338.3
Offshore centres	7.2	0.7	17.1	13.9	10.0	15.7	74.7
Other countries	32.5	22.0	87.7	89.1	40.1	35.5	408.0
International institutions	8.9	11.0	23.0	21.2	56.0	24.6	379.8
US dollar	64.4	68.4	259.1	331.6	410.4	546.2	2,512.2
Euro area currencies	80.6	84.2	134.5	133.9	223.6	576.2	1,561.2
Yen	85.3	79.8	85.7	33.4	-26.8	-5.8	536.8
Other currencies	21.4	28.2	52.7	64.4	73.7	108.7	755.4
Financial institutions ³	134.8	167.0	342.3	355.6	369.5	659.1	2,581.4
Public sector ⁴	103.4	72.6	118.9	85.4	178.2	213.5	1,436.3
Central government	50.1	37.3	53.5	31.6	45.1	40.4	459.0
Corporate issuers	13.5	21.1	70.7	122.3	133.2	352.7	1,347.8

¹ International issues include all issues except those by residents in domestic currency not targeted to non-resident investors. Flow data for international bonds; for money market instruments and notes, changes in amounts outstanding excluding exchange rate valuation effects. ² Excluding notes issued by non-residents in the domestic market. ³ Commercial banks and other financial institutions. ⁴ Governments, state agencies and international institutions.

Sources: Bank of England; Capital DATA; Euroclear; ISMA; Thomson Financial Securities Data; BIS.

Table VI.2



paper (Graph VI.7). These measured credit spreads had increased sharply in the market turbulence of autumn 1998, when investors fled into the safest and most liquid issues out of concern over the credit quality of emerging market borrowers and of some financial institutions in the industrial countries. The subsequent narrowing of spreads indicated renewed confidence in recovery in the emerging market economies and in the prospects for corporate issuers as growth in industrial countries accelerated. Even at their narrowest points, however, measured credit spreads in the United States and Germany remained above their mid-1998 levels. In fact, swap spreads, which reflect the generally

high credit standing of swap counterparties, did not decline appreciably during 1999 and early 2000. Why did these spreads not fall further in the light of what seemed to be steadily improving conditions and a renewed appetite for risk?

Why did measured credit spreads not fall further?

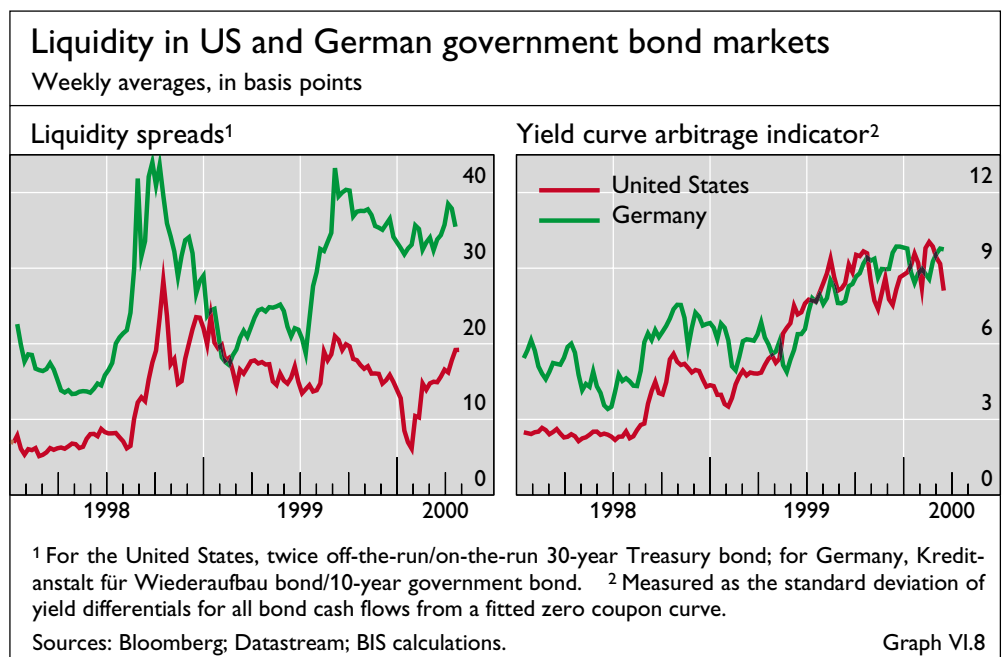
Liquidity factors in credit spreads

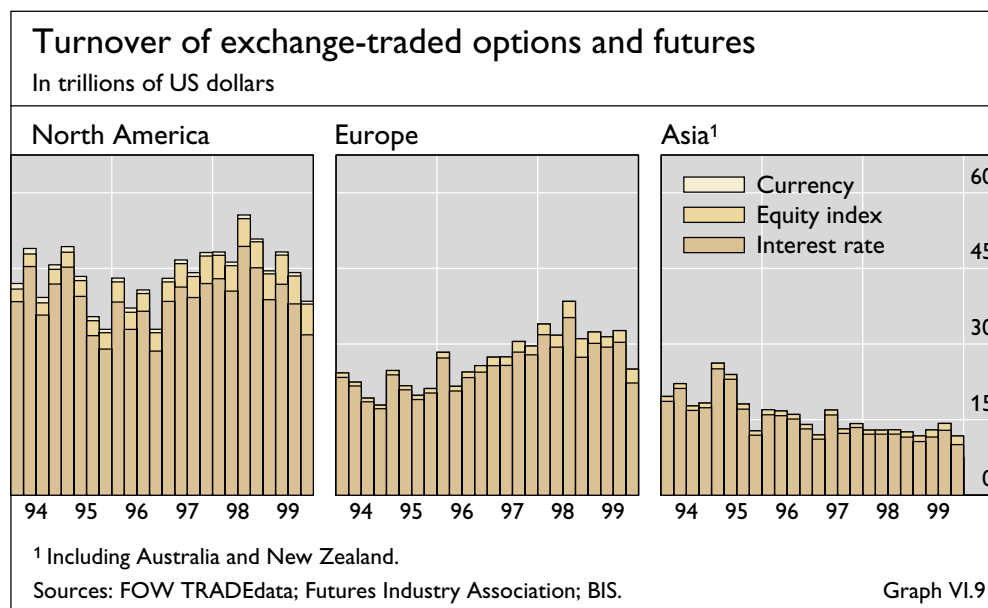
Two structural factors with adverse effects on liquidity seem to have contributed to the width and occasional turbulence of measured credit spreads. First, the anticipation of reduced government debt issuance had led dealers in the secondary market to withdraw some of the market-making capital they use to provide liquidity. This withdrawal seems to have started as early as 1997. Second, the experience of autumn 1998 had left market participants with a legacy of increased sensitivity to liquidity risk, which made leveraged funds and proprietary trading desks reluctant to engage in arbitrage activity that would absorb supply shocks or eliminate relative price distortions across the yield curve. Indeed, some financial institutions may have begun to build liquidity considerations into their risk management. As a result of both structural factors, significant and occasionally volatile liquidity premia have become part of measured credit spreads.

Dealers in the secondary market withdrew some market-making capital

The lack of market-making and arbitrage activity is evident in an increased fragmentation of the government bond markets. Graph VI.8 depicts this fragmentation in terms of spreads between off-the-run and on-the-run issues and in terms of price anomalies. Both measures show that liquidity tended to be lower during 1999 compared with the early part of 1998. For three of the indicators, this continued into the first part of 2000. The US on-the-run premium seems to have narrowed in 2000, which may reflect an increased risk premium on the 30-year bond, deriving from uncertainty surrounding the bond's benchmark status in the wake of the US Treasury's revised issuance plans. The pricing anomalies recorded in Graph VI.8 previously tended to disappear quickly, but now seemed to last longer. As a result, the response of

Pricing anomalies now seemed to last longer





a specific bond's price to broad movements in the term structure has become harder to predict. This increased idiosyncratic risk made government securities less attractive for hedging purposes.

Two episodes in the period under review demonstrate the new role of liquidity in measured credit spreads. In summer 1999, spreads on interest rate swaps rose sharply. This puzzled market observers at the time, given the generally healthy state of macroeconomic indicators and financial asset prices. In retrospect, the widening of spreads appears to have reflected pressures on the liquidity of the available credit instruments deriving from an imbalance between a record volume of corporate bond issuance and temporarily subdued buying interest among investors. Issuers felt obliged to "front-load" issuance schedules in anticipation of the adverse liquidity conditions expected to accompany the millennium date change. Investors were reluctant to absorb the extra volume, because of similar forward-looking concerns about liquidity and perhaps also because of uncertainty about interest rates after the Federal Reserve's move to a tighter policy stance. This imbalance sent bond dealers to the swaps market in an effort to hedge unusual amounts of inventory, while avoiding the idiosyncratic risk that has been perceived in Treasury securities since autumn 1998. The swaps market in turn was new to such hedging activity and did not seem to possess the market-making capacity to easily accommodate these demands.

Concerns over possible year-end market disruptions soon dissipated, particularly after central banks generally took actions to reassure markets that emergency liquidity would be made available if needed. The actions taken included the broadening of eligible collateral, an increase in the set of counterparties and the provision of new credit facilities. In the event, the turn of the year came and went without significant incident in the markets. Nevertheless, the degree to which financial market activity slowed in the fourth quarter of 1999 can be seen in the sharp decline in the turnover of exchange-traded derivatives contracts, particularly those linked to interest rates (Graph VI.9).

In summer 1999, swap spreads rose sharply

The turn of the year came and went without incident

Markets were hit by another bout of rising spreads from late January 2000 onwards. Uncertainty over the US Treasury's debt buyback strategy and prospects for continued monetary tightening led to an inversion of the US dollar yield curve and a renewed shift of speculative and hedging activity to the swaps market. This episode led to increased scrutiny of securities which could potentially serve as market benchmarks in place of US Treasury issues (see below). Ambiguity about the credit status of one class of possible benchmarks, the obligations of US government-sponsored enterprises such as the Federal Home Loan Mortgage Corporation ("Freddie Mac") and the Federal National Mortgage Association ("Fannie Mae"), led to a further widening of spreads in March 2000. Around this time, legislative action to clarify the government's obligations vis-à-vis the debt of these agencies was proposed for the coming year.

Ambiguity about the credit of US agencies led to a widening of spreads

The search for new benchmarks

The changing relative supplies of tradable government and private sector debt pose challenges for markets that have come to rely on a steady, highly liquid supply of default-free securities as benchmarks for price discovery about future interest rates and for the management of market and credit risks. The challenges include forming a consensus as to which types of securities should be considered as benchmarks; fostering the emergence of a supply of benchmark securities that offers sufficient coverage of the yield curve; developing a stable, transparent pricing mechanism; creating supporting instruments such as repos and futures; and formulating market and credit risk management techniques appropriate to the newly chosen benchmarks. The quest for a reliable benchmark for euro-denominated government securities markets, discussed in more detail in Chapter VII, offers an instructive example of some of the issues involved.

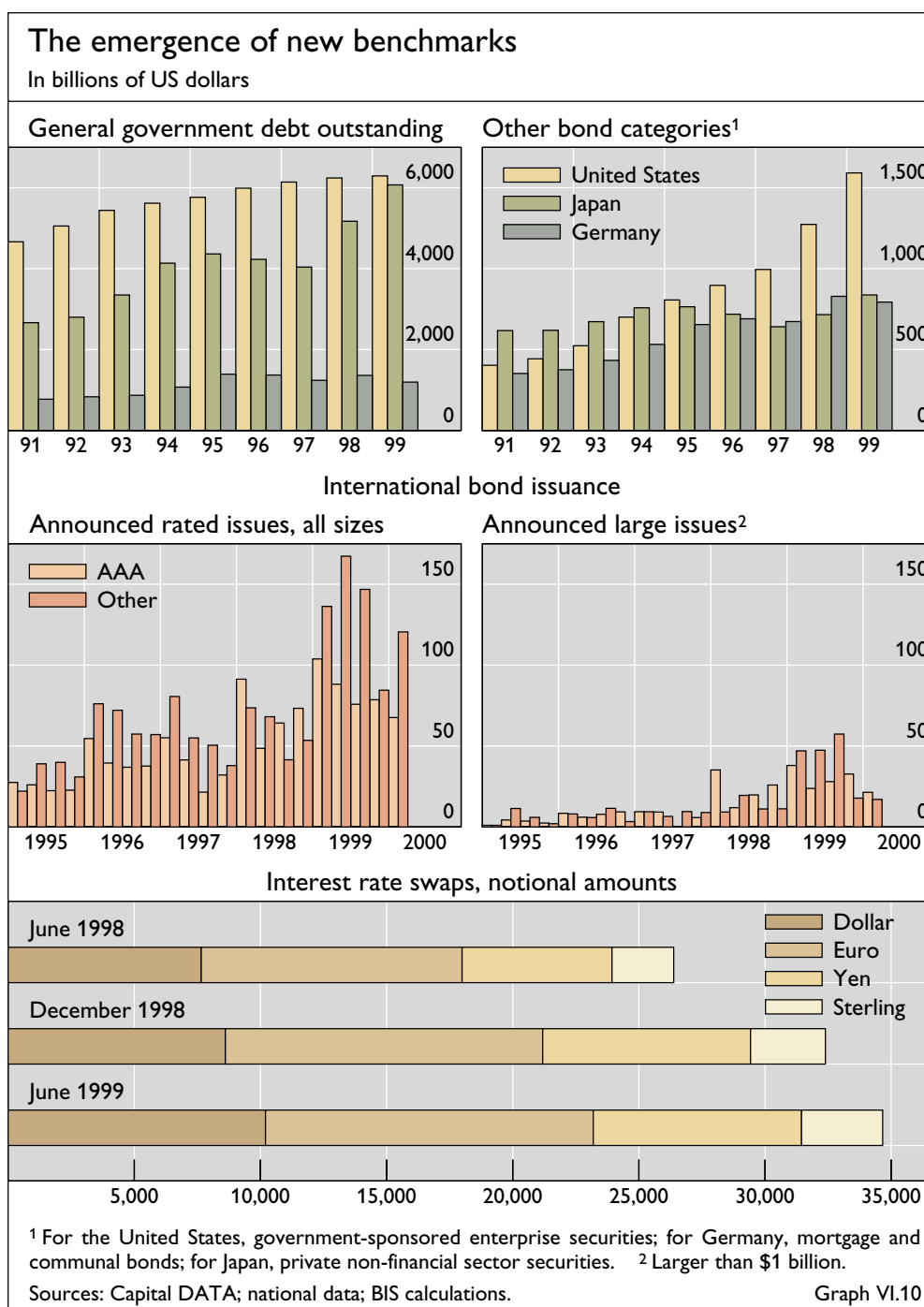
The key requirement for a benchmark instrument is, paradoxically, that it be widely accepted as such. The self-fulfilling process by which an instrument gains this acceptance is very difficult to predict or to influence by external means such as regulation. However, the competition among borrowers to provide new benchmarks, at varying levels of credit quality, has already begun, as can be seen from the increased number of very large debt issues over the past year (Graph VI.10). The US housing credit agencies offered several multi-billion dollar issues at key maturities during the period under review, in an attempt to create alternative US dollar benchmarks at the highest credit level. Benchmark candidates in other parts of the credit spectrum were US dollar offerings by AT&T Corp (\$8 billion) and Ford Motor Credit Co (\$5 billion), and takeover-related issues in euros by Mannesmann of Germany (€3.0 billion), Repsol of Spain (€3.3 billion) and Tecnost of Italy (€9.4 billion).

Wide acceptance the key requirement for a benchmark

In terms of overall supply, the slowdown in government issuance and acceleration in private sector issuance has already been noted. The middle panel of Graph VI.10 shows that, coincident with the broad increase in issuance in corporate bonds on the international market, the number of large issues (amounts greater than \$1 billion) has increased sharply, particularly among issuers with a rating below AAA. Yet it remains to be seen whether the various

Sharp increase in large issues, particularly by issuers rated below AAA

private sector issuers can succeed in achieving the necessary critical mass of trading volume for their candidate benchmarks. Elements contributing to such a critical mass include the fungibility of issues with similar maturities and the availability of futures, repo and other supporting markets. In this regard, it is notable that futures and options contracts on five- and 10-year US agency securities began trading on the Chicago Board of Trade in March 2000. In recent years, however, trading of derivatives on organised exchanges has been essentially stagnant (Graph VI.9), whereas over-the-counter (OTC) markets have continued to grow (Graph VI.10 (bottom panel)). This suggests that the availability of OTC derivatives will be another necessary element in the adoption of any future benchmark instrument.



Regarding pricing stability, it is notable that the decline of 10-year US Treasury yields in the first quarter of 2000 almost matched the rise in spreads. As a result, the overall level of swap yields and high quality corporate rates at that maturity remained virtually unchanged. This suggests that, to some degree, investors and borrowers may have already begun to think in terms of the overall price of risky credit, rather than its price relative to a benchmark. However, price transparency will remain limited as long as market participants lack a strong consensus as to the appropriate indices for the different classes of private sector debt. The episodes described above illustrate that even large and growing asset categories such as swaps can be subject to sudden and unexpected changes in price behaviour.

Focus on overall price of risky credit rather than its price relative to a benchmark

The shift to new benchmarks is likely to affect not just the pricing practices of fixed income markets, but many other aspects of the financial system as well. In particular, if private sector obligations are eventually asked to fill the role currently still performed by government bonds, an additional dimension of complexity will be added to the management of market and credit risk exposures. Market participants will need to develop improved techniques for incorporating credit risk considerations in hedging and collateral management. The task of pricing and hedging credit risks has been facilitated by the rapidly growing market in credit derivatives. While market participants will no doubt continue to develop techniques to meet these challenges, the process may be accompanied by further episodes of turbulence as liquidity conditions for the different possible benchmark securities are tested, the risks involved become better understood, and new market standards gain acceptance.

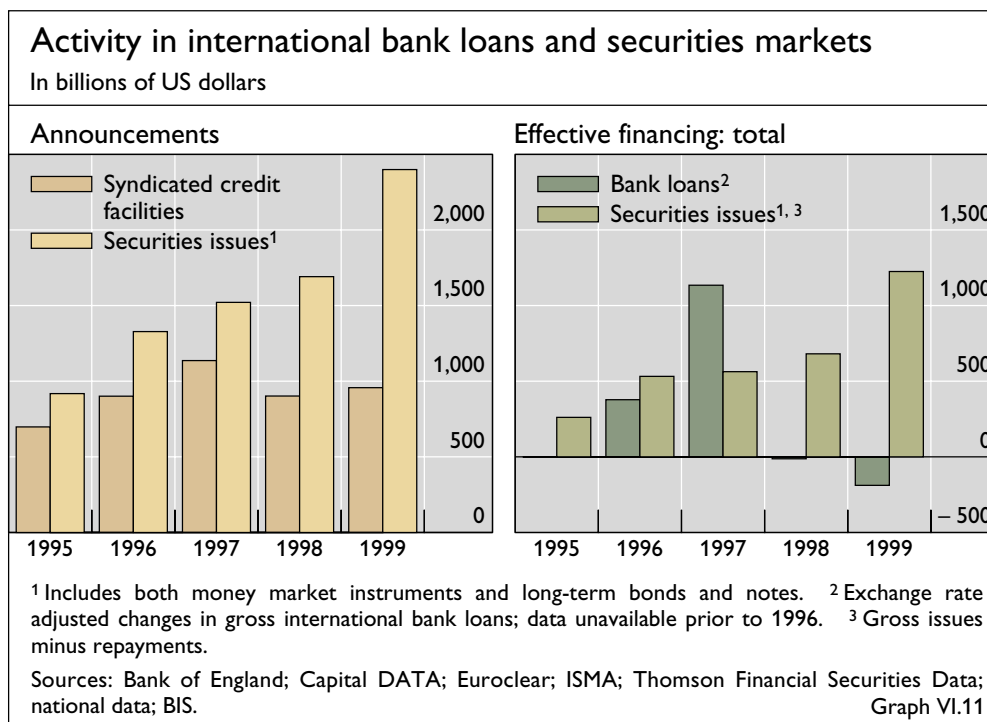
Such a transition to private benchmarks poses certain challenges for policymakers. Faced with fiscal surpluses or diminishing deficits, governments are fighting rearguard actions to preserve liquidity, primarily by maintaining the size of gross issuance in specific maturities even as net issuance declines. The issue for debt management is then the selection of securities that are not only important as benchmarks, but also have uses that are difficult for private markets to replicate. At the same time, central banks are confronted with increasing noise in yield curves and measured spreads. This noise clouds information about macroeconomic and credit prospects and alters the monetary transmission mechanism in unpredictable ways. Finally, the authorities need to prepare for sudden bouts of illiquidity that may disrupt the financial system.

The noise in yield curves and spreads alters the transmission mechanism

The international banking market

As financing through international securities surged in 1999, bank loan financing continued to lag behind (Graph VI.11). The world's major banks seemed to have little choice but to contribute to this development by investing heavily in debt securities and to relegate their traditional lending activity to the sidelines. Nonetheless, lending to non-bank borrowers in developed countries began to recover from the low levels of 1998, most notably owing to a few large deals related to mergers and acquisitions. However, emerging market borrowers in Latin America showed a distinct preference for securities financing over bank

The major banks found their traditional lending activity relegated to the sidelines



credit, while those in Asia accelerated their loan repayments in the second half of the year. Following a period of contraction in the first half of 1999, the interbank market among developed countries suddenly found itself flush with funds, and the banks could evidently find few new borrowers.

Bank flows to industrial countries

The world's major banks found it easier to participate in the buoyant debt securities markets than to pursue opportunities in their traditional international lending markets. During 1999, the banks' net purchases of debt securities exceeded \$300 billion, more than three times their net lending to non-bank borrowers in developed countries (Table VI.3). The banks provided their strongest boost to the securities markets during the first quarter, when they made about a third of their securities purchases for the year. Deploying large repayment flows from their loans abroad, banks in Japan channelled nearly \$130 billion into debt securities during the year. Banks in Germany and France were also major investors in securities, mainly in US, German and Italian bonds.

The increase in banks' net lending to non-bank borrowers in developed countries in 1999 represented no more than the recovery of activity that had virtually disappeared in 1998. The second quarter of 1999 accounted for the bulk of this new business, with banks providing \$67 billion in net lending, an amount equivalent to over 90% of their securities purchases during the quarter. The major lenders were banks in Japan and the United Kingdom, and the biggest loans tended to be those that helped finance merger and acquisition activity. Lending flows fell in the third quarter, when non-bank borrowers in the United States repaid \$25 billion of their loans, but recovered somewhat in the fourth quarter.

Banks in Japan, Germany and France were major investors in securities

Main features of cross-border claims of BIS reporting banks ¹								
	1998	1999	1998	1999				Stocks at end-Dec 1999
	Year	Year	Q4	Q1	Q2	Q3	Q4	
	in billions of US dollars							
Claims on developed countries	567.3	449.9	61.2	94.2	56.8	193.9	105.0	7,562.9
Interbank loans	288.7	29.9	-16.6	- 15.4	- 82.2	123.5	4.1	4,416.7
Loans to non-banks	24.2	103.4	14.1	6.9	66.8	5.4	24.3	1,319.0
Debt securities ²	254.4	316.6	63.8	102.8	72.3	65.0	76.6	1,827.3
Claims on offshore centres	-178.0	-105.6	-72.5	- 68.9	- 45.0	-26.4	34.7	1,207.9
Interbank loans	-172.0	-139.3	-24.2	- 77.0	- 51.8	-47.7	37.2	858.4
Loans to non-banks	- 27.1	6.3	-50.2	2.1	0.9	12.7	-9.3	224.8
Debt securities ²	21.0	27.4	2.2	6.1	5.9	8.6	6.7	124.7
Claims on developing countries ³	- 83.0	- 71.2	-25.6	- 9.4	- 20.7	-34.6	-6.5	857.1
Interbank loans	- 63.9	- 61.6	- 8.5	- 11.3	- 19.7	-22.3	-8.3	340.5
Loans to non-banks	- 12.4	- 14.6	-12.2	2.4	- 3.6	-12.4	-1.0	389.9
Debt securities ²	- 6.8	4.9	- 4.9	- 0.5	2.6	0.1	2.8	126.8
Unallocated	- 33.9	- 20.0	-10.2	- 3.0	- 0.3	-13.4	-3.3	195.6
Total	272.4	253.1	-47.1	13.0	- 9.2	119.5	129.9	9,823.5
Interbank loans	28.1	-219.9	-55.4	-111.2	-153.5	34.7	10.1	5,684.0
Loans to non-banks	- 26.9	92.2	-58.8	- 0.7	61.5	5.0	26.4	1,966.8
Debt securities ²	271.2	380.7	67.1	124.9	82.7	79.8	93.4	2,172.7
<i>Memorandum:</i>								
<i>Syndicated credits⁴</i>	902.0	957.1	219.8	172.5	271.1	264.3	249.2	

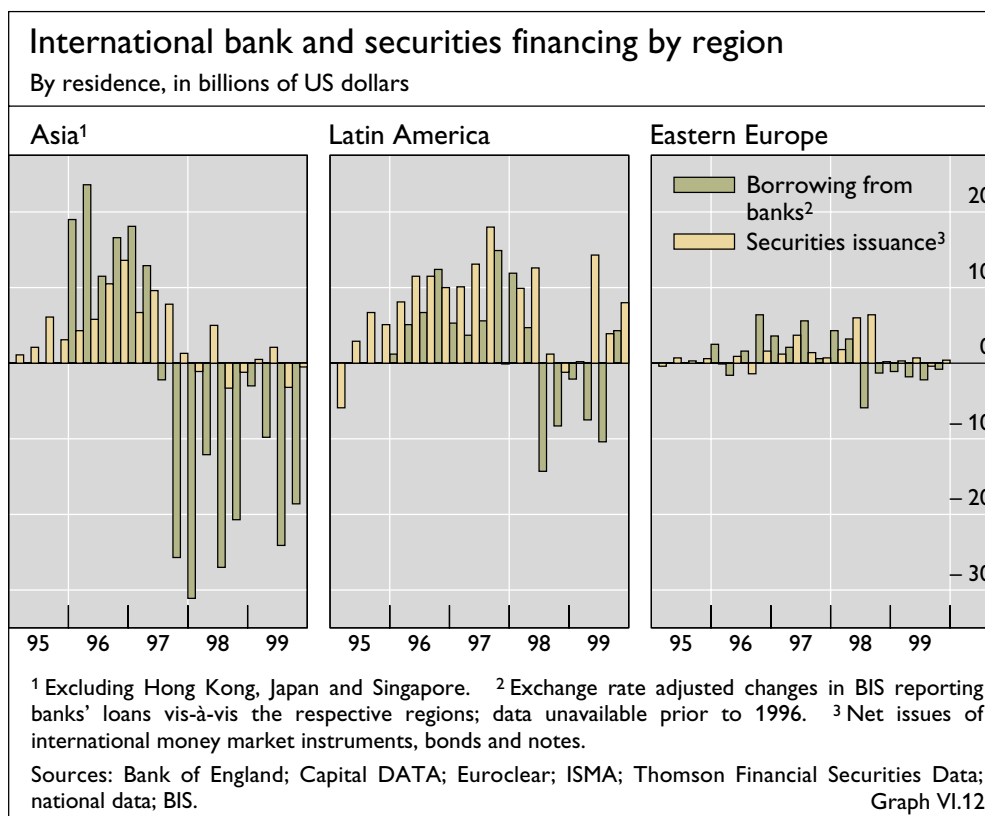
¹ Changes in amounts outstanding excluding exchange rate valuation effects. ² Partly estimated. The data also include other assets, which account for less than 5% of the total claims outstanding. ³ Including eastern European countries. ⁴ Announced new facilities. Table VI.3

Flows to emerging markets

Having been shunned by international banks during the Asian crisis in 1997 and in the wake of the Russian debt moratorium in 1998, emerging market borrowers returned the favour in 1999. By the second quarter of the year, notwithstanding the Brazilian currency crisis in January, the banks seemed ready to resume lending to emerging markets in a substantial way. Indeed, two power utilities in Brazil obtained syndicated loans, albeit at credit spreads exceeding 800 basis points. However, there were few other borrowers from emerging markets. In the second quarter, after years of simply servicing their bank loans, these borrowers suddenly accelerated their repayments. The third quarter saw the largest decline in bank claims on developing countries since the sharp cutback in the third quarter of 1998. Bank claims fell by \$35 billion, nearly four times the decline of the first quarter. Such an acceleration of repayments to banks, well after the 1998 credit squeeze, suggests a borrower-driven move away from bank credit.

While the bulk of loan repayments came from emerging Asia, a shift from bank loans to securities financing was more apparent in Latin America (Graph VI.12). In Asia, current account surpluses and equity inflows obviated any need for external debt financing. The region made loan repayments of \$56 billion during 1999 as a whole, with \$24 billion in the third quarter alone and

The bulk of loan repayments came from emerging Asia



\$19 billion in the fourth. The largest repayments came from China, Thailand and Indonesia. In Latin America, current account deficits required some debt financing but the region relied more heavily on securities financing than on bank loans. Latin American borrowers repaid a net amount of \$16 billion during the year, with \$10 billion in repayments during the third quarter more than offsetting net borrowing during the fourth quarter. The biggest repayments came from Brazil and Mexico.

The interbank market and offshore centres

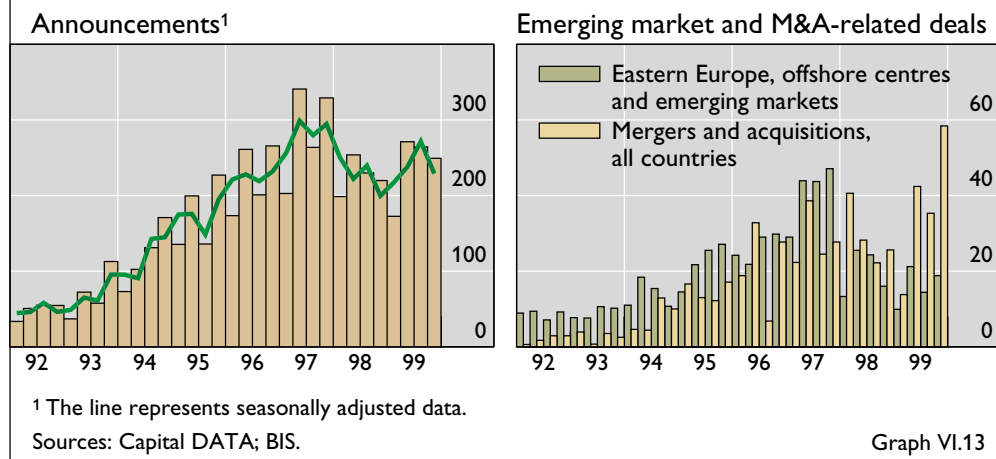
A retreat by major banks from offshore centres coincided with the rush into securities. The banks' claims on these centres fell by \$106 billion in 1999. Much of the decline was accounted for by Hong Kong and Singapore and took place in the first half of the year. An important part of this retreat represented a reversal of a round-tripping of funds from banks in Japan to banks in Hong Kong, and to a lesser extent Singapore, and back to non-bank borrowers in Japan. These reverse flows had been going on since mid-1997 and continued until the third quarter of 1999. During the first three quarters of 1999, non-bank borrowers in Japan repaid \$40 billion to banks in Hong Kong and Singapore. These banks in turn used the money to help cover deposit withdrawals by banks in Japan, thus completing the circle. From Japan, some of this money seems to have found its way into securities purchases.

The interbank market in developed countries recovered strongly in the second half of the year. As long as the banks could readily find new borrowers or other investment opportunities to place the funds they received from non-bank customers, they did not need to lend very much to one another.

Retreat from Hong Kong and Singapore a reversal of round-tripping from Japan

Announced facilities in the international syndicated credit market

In billions of US dollars



This seems to have been the case during the first half of 1999, when interbank loans fell by \$98 billion. During the third quarter, however, the banks received unusually large repayments of \$35 billion from emerging markets and \$25 billion from non-bank borrowers in the United States. To absorb the funds, the inter-bank market passed them through a chain of banks in a portfolio adjustment process that resulted in a temporary expansion of interbank balance sheets. As a result, lending among the banks in developed countries surged to \$124 billion during the third quarter after several quarters of cutbacks in such claims.

International syndicated lending

The syndicated loan market provided the bulk of new lending to non-bank borrowers in 1999. During the year, announced facilities for the market as a whole amounted to \$957 billion, a modest increase from 1998 but still below that of the peak year of 1997 (Graph VI.13). Deals for mergers and acquisitions accounted for most of the rise in the market. They were dominated by a few large deals, including a \$12 billion facility in three tranches to finance the acquisition of Airtouch Communications in the United States by Vodafone Plc in the United Kingdom during the third quarter and an £8 billion facility in two tranches arranged to support the purchase by Mannesmann AG in Germany of Orange Plc in the United Kingdom during the fourth quarter. These deals helped to make the year as a whole a record one for merger-related business, with \$150 billion in announced facilities of that type. In contrast to the buoyancy of acquisition financing, syndicated lending for emerging market borrowers remained subdued, at \$64 billion for the year, down 23% from 1998.

Acquisition deals accounted for the rise in syndicated loans

VII. The euro and the European financial architecture

Highlights

The introduction of the single currency represents a major landmark in the evolution of the European financial structure. Not only has EMU permanently altered the monetary policy framework within the common currency area, it has also given single currency representation to a large economic bloc that rivals in size the other two leading world economies. At the same time, it has provided a significant boost to the continent's financial markets, supporting their growth and promoting their deepening. The single currency has also had a positive influence on the ongoing unification of the market for financial services in Europe and catalysed the trend towards consolidation in the financial industry. This chapter reviews the impact of the euro on the European financial landscape during its first full year of existence and discusses the challenges that this new reality poses for the future.

Development and progress have not been even across the spectrum of financial markets and financial services. In a way, the advent of the euro has had its greatest impact where pre-existing conditions were the most favourable. Market segments where cross-border transactions had already reached a critical level and where institutional structures had achieved a higher degree of harmonisation benefited most. Despite the impetus from the elimination of exchange rate risk, market forces alone have not always been capable of overcoming the impediments to fuller integration presented by national differences in technical and legal infrastructure and market practices which have been at the root of segmentation in certain sectors.

The arrival of the euro, by highlighting the potential benefits of further progress towards a truly unified financial market in Europe, has helped focus attention on the implicit economic costs arising from insufficient harmonisation of the financial infrastructure across the EMU zone. It has thereby underscored the fact that reaping the full fruits of eliminating the economic barriers to trade will require a firm political commitment by the member states to further align institutional and legal structures that have a bearing on the economic process.

Financial markets

Nowhere has the euro's positive influence been more immediate and clearly evident than in Europe's financial markets, especially the market for interbank deposits and the international corporate bond market. Both markets have grown rapidly and have been transformed into more efficient vehicles for the allocation of liquidity and savings. By contrast, other market segments, such as

collateralised money markets and equity markets, have largely retained their national character and have so far not been able to capitalise on the enhanced potential for efficiency and liquidity offered by greater cross-border activity.

Money markets

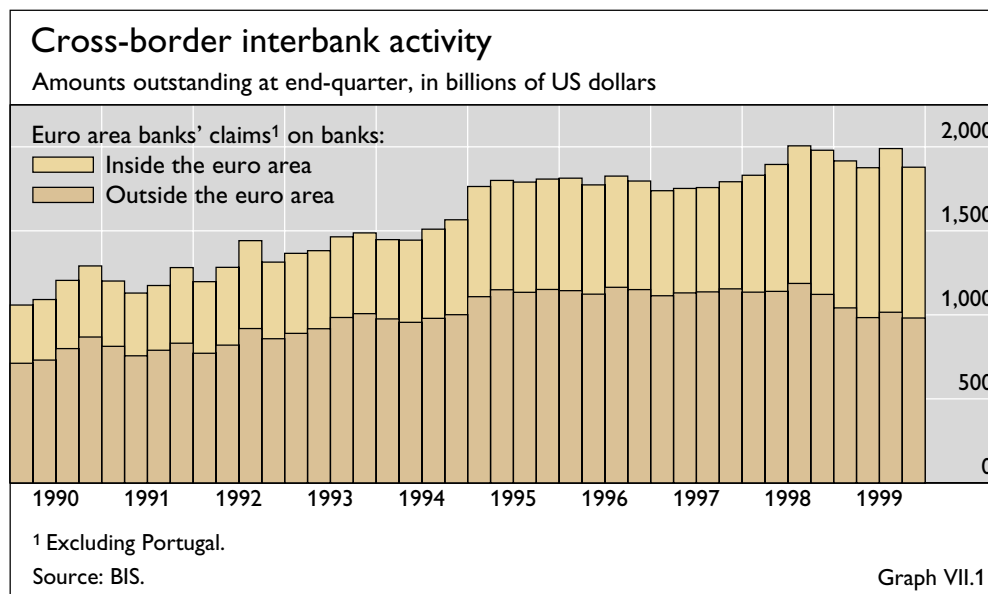
The conduct of monetary policy in the framework of EMU requires an efficient mechanism for the allocation of central bank liquidity throughout the single currency zone. The interbank market in unsecured credit has provided this mechanism as it rapidly adapted to the new framework. In this role it has been supported by TARGET, the large-value funds transfer system for the euro area, which quickly overcame minor initial operational problems to become the backbone of the euro area's payment system. The early resolution of all uncertainty relating to the money market reference yield curve also contributed to this successful transition. During the first few weeks of 1999 the EONIA (euro overnight index average) rate, extended by the Euribor yield curve and supported by an active derivatives market, emerged as the clear choice of market participants. The establishment of a single money market in euros is clearly evidenced by the convergence of yields across the euro area, and its efficiency demonstrated by the continuing tightening of bid-ask spreads, which are currently about 40% lower than five years ago (Table VII.1).

A pan-European interbank deposit market has emerged ...

The emergence of an efficient euro area money market has allowed the treasurers of many large companies to reduce costs by centralising their cash management operations. Banks have formed a two-tiered structure in which larger institutions with a pan-European presence handle the cross-border flow of liquidity and smaller institutions play a more restricted regional role. The significant increase in cross-border interbank activity between institutions in the euro area after the fourth quarter of 1998 is a direct consequence of this development (Graph VII.1).

Three-month money market rate bid-ask spreads ¹		1996	1997	1998	1999	2000 ²
Euro area ³	average	14.4	12.4	9.6	8.9	8.4
	stand. dev.	3.0	3.5	1.8	3.1	3.1
Germany	average	16.5	15.1	8.2	9.2	8.5
	stand. dev.	6.3	7.6	2.9	4.1	3.1
France	average	14.1	11.2	11.3	8.7	8.5
	stand. dev.	4.6	2.7	3.0	2.8	3.1
Italy	average	11.3	9.3	10.1	8.9	8.5
	stand. dev.	2.3	2.4	2.8	2.6	3.1
United States	average	12.5	11.3	8.8	9.0	9.3
	stand. dev.	2.9	5.3	4.0	2.9	2.8
Japan	average	12.0	9.8	11.5	10.5	10.4
	stand. dev.	2.0	3.8	3.6	5.9	1.1

¹ Spreads in basis points of eurocurrency deposit rates, London close. ² Up to mid-April. ³ Prior to 1999, weighted average of the rates of Germany, France and Italy; weights according to the ECB capital key.
Source: Standard & Poor's DRI. Table VII.1



... but repo markets have remained segmented

In contrast to the unsecured deposit market, the repo market has failed to break out of the segmentation that characterised it prior to the introduction of the euro. Existing market rules and architecture that may have served participants' needs well at national level are not necessarily conducive to the development of a true pan-European general collateral market. Cross-border activity remains limited, keeping the market from achieving its full liquidity potential and resulting in persistent pricing differentials and variations in market depth across segments. The slow pace of harmonisation of national market practices and conventions and the lack of a unified market infrastructure continue to present obstacles to further development. Some of these obstacles, such as the cumbersome interface between delivery systems, settlement procedures and market practices, are technical and hence easier to overcome. Others, however, such as differences in documentation and tax treatment, as well as uncertainty regarding title to the underlying securities, relate directly to deep-seated structural differences in national tax and legal systems. Achieving greater harmonisation across the euro area on this front requires more far-reaching intervention, and hence a significant commitment, by national authorities.

Bond markets

Arguably the most impressive effect of EMU on the continent's financial structure has been the tremendous boost that the single currency has given to European fixed income markets. Issuance of euro-denominated bonds surged in 1999, with total funds raised increasing to multiples of their pre-EMU average. Both government and private borrowers have been attracted to the new currency. However, it is the intensified activity by the latter, especially European corporations, that has been the most significant development.

At one stroke, the conversion of government debt denominated in the legacy currencies into euros created a market that currently surpasses in size its Japanese counterpart and stands second only to the US Treasury market. At

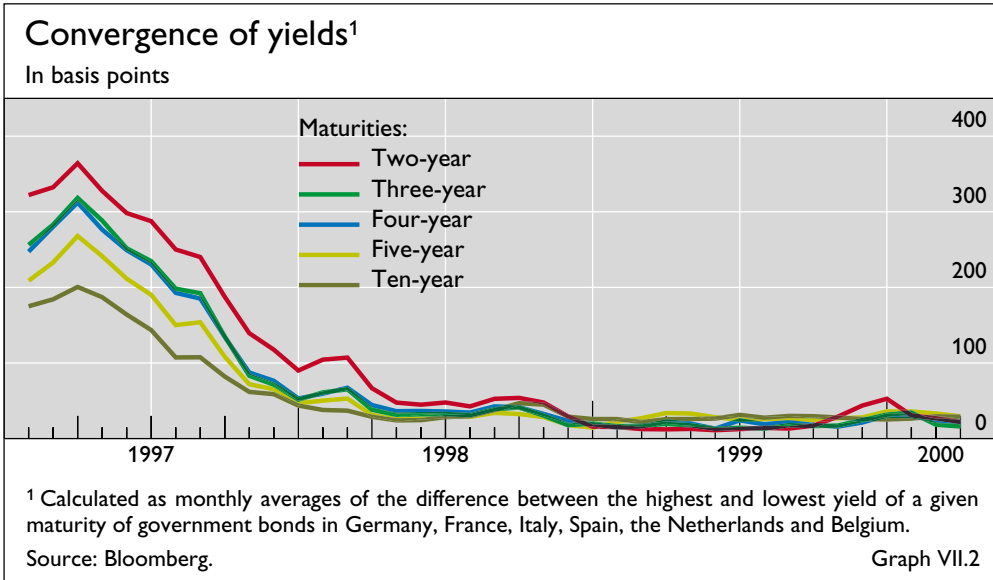
The second largest government bond market ...

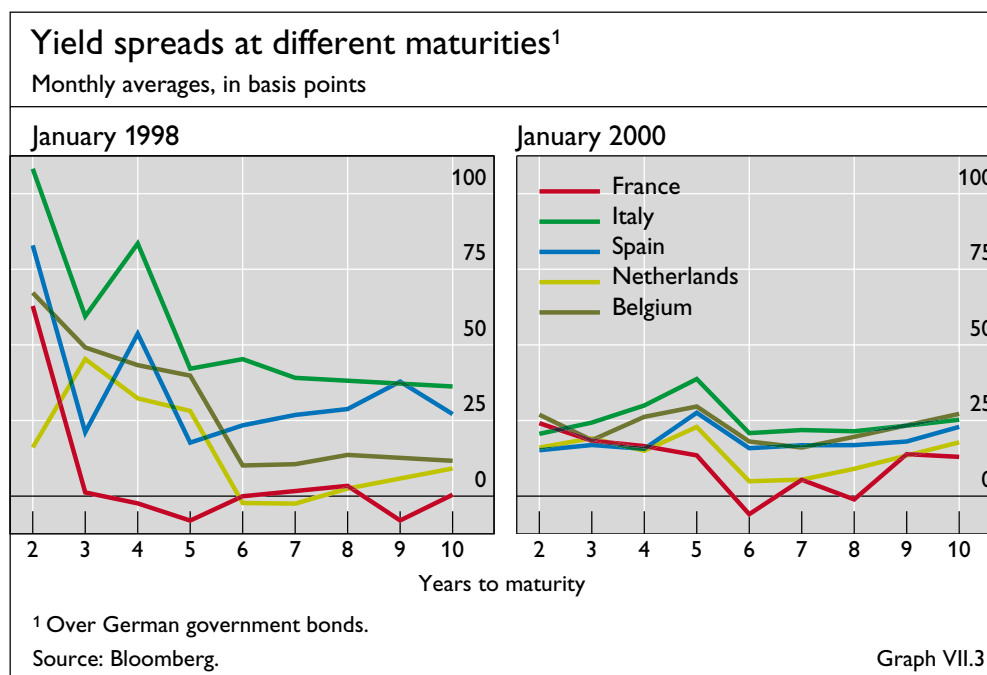
end-December 1999, the stock of long-term euro-denominated debt issued by the euro area governments amounted to around €2.2 trillion or two thirds of the outstanding stock of US Treasury bonds. Over the medium term, the combination of budget deficits in most euro area countries and the ceilings on indebtedness imposed by the Maastricht Treaty are likely to maintain the market at its current size. In contrast, current and projected fiscal trends are pulling the US and Japanese markets in opposite directions, with the former expected to shrink and the latter to expand significantly.

The economic convergence process in the run-up to EMU went hand in hand with an impressive narrowing of interest rate differentials across the 11 participating economies. Current yield spreads are typically contained within 40 basis points or less at any point on the yield curve (Graph VII.2). Closer inspection suggests that a significant portion of these yield differentials reflects technical and liquidity considerations rather than economic risk. Yield differentials in the vicinity of 20 basis points for similarly rated borrowers, such as the German, French and Dutch governments, are too large to be justified by market perceptions of differential credit risk, especially in view of the fact that the spread between French and Dutch bonds and the lower-rated Italian and Belgian bonds is narrower. Moreover, differences in issuers' creditworthiness are unlikely to exhibit the required term structure to account for the fact that national yield curves often cross each other at different points on the maturity spectrum (Graph VII.3).

... is not fully harmonised

Liquidity, security design and issuance policies are key in explaining the interchange between German and French bonds in the highest-priced position at different points along the maturity spectrum. German bonds enjoy benchmark status at the short end of the yield curve and then again in the 10-year maturity range, where they are complemented by the most heavily traded futures contract worldwide. Over the intermediate maturity range, the French Treasury has managed to carve a niche for its securities through an innovative, transparent and investor-friendly issuance policy.





Greater coordination between issuers has economic benefits ...

Idiosyncratic national debt management policies and differences in market conventions are not without costs. No single government bond market is sufficiently large and deep to become the benchmark for the whole euro area, let alone challenge the US market in its leading role. Moreover, different structures and conventions in national bond issuance translate into inefficiencies in other market segments. One example is the repo market where, as noted, development is hampered by imperfect harmonisation of conventions. The corporate bond market could also benefit from a well defined reference government yield curve off which it could be priced in a consistent way. Greater coordination among euro area treasuries with respect to the calendar of issuance, coupon, maturity and other more technical characteristics of the bonds issued could lead to greater fungibility and larger pools of bonds across the maturity spectrum which would be likely to carry a liquidity premium. Bonds issued by the governments of the smaller economies would arguably be the main beneficiaries of such a boost in prices.

... but poses a political dilemma

Given the potential benefits in promoting market structure and reducing debt servicing costs, calls have been made for greater cooperation among EMU governments in this area. The issue, however, is much more complex than a harmonisation of market structure and conventions. It goes to the heart of the debate on how far national discretion could or should be surrendered in the name of achieving benefits that are unevenly distributed across the euro area. For some of the more formal proposed schemes, it is also a question of the extent to which cooperation would imply, or be perceived as implying, shared fiscal responsibilities, which are explicitly ruled out by the Maastricht Treaty. Any argument based on the economic benefits of greater coordination has to be carefully weighed against the further erosion of national independence. This debate is familiar from the process that led to Maastricht and it shows that closer economic integration is likely to continue to raise similar issues.

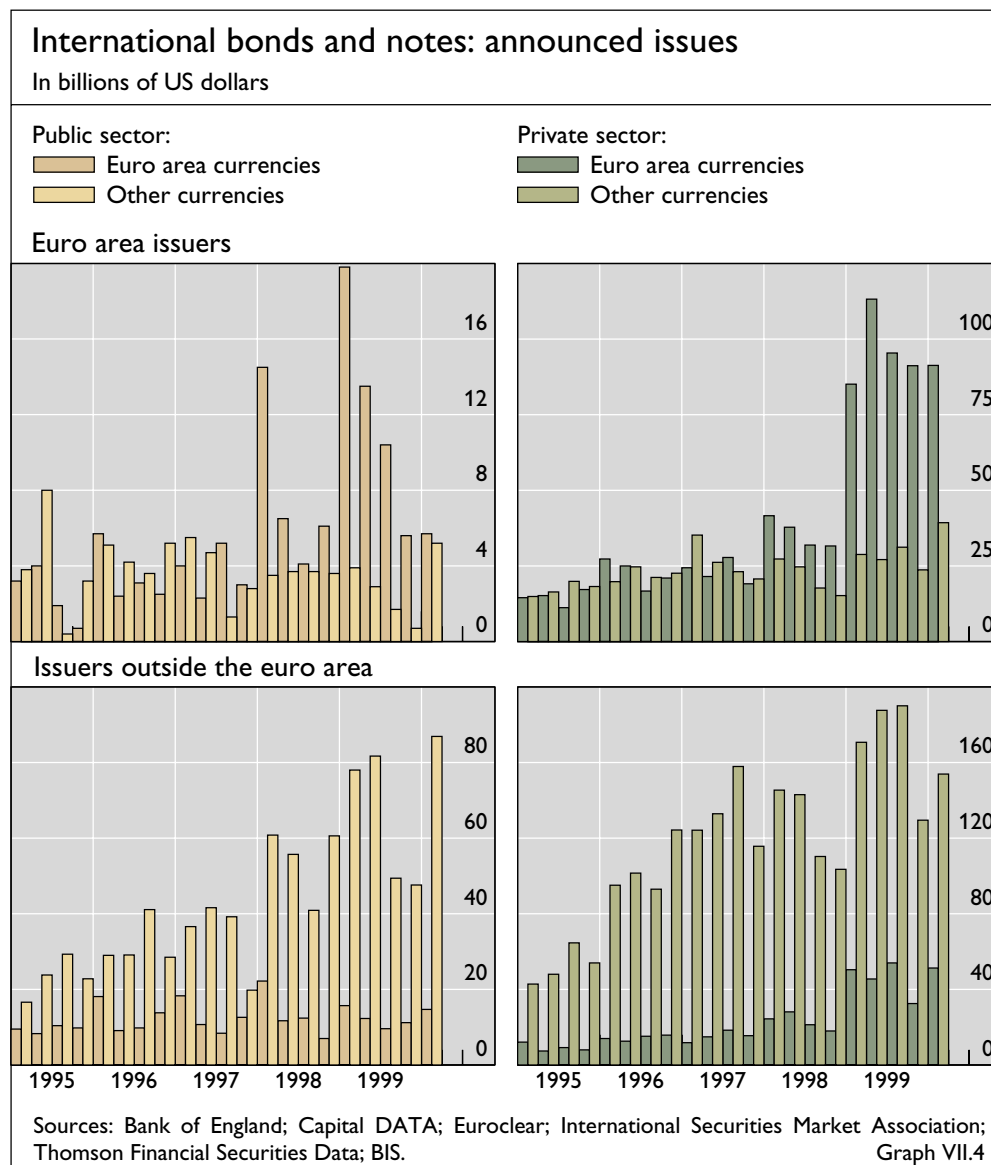
Corporate bonds

The euro has been particularly attractive to private sector borrowers both within and outside the euro area. Between July 1998 and December 1999, euro 11 private sector borrowers issued 76% of their debt in euros, compared to an average of 50% in the predecessor currencies between January 1990 and June 1998. Over the same period, private borrowers residing outside the euro area issued a fifth of their international debt in euros, nearly a twofold increase over the total share of the legacy currencies before July 1998 (Graph VII.4).

While it could be argued that low interest rates and a weakening currency may have played some role in stimulating borrowers' interest in the euro, structural factors have clearly also contributed to the increase in issuance. Chief among these factors has been a significant expansion of the investor base. The single currency has effectively relaxed regulatory currency matching requirements for assets and liabilities imposed on many institutional investors that had led to a strong national bias in their portfolio allocation. Insurance

Private issuance surged ...

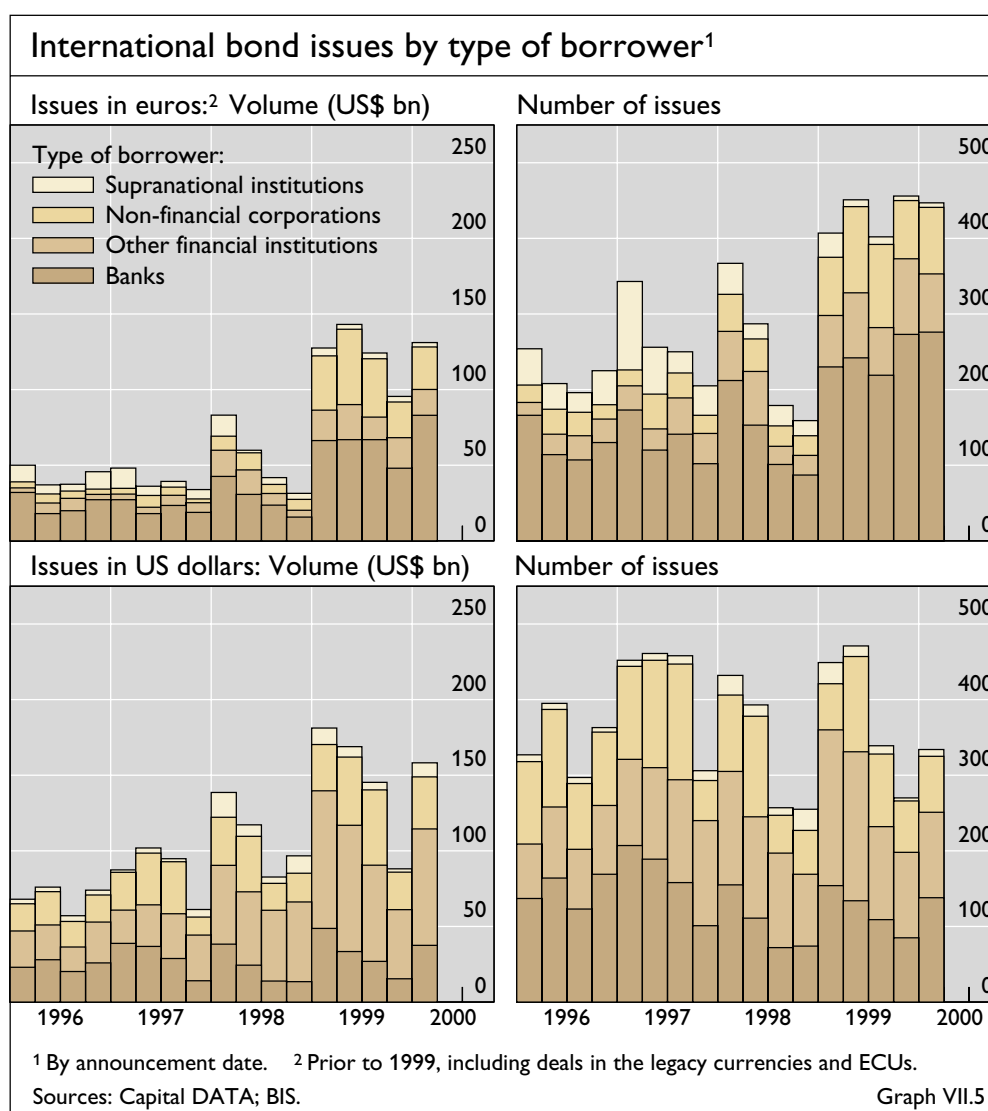
... helped by strong euro area demand



companies and pension funds have thus been able to take advantage of the elimination of exchange rate risk while at the same time achieving a greater degree of portfolio diversification by investing across the single currency area. German investors, for instance, had already sharply increased their purchases of euro-denominated foreign assets ahead of the introduction of the new currency. These purchases actually intensified thereafter, with euro area assets accounting for roughly two thirds of the total gross outward portfolio investment from Germany in 1999.

High concentration on bank and ...

The composition of borrowers that have tapped the euro bond market partly reflects the traditional structure of European finance, but partly also its changing profile. The largest issuers, in terms of both the number of issues and the volume of funds raised, have been European banks (Graph VII.5). German banks' sales of securitised assets in the form of Pfandbriefe account for a large part of this segment. Indeed, the success of the Pfandbrief market has prompted a number of European countries to introduce legislation that replicates its institutional features in an effort to facilitate the development of bank asset securitisation. Such recent innovations in France, Spain and Luxembourg have yet to mature and achieve the liquidity and investor

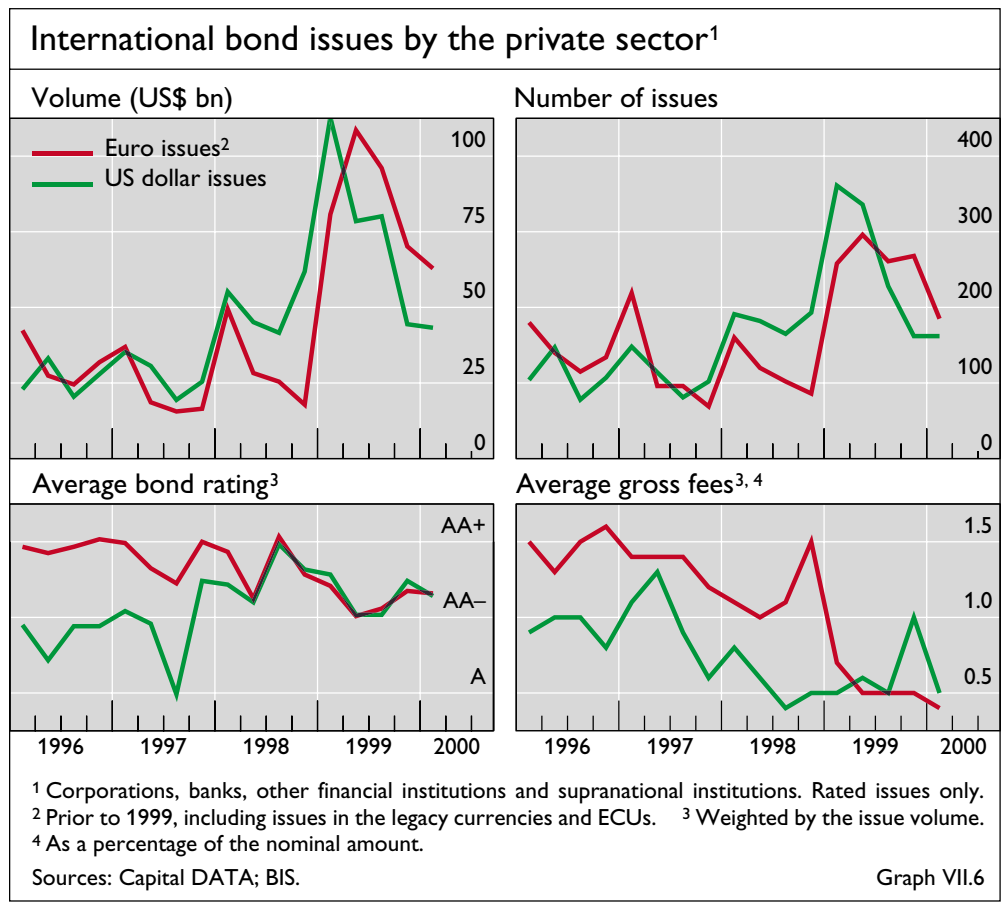


acceptance enjoyed by their German counterpart. A smaller but growing share of bonds has been issued by non-financial corporations, which have capitalised on the increasing appetite for credit risk among European investors. Within this group, there is a high concentration of telecommunications companies that have made extensive use of bond markets to finance the flurry of merger and acquisition activity in this sector. Large-scale borrowers, such as supranational institutions and other US dollar-based agencies and finance companies, remain under-represented in the euro-denominated bond market, relative to their size and global presence. An often cited explanation for this phenomenon is the unfavourable conditions in the swap market, which raise the effective US dollar financing costs for these borrowers accustomed to sub-Libor rates.

... telecommunications issues

The advent of the euro has rendered investment strategies based on cross-currency yield arbitrage and directional bets on national interest rates obsolete, encouraging investors to focus more closely on credit risk. European institutional portfolio managers have begun to educate themselves in the evaluation and management of credit risk, and have gradually developed an appetite for it. The progressive expansion of the market towards lower credits bears witness to this process. What used to be a market only for borrowers rated AA or higher has been able to accommodate a broadening array of credits (Graph VII.6). The sub-investment grade segment, while still much smaller and less diversified than its US dollar counterpart, has regained momentum after suffering a severe setback in the aftermath of the 1998 financial market turmoil.

Investors more receptive to credit risk



Currency of issue versus business relationship in the choice of bond bookrunner					
Borrower's nationality		Currency of issue			
		Euro legacy currencies	Euro	US dollar	All currencies
Market share of bookrunners whose nationality matches the issue currency (in %) ¹					
Euro area	1996–98	59.0	63.1	41.1	53.8
	1999–2000 ²	56.3	60.0	39.6	55.1
United States	1996–98	34.6	28.6	81.7	71.9
	1999–2000 ²	–	26.9	79.4	71.1
All	1996–98	53.2	58.2	64.2	57.8
	1999–2000 ²	50.5	53.0	69.3	58.2
Market share of bookrunners with the same nationality as the borrower (in %) ³					
Euro area	1996–98	39.7	35.4	19.2	28.1
	1999–2000 ²	18.1	42.1	22.3	36.6
United States	1996–98	52.6	44.5	81.7	74.2
	1999–2000 ²	–	53.5	79.4	75.2
All	1996–98	28.2	27.7	38.6	32.1
	1999–2000 ²	19.2	36.3	51.2	41.5
<p>¹ Percentage share of the volume of bonds issued by borrowers of a specific nationality (rows) won by bookrunners of the same nationality as the specified currency of issue (columns). For example, in 1996–98, US banks ran the books of 41.1% of all US dollar bond issues by euro area borrowers.</p> <p>² Up to mid-March. ³ Percentage share of the volume of bonds issued by borrowers of a specific nationality (rows) and denominated in the specified currency (columns) won by bookrunners of the same nationality as the borrower. For example, in 1996–98, the books of 19.2% of all US dollar bond issues by euro area borrowers were run by banks from the same country as the borrower.</p> <p>Sources: Capital DATA; BIS calculations.</p>					

Table VII.2

Intensified
competition in
bond underwriting

The introduction of the single currency has played a critical role in increasing the contestability of the market for the provision of corporate financial services. Table VII.2 shows that historically the nationality of the underwriter of an international bond has been more closely associated with the currency in which the bond is issued than with the nationality of the borrower. This suggests that any established relationship between corporations and their investment bankers is not as important a factor in the selection of underwriters as the ability of the latter to correctly price and place the issue in a market they know well. The advent of the euro has diminished any local advantage European bankers had derived by virtue of their familiarity with investors with a strong national currency bias. While the effect of this change has failed to alter the strength of the stylised facts, the lower right-hand panel of Graph VII.6 suggests that fees for the euro-denominated segment of the market have rapidly converged towards the level of its US dollar counterpart over the last two years. Together with the growing similarity in the average credit quality of the borrowers and the close relationship between issuance levels in the two segments, this convergence in fees is a clear indication of the progressive integration of the international bond market.

The blossoming of the euro-denominated corporate bond market will have a lasting impact on the European financial structure, traditionally

characterised by the predominance of bank-intermediated forms of finance. A broader and more receptive investor base is likely to encourage more classes of private borrowers to substitute debt securities for bank loans. At the same time, banking institutions are themselves likely to use the market as a source of funding that will support their portfolios of less liquid assets. Clearly such developments, by expanding the range of available funding channels, will also enhance the efficiency of the mechanism for the allocation of savings, thereby benefiting the entire European economy. However, by increasing the sensitivity of corporate and bank balance sheets to capital market conditions, this trend is also likely to pose new challenges for financial stability in the area.

Equity markets

Two of the most significant developments in Europe’s equity markets during the past year are only tangentially linked to the introduction of the new currency: healthy issuance and further maturation of Europe’s specialised exchanges for young and growing company stocks. Issuance has been supported by generally buoyant stock prices as well as by the continuing trend of government withdrawal from commercial activities. Gross issuance of international equity by euro area companies grew in 1999 by almost 70% over its average level for the previous two years. Declining bond yields in much of the euro area, a result of the economic convergence, have contributed to intensified interest by retail investors in riskier but potentially more rewarding equity investments. In fact, record inflows into equity mutual funds have supported valuations across most of the area’s equity markets.

Healthy supply

A new, more capital market-friendly breed of European entrepreneurs has brought increasing numbers of small and medium-sized companies into the public equity markets. This trend has been underscored by the success of the network of “new markets”, which have been created in many European countries with the objective of providing access to equity finance for small, dynamic companies with a high growth potential. After a period of strong growth in early 1999, the market was unsettled by an excess supply of new equity for much of last year. Conditions improved again in November, influenced by the global rally in “new economy” stocks (see Chapter VI). This time, strong initial public offering activity was met by a more diverse group of investors showing greater commitment to the sector.

New types of issuer

The advent of the euro was widely expected to mark the beginning of a new paradigm in the valuation of equity for companies in the EMU area. The importance of diverging macroeconomic factors affecting share prices was expected to diminish because of the elimination of exchange rate risk, the fully unified monetary policy stance and the greater cohesion of fiscal policy across the EMU economies. In addition, the expansion of cross-border commercial activity, boosted by progress towards a single market in the European Union, was expected to increase the importance of sector-specific factors at the expense of country-specific factors in influencing individual company valuations. Evidence from company valuations so far, however, has failed to detect a major shift. Individual company stock continues to co-move more closely with that of other companies in the same country than with

Old pricing paradigm persists

that of similar companies elsewhere in the euro area, an indication that prices continue to be driven principally by local investors with a considerable geographical portfolio bias.

One factor that is likely to have contributed to this segmentation of equity markets is the absence to date of an integrated trading infrastructure covering the entire EMU area. There have been many attempts to establish a unified platform that would allow investors from inside as well as outside the common currency zone to trade seamlessly in equities of European companies, through bilateral or multilateral agreements among the existing national bourses. The most ambitious such plan is for an alliance among six of the largest stock exchanges in the euro area, together with the London and Zurich exchanges, aimed at creating a pan-European market for the largest and most heavily traded stocks. The intention is to start with simple steps such as the harmonisation of opening hours and to progressively establish a common trading infrastructure, as well as uniform settlement and clearing facilities. By improving market liquidity and reducing trade processing costs, such a development would help the European equity markets to realise their full potential and grow to a size commensurate with the area's economy (Table VII.3). Progress in this project, however, has been slower than initially expected. Agreement on a common architecture has been hampered by the ambitions of

Gradual progress towards a pan-European stock exchange

Stock market indicators										
	Market capitalisation ¹				Turnover ²			Number of listed stocks ¹		
	in billions of US dollars			1999 in % of GDP	in billions of US dollars			1990	1995	1999
	1990	1995	1999		1990	1995	1999			
Euro area	1,169	2,119	5,526	85	737	1,237	4,342	2,485	2,592	3,893
Germany	355	577	1,432	68	509	594	1,551	413	678	1,043
France	314	522	1,503	105	121	213	770	578	450	968
Italy	149	210	728	62	42	87	539	220	250	264
Spain ³	111	198	432	72	...	163	739	427	362	723
Netherlands	120	356	694	176	41	124	471	260	217	233
Belgium	65	105	184	74	9	18	59	182	143	159
Austria	11	33	33	16	11	13	13	97	109	97
Portugal	9	18	67	62	...	4	40	181	169	125
Finland	23	44	349	272	4	19	110	73	73	147
Ireland	...	26	69	75	...	...	48	...	80	84
Luxembourg	10	30	34	192	-	-	1	54	61	50
United States ⁴	3,059	6,858	16,773	181	1,778	5,481	19,412	6,599	7,671	7,297
Japan ⁵	2,918	3,667	4,455	102	1,288	884	1,676	2,071	2,263	1,889
United Kingdom	849	1,408	2,955	206	543	1,153	3,399	1,701	2,078	2,292
Canada ⁶	242	366	789	124	71	185	389	1,144	1,196	1,406
Switzerland	160	434	678	262	65	340	562	182	233	239

¹ Listed domestic stocks. ² Value of share trading; total domestic and foreign listed companies. Due to different reporting rules and calculation methods, turnover figures are not entirely comparable. ³ For turnover, Madrid Stock Exchange only; otherwise, also including the stock exchanges of Barcelona, Bilbao and Valencia. ⁴ For turnover, New York Stock Exchange and Nasdaq; otherwise, also including AMEX. ⁵ For turnover, Tokyo Stock Exchange only; otherwise, also including Osaka Stock Exchange. ⁶ Stock exchanges of Toronto, Montreal and Vancouver.

Sources: International Federation of Stock Exchanges (FIBV); International Finance Corporation; Swiss Exchange. Table VII.3

individual alliance members and a reluctance to change established practices and rules. Disappointment with the lack of progress and increasing competitive pressure from a number of newly created electronic trading systems have prompted some exchanges to seek closer cooperation on a smaller scale. The most prominent examples are the announced mergers between the London Stock Exchange and Deutsche Börse, on the one hand and between the Paris, Amsterdam and Brussels exchanges, on the other. The first deal will create the second largest stock exchange in the world by market capitalisation, while the second will be a significant competitor within Europe. Other European exchanges are expected to join these two alliances at a later stage.

Consolidation in the financial sector

The euro has played a central role in reshaping financial intermediation in the EMU area and its periphery by reinforcing the factors that have been driving the consolidation process in the banking and non-bank intermediary sectors for some time. The euro lifted the economic barriers to the cross-border supply of financial services within the single currency area and thus expanded the scope for growth and diversification for the area's banks. Its influence has strengthened the trend towards larger institutions that would be able to reap the full benefits of greater economies of scale brought by technological progress. At the same time, it has intensified competition, at least at the wholesale level, reinforcing the incentive to create institutions capable of competing effectively on a pan-European scale for corporate banking business.

The pace of financial sector consolidation in Europe accelerated in anticipation of the introduction of the new currency and has continued

The euro has catalysed consolidation ...

Merger and acquisition activity in the euro area financial industry ¹										
	Same country		Other euro country		Other non-euro country		Total		As a percentage ²	
	Number	Value ³	Number	Value ³	Number	Value ³	Number	Value ³	Number	Value ³
Banks – banks										
1998	7	8,445	1	147	12	13,787	20	22,379	12.7	13.0
1999	9	41,242	4	9,465	15	7,495	28	58,202	15.9	34.2
2000 ⁴	3	4,528	0	0	5	11,654	8	16,182	26.7	62.0
Banks – non-bank financial										
1998	4	28,604	1	646	3	897	8	31,147	24.2	37.9
1999	3	20,816	1	800	12	4,130	16	25,746	20.8	56.4
2000 ⁴	8	4,768	1	1,631	4	653	13	7,052	48.1	39.1
Non-bank financial – non-bank financial										
1998	6	7,299	2	7,974	7	1,201	15	16,474	11.8	13.8
1999	11	15,508	4	378	19	21,888	34	37,774	15.7	40.7
2000 ⁴	4	5,071	1	9	5	454	10	5,534	23.3	18.8

¹ Either acquirer or target company is resident in the euro area. Only completed or pending deals; announcement date volumes.
² Of mergers and acquisitions in all countries. ³ In millions of US dollars. ⁴ 1 January to 10 April.

Source: Bloomberg.

Table VII.4

Cost structure in the banking sector						
	Number of branches per 1,000 inhabitants			Employment per \$1,000 assets		
	1990	1995	1998	1990	1995	1998
United States	0.29	0.28	0.29	0.40	0.32	0.29
Japan ¹	0.18	0.19	0.19	0.07	0.06	0.06
Euro area ²	0.56	0.55	0.55	0.21	0.15	0.15 ³

¹ For the employment ratio, commercial banks only. ² For the employment ratio, Germany, France, Italy, Belgium, the Netherlands and Spain only. ³ 1997.
Source: National data. Table VII.5

... largely at a national level

unabated. The merger wave has also spilled over to the periphery of the euro zone, partly in sympathy with the consolidation taking place within the area, and partly in anticipation of future EMU entry. However, while financial sector mergers and acquisitions often cross industry lines, they remain largely confined within national borders. Current cross-border activity mostly takes the form of strategic alliances, often reinforced by the acquisition of minority, non-controlling stakes.

There are several factors that might explain this preference for national transactions. One is that domestic mergers offer clearer opportunities for reducing costs by trimming overlapping branch networks and excess capacity. Another factor is that such transactions present, in principle, fewer complications in terms of conflicts of corporate and managerial cultures between the two merging organisations, one of the commonest reasons for lack of success. A third factor is that a strong domestic presence is seen as a prerequisite for successful cross-border alliances as it gives the institution a stronger bargaining position. Finally, there is evidence that economies of scale are more prevalent in the wholesale business, which is arguably easier to centralise, than in the retail sector, where a local presence is crucial. In this sense, what has been observed so far is likely to be only the first stage in this consolidation process, with later stages focusing more on the international dimension.

Supervisory and regulatory structure

A framework blending harmonisation with decentralisation ...

The objective of creating a single market for financial services in the European Union dates back to the 1957 Treaty of Rome. Market forces alone, however, were unable to overcome legal, regulatory and practical impediments to the cross-border provision of services. Recognising the inherent difficulties in fully harmonising all national standards, the European Union adopted an approach based on the principles of mutual recognition of regulatory frameworks, subject to minimum essential harmonisation, and home country control. This approach has been successful in facilitating the introduction of key legislation. At the same time, it has given rise to a regulatory framework in which common elements coexist with others that remain under national control and thus potentially differ across countries. This mixture of harmonisation and decentralisation has been extended under EMU, where the conduct of

monetary policy is fully centralised, while responsibility for financial stability remains largely with national authorities.

In a market free of competitive distortions, similar institutions must have the same opportunities for access and face the same costs stemming from the supervisory and regulatory framework and the approaches to dealing with financial distress. The continued reliance on an approach that maintains decentralised control over important components of this framework raises the issue of potential implications for the “levelness of the playing field” within the European Union. By further integrating the economic environment in which EU financial institutions operate, the advent of the euro has highlighted the possible competitive distortions that may arise from differences in the elements that remain decentralised.

... has implications for competition ...

The decision to leave the responsibility for financial stability largely with national authorities has also raised questions concerning the appropriate mechanisms for achieving this objective in the euro area as a whole. The main issues relate to the implications of decentralisation for the balance between the incentives that influence decision-making by the relevant authorities and the adequacy of the means at their disposal to secure stability in an increasingly international business environment. These questions have gained salience in the light of the role of the euro in furthering economic integration.

... and financial stability

The relationship between these two goals – a level playing field and financial stability – is more intimate and complex than might appear at first sight. Experience suggests that competitive distortions may undermine stability by leading to excessive risk-taking. Conversely, there may be circumstances in which constraints on the provision of assistance to institutions in distress on the grounds of unequal treatment could complicate the effective management of financial strain.

Current arrangements

Since the “home country control” principle was first adopted in the Second Banking Co-ordination Directive, it has been an integral part of the major legislative initiatives to promote the single financial market. The same principle is also an important element of the design of the EMU framework. It assigns responsibility for the worldwide consolidated supervision of an EU credit institution to the “competent authority” of the member state in which the institution has its head office, subject to the harmonisation of minimum prudential standards. Host country supervisors are expected to provide all necessary information to the home country authorities. In contrast, conduct of business rules are the responsibility of the host country where the services are actually provided.

Reliance on home country control ...

Even prior to the introduction of the euro, this basic principle was the foundation for the development of a complex web of cooperation among regulatory and supervisory authorities. Cross-border cooperation and information exchange were implemented partly bilaterally, through memoranda of understanding, and partly at the EU level, through the Banking Advisory Committee and the Groupe de Contact. Parallel coordinating structures were established for EU insurance and securities market supervisors. National

... puts emphasis on coordination

organisational arrangements for financial sector supervision vary considerably across countries, ranging from a single agency to multiple agencies for separate sectors and with different degrees of central bank involvement. Consequently, each committee, though organised along sectoral lines, interfaced with agencies with multi-business supervisory responsibilities. However, the formal structures that bring together supervisors from all three sectors have been created only recently and their character is better described as consultative than rule-making, in line with current practice in many member countries.

EMU brings the Eurosystem into the picture

The creation of the euro, besides bringing about the centralisation of the conduct of monetary policy, has so far not altered the fundamental features of this picture. The Maastricht Treaty assigned to the Eurosystem the role of contributing “to the smooth conduct of policies pursued by the competent authorities relating to the prudential supervision of credit institutions and the stability of the financial system”. Supervisory powers, therefore, have remained at the national level, under an arrangement that accommodates the considerable variation in practices and powers allotted to different agencies under national frameworks and forgoes further harmonisation. While the text of the Treaty does not preclude the assignment of certain responsibilities in this field to the ECB, it has been decided not to make use of this option at the present stage. The Treaty has also given the Eurosystem responsibility for the oversight of payment systems, thereby strengthening the statutory backing for some national central banks’ policies in this field. Finally, in line with the need for greater coordination, the Banking Supervision Committee of the ESCB now brings together the authorities responsible for financial stability and payment systems oversight in the system with national banking supervisors.

Minimum harmonisation of deposit insurance

In the area of deposit insurance, the 1994 Directive on deposit guarantee schemes has partly harmonised arrangements by making such schemes mandatory in all member states and setting a uniform *minimum* coverage of €20,000 per depositor. National schemes, however, have the option of offering higher protection levels, and the Directive contains no provisions on several other aspects of the arrangements, including administration and funding.

Winding-up procedures ...

As regards policies for dealing with problem institutions, the harmonisation of procedures and rules for reorganisation and winding-up is not very far advanced. The home country control principle and national laws remain the rule. Takeover and securities legislation, which can materially affect the effectiveness of private market solutions to problem institutions, differs considerably across countries. The result is a lack of uniformity in the rights attached to shares as well as in the powers of boards of directors and shareholders. National authorities retain discretion in scrutinising bank takeovers as part of their responsibility for safeguarding financial stability, although this is limited by the EU rules on the free movement of capital.

... and liquidity assistance ...

The use of public funds in a bank rescue is governed by the EU rules on state aid. While acknowledging the special nature of the banking sector, the European Commission is of the opinion that Community law clearly sets a criterion of “equal competitive conditions”, hence subjecting state financial support to the Commission’s scrutiny. The use of central bank funds in crisis management is part of the Emergency Liquidity Assistance function (ELA).

Neither the Maastricht Treaty nor the Statute of the ESCB gives the ECB an explicit mandate for providing emergency liquidity support directly to individual financial institutions. However, by assigning the responsibility for financial stability to national authorities, the Treaty implicitly charges national central banks with this task. Subsequent agreements have crystallised this basic principle (see below).

... under national control

Levelling the playing field

In assessing how far the current arrangements for ensuring financial stability in the European Union might be a source of competitive inequalities, it is useful to compare them with those established in the United States. The latter in fact presents another example of a framework based on the coexistence of multiple regulatory and supervisory agencies for the financial system. Indeed, because of the historically stricter functional differentiation between securities and banking business in the United States, the banking regulators' purview is narrower than in Europe, where securities firms normally operate with a banking licence. This US feature tends to emphasise the differences in regulatory and supervisory approaches in the two fields. Even so, at least in the banking area, there are a number of countervailing elements in the US system which tend to promote greater uniformity of treatment. The prompt corrective action scheme effectively obliges the supervisory agencies to align their actions in response to the deterioration of a bank's financial condition. The centralisation of the lender of last resort function at the Federal Reserve guarantees harmonisation of the conditions under which banks can access liquidity support. National rules require banks to offer the same nominal deposit insurance coverage, and the centralisation of insurance provision for bank deposits under the Federal Deposit Insurance Corporation ensures that it is available on uniform terms.

Similarities with the US framework ...

Such mechanisms are largely absent from the current EU framework. The Directive on deposit insurance has institutionalised only a minimum insurance coverage, thereby permitting a significant dispersion in protection levels (Table VII.6), without constraining other elements that could have compensated for this dispersion, such as insurance premiums and funding mechanisms. There is no formal equivalent to the prompt corrective action scheme that would closely prescribe the intervention by supervisory agencies when confronted with a distressed institution, nor is there harmonisation of the conditions of access to liquidity support from central banks. Admittedly, the restrictions on state aid limit the discretion of national authorities in the scrutiny of mergers and acquisitions or the resolution of insolvent institutions. Nonetheless, the effective room for manoeuvre in response to national considerations remains considerable within the existing framework.

... but also important differences ...

It is of course difficult to assess the extent to which these national differences impinge on competitive conditions. One reason is that their effect should not just be considered in a piecemeal fashion, but should be evaluated in terms of the overall architecture of the arrangements and actual practices. Even so, the actions already taken or being taken by the European Commission in the area of state aid to the banking sector indicate a heightened sensitivity

... with a potentially distorting impact

Coverage of deposit protection schemes ¹				
	Coverage per depositor		Funding	Administration ²
	in euros	relative to GDP per capita, in %		
Germany	20,000 ³	85.4	yes ⁴	private ³
France	60,980	276.6	no	private
Italy	103,291 ⁵	559.5	no ⁶	private
Spain	15,000 ⁷	113.5	yes	joint
Netherlands	20,000	90.1	no	joint
Belgium	15,000 ⁷	68.4	yes ⁸	joint
Austria	18,895	80.6	no ⁹	private
Portugal	15,000 ¹⁰	156.1	yes ¹¹	government
Finland	25,228	113.4	yes	private
Ireland	15,000 ¹²	73.3	yes	government
Luxembourg	15,000 ⁷	40.6	no	private
United Kingdom	22,222 ¹³	105.0	yes ¹⁴	government
Sweden	26,349	109.9	yes	government
Denmark	42,000	143.5	yes	government
Greece	20,000	193.8	yes	joint
EU ¹⁵	20,000 ¹⁶	99.1	. ¹⁷	. ¹⁸
United States	85,708	296.6	yes	government
Japan	60,853 ¹⁹	226.0	yes	joint
Canada	33,220	186.5	yes	government
Switzerland	20,000	56.8	no	private

¹ Prevailing at end-1998. ² Of the system: either by the government, by industry (private) or both (joint). ³ For almost all banks, 100% up to a limit of 30% of the bank's liable capital. Official coinsurance 90% up to €20,000. ⁴ Additional assessments may be made if necessary to discharge the fund's responsibilities. These contributions are limited to twice the annual contribution. ⁵ 100% of first Lit 200 million (€103,291). ⁶ Banks commit ex ante; however, contributions are ex post. ⁷ Until December 1999; €20,000 thereafter. ⁸ In case of insufficient reserves, banks may be asked to pay, each year if necessary, an exceptional additional contribution up to 0.04%. ⁹ System is organised as an incident-related guarantee facility. ¹⁰ 100% up to €15,000; 75% from €15,000 to €30,000; 50% from €30,000 to €40,000. ¹¹ The payment of the annual contributions may be partly replaced, with a legal maximum of 75%, by the commitment to deliver the amount due to the fund, at any moment it proves necessary. ¹² 90% up to €15,000. ¹³ 90% of protected deposits, with the maximum amount of deposits protected for each depositor being £20,000 (unless the sterling equivalent of €22,222 is greater). ¹⁴ Banks make initial contributions of £10,000 when a bank is first authorised, further contributions if the fund falls below £3 million, not exceeding £300,000 per bank based on the insured deposit base of the banks involved, and special contributions, again based on the insured deposit base of the banks involved, but with no contribution limit. ¹⁵ EC Directive on Deposit Guarantee Schemes. ¹⁶ The minimum coverage was originally specified as ECU 20,000 and the conversion rate was set to ECU 1 = €1 at end-December 1998. ¹⁷ Determined within each member state. ¹⁸ Only directs that each member state shall ensure within its territory one or more deposit guarantee schemes are introduced and officially recognised. ¹⁹ Full coverage until March 2001.

Sources: J R Barth, D E Nolle and T N Rice (1997) and IMF, as quoted in A Prati and G J Schinasi, "Financial stability in European economic and monetary union", *Princeton Studies in International Finance No 86*, Princeton University, August 1999; national data; BIS calculations. Table VII.6

to their potential impact. Looking forward, that impact is likely to grow. This is in part due to the introduction of the euro, which has increased transparency and given further impetus to the integration of markets. But more generally, as further elements of the EU regulatory framework are harmonised, the competitive advantage that may arise from differences in those aspects that remain under national control is bound to become relatively more significant.

Clear examples include the considerable diversity in the powers and practices of national supervisory agencies as well as the architecture of safety nets.

Safeguarding financial stability

The issues that have been raised with respect to the current arrangements for safeguarding financial stability in the euro area relate primarily to the allocation of responsibilities and the exchange of information among the relevant authorities.

Initial criticism of the arrangements regarding emergency liquidity assistance focused on the ambiguities in the Treaty concerning the mechanisms for providing liquidity support, if and when required, and the corresponding allocation of responsibilities. Steps taken by the authorities in the period under review, however, have clarified that responsibility for emergency liquidity assistance to individual institutions has been assigned to competent national authorities, as defined in the national framework, while the Eurosystem retains responsibility for managing overall liquidity conditions through monetary operations. Specific technical characteristics of the arrangements have facilitated the drawing of this distinction. First, under EMU there is a well defined dividing line between ELA, on the one hand, and monetary operations, on the other, as a result of the existence of standing facilities available on demand and a prespecified set of acceptable collateral. ELA begins where normal operations stop. This contrasts with arrangements in some other countries, such as the United States, where end-of-day credit is granted at the discretion of the authorities through the same facility used to provide emergency liquidity support. Moreover, the comparatively ample supply of collateral and wide access to the standing facilities in the Eurosystem mean that the available cushion before ELA is technically activated is larger than elsewhere. Second, the fact that operating objectives for monetary policy are effectively set in terms of short-term interest rates rather than specific quantities of reserves provides national central banks with somewhat greater freedom. In particular, if financial distress is associated with changes in the demand for reserves at the local, or even aggregate, level, these could be accommodated by the Eurosystem without modifying the stance of policy as long as the key interest rates remained under control. Mechanisms for the timely exchange of information with the Governing Council of the ECB, which is ultimately responsible for monetary policy decisions, ensure that the consequences of national actions for monetary policy implementation can be duly taken into account.

ELA is but one instrument in the wider set of tools available to deal with institutions in distress, which may range from pure liquidity shortage to insolvency. The more general question is whether allocating this broader function to national authorities with respect to “home” institutions might in some circumstances create difficulties. Conceivably, in certain situations this might result in incentives not fully in line with the stability needs of the area as a whole. Cases in point might be those of institutions that were systemically relevant only outside their home market or that, in effect, had more than one “home” market in view of the geographical scope of their operations and, perhaps, ownership structure. In the absence of appropriate burden-sharing

Ambiguities regarding the responsibility for ELA ...

... have been clarified

Decentralisation can be cumbersome ...

... in cases of intense cross-border activity

mechanisms, such situations could complicate the timely elaboration of a policy response and might even lead to a certain bias towards inaction. Even so, scenarios such as these are predicated on a degree of financial integration that, arguably, goes beyond what has so far been achieved within the euro area.

Harmonisation of
legal framework ...

Progress towards the elimination of existing differences in important aspects of the national legal framework is likely to boost the effectiveness of market-based mechanisms in dealing with cases of financial distress. A liquid repo market could usefully complement the uncollateralised interbank market, especially during periods of financial strain when market participants are particularly sensitive to credit risk. The establishment of a common legal and market infrastructure, the absence of which has so far hindered the development of the cross-border repo market in the euro area, would minimise the likelihood that emergency central bank assistance will be necessary. Similarly, further harmonisation in national securities and bankruptcy legislation as well as in the framework for merger and acquisition approvals could facilitate the resolution of financial distress through cross-border “private money” solutions.

... and closer
supervisory
cooperation are
key

In any case, there is little doubt that the greater financial integration promoted by a single currency puts a premium on mechanisms for the exchange of information between the relevant authorities in charge of safeguarding financial stability. Access to accurate and timely information is necessary both for the early detection of potential vulnerabilities, thereby permitting preventive action, and for assessing the extent and intensity of strains once they arise. The establishment of the Eurosystem has provided an opportunity for streamlining and strengthening existing mechanisms. There is, however, scope for improving the practical functioning of current arrangements, especially with regard to communication and cooperation between supervisory authorities of different sectors at an international level, cooperation between these authorities and central banks, and the convergence of supervisory practices.

Looking ahead, it is difficult to foresee how the framework for safeguarding financial stability will evolve. Much will depend on the pace of further financial integration, on how the arrangements perform if and when put to the test, and on developments in the broader political environment. The current balance between centralisation and decentralisation is unique. Nonetheless, as the elusive objective of a true single market comes within closer reach, the underlying forces at work should tend to shift the balance towards further centralisation or harmonisation, even though the precise modalities and timing of this shift remain hard to predict.

VIII. Conclusion

There seems to be a widespread perception that the global economy now stands on the brink, but the brink of what remains the question. The better than anticipated recent economic performance in many parts of the world has predictably led both private and public sector bodies to revise their growth forecasts upwards. Many now see better economic prospects than at any time since the early 1980s. Part of this is pure extrapolation, but advances in technology and continuing deregulation are further reasons for expecting rapid growth along with continuing low inflation. Indeed, as such structural developments increasingly spread throughout the global economy, the remarkable success enjoyed by the United States over the last few years seems likely to be more broadly shared. A prolonged boom in a more market-driven world economy can thus by no means be ruled out.

Yet, even if this longer-term vision is accepted, policymakers can still expect a few bumps along the way. Consistent with previous historical episodes of structural change and associated new promise, the last decade has been characterised by rapid credit expansion in many economies, and a growing appetite for risk among lenders. Concentration ratios have risen in financial markets while liquidity has sometimes fallen noticeably. These developments imply not only that the global economy may have become more exposed to macroeconomic shocks, but also that the dynamic response of markets to such shocks may be harder to predict than in the more regulated past. Finally, it must also be asked whether, with a more globalised financial system, policymakers have all the tools required both to avert problems and to manage them should they arise. This is never an easy task since liquidity injections, which may be needed to help manage one crisis, can also encourage imprudent behaviour, simply leading to the next.

The principal macroeconomic vulnerabilities are well known, not least among them the possibility of rising inflation in the countries most advanced in the business cycle. But it is the potential interactions between these vulnerabilities that may require more attention. Stock prices in many countries still seem high by historical standards, even after stripping out “new era” stocks, for which new valuation criteria could conceivably apply. The US dollar also appears to be stronger than is compatible with the stabilisation of longer-term external debt ratios. Given the increased extent to which projected returns on equity have driven international capital flows in recent years, the possibility of a simultaneous adjustment in both markets would seem greater than historical correlations might indicate. The likely implication of such an outcome would be slower demand due to wealth effects, even as inflation rose

in response to both internal and external pressures. Whether the former would be judged useful or not, since it would help offset the inflationary pressures, would of course very much depend on how big and orderly the wealth adjustment proved to be. Neither a hard nor a soft landing could logically be ruled out. Finally, in such an uncertain macroeconomic environment, an outflow of capital from emerging market economies might also be anticipated. While those countries that now have current account surpluses and large external reserves might be little affected, not all emerging markets currently enjoy such a comfortable external position.

The market dynamics conditioning the response of the global financial system to a continued tightening of policy rates also deserve attention. Higher policy rates have for the most part been viewed as helpful in sustaining economic growth while heading off inflation. Growth has been positive for stock prices and for credit spreads, and low inflation has perhaps constrained the upward movement in bond rates. Yet, if the authorities were suddenly judged to be “behind the curve”, this could all go into reverse, with potentially contractionary effects. In addition, equity price movements could be exaggerated by the growing use of leverage and margined debt, portfolio insurance strategies and the increased dependence of blue-chip profits on stock gains in the high-tech area. These are all interwoven elements with potential for mischief. Similarly, fixed income markets might also react uncharacteristically, given the changing status of benchmarks in both the US and European bond markets, and the growing reluctance of large firms to commit capital to a market-making function.

How any or all of these developments might feed back onto the health of individual financial institutions is another open question. A combination of continuing deregulation, heightened competition, technological change and increased concern for shareholder value may have encouraged behaviour and cross-sectoral relationships which will prove to have been imprudent only when the next downturn comes. That said, it must also be noted that financial markets have recently been extremely volatile, without any such knock-on effects, and very high volumes of financial transactions have been processed without any signs of strain.

What can policymakers do to ensure that the global economy reaps the benefits of a more efficient production and financial structure over time? Whatever the answer, and some suggestions are made below, it must be recognised that efficiency is not everything. Fairness and perceptions of fairness must also be taken into consideration. Thus, issues of income distribution, debt relief and the protectionist policies of industrial countries, particularly towards imports of agricultural products and textiles from emerging markets, need more effective attention than they have received thus far. A further constraint on the pursuit of efficiency, particularly in the development of financial systems, must be considerations of safety and stability. The potential economic costs of sporadic financial crises must always be weighed against the ongoing benefits of freer capital markets. Unless policy measures can adequately trade off all these competing objectives, a sharp and unwelcome turn away from a market-based approach to less desirable solutions cannot be ruled out.

Imbalances and the pursuit of price stability

Uncertainty about the economic future is an inevitable complication in the formulation of monetary policy. Knowledge is limited about both the structure of the economy and the lags with which monetary policy affects ultimate objectives. Data are frequently subject to revision, as are the sentiments that often dominate expenditure decisions. While theory suggests that policymakers should at each moment simply give it their “best shot” and then systematically revise their views on the basis of incoming evidence, this strategy also has shortcomings. In particular, widespread uncertainty may lead to excessive delays in responding to new information, thus increasing the chance of large, disruptive moves later. Indeed, such delays might even call into question the authorities’ commitment to meeting their stated objectives. Moreover, a policy strategy based solely on mean expectations could result in inadequate preparation in the event of extreme outturns. In the current circumstances, where many imbalances can be identified, such a shortcoming would seem particularly significant.

One point on which virtually everyone would agree is that the current rate of expansion of domestic demand in the United States is unsustainable and potentially inflationary, and that a similar if less extreme state of affairs prevails in some of the other English-speaking countries. With all talk of fiscal action in the United States moving resolutely in the other direction, the recent trend towards monetary tightening is most welcome even if some asset prices currently look quite vulnerable. Were monetary policy to back off at the first signs of declining equity prices, the risks of moral hazard would be great. In any event, if we really have entered a “new era”, the likelihood of a sharp and sustained reaction in equity markets would be much reduced. And if we have not, then it could be argued that the sooner the bubble deflates, the better.

This is not to say that a significant reaction in the stock market, or in financial markets more generally, should not elicit a measured policy response. Disinflation can go both too far and too fast. This danger is not inconsequential in the United States, nor in a number of other countries advanced in the cycle. Given recent low rates of saving and heavy investment in housing and durable goods, it would now be very easy to postpone prospective expenditures. But once it has become apparent that certain investments will never yield their expected rates of return, the misguided investors should be allowed to pay the price, and quickly, so that capacity can be reduced and longer-term profitability rapidly restored. This may be the principal lesson from the 1990s in Japan.

Another area of more or less universal agreement is that the rate of growth of private expenditures in Japan is too low. The unresolved question is: how might it be encouraged to quicken? The Japanese fiscal authorities are to be commended for having been prepared to use fiscal policy counter-cyclically, yet this could also have been done more effectively. The initial grudging recourse to this expedient, accompanied by threatened and actual reversals of policy from time to time, undermined private sector confidence that a definitive upturn was in prospect. Moreover, as the scale of the spending

rose, the efficiency of the expenditures declined sharply, leaving taxpayers with perceptions of increased liabilities that were not matched by worthwhile assets. While rising levels of public debt in Japan imply that overall fiscal stimulus will have to be more restrained in the future, a rebalancing of expenditures could yet pay big dividends. Cutting back on the overdeveloped public investment side (three times the G10 average) and increasing expenditure on the underdeveloped social safety net could help preserve needed confidence. It could also increase labour mobility at a time when this would be highly desirable. With old industries still plagued by overinvestment, expansion in other areas must be encouraged through deregulation and related public policies.

Whether there is any further role for expansionary monetary policy, now that short-term rates have effectively hit the zero nominal bound, remains a controversial topic in Japan and elsewhere. There are two strands to this debate. The first suggests that the Bank of Japan should have recourse to “exceptional” procedures to directly raise asset prices and sharply increase the level of reserves in the banking system, for example through unsterilised yen intervention and massive purchases of government bonds. The Bank has strongly resisted such initiatives on the grounds that they would be of limited, if any, use and might even get in the way of a needed increase in rates should the economy recover. Underlying this resistance are also legitimate concerns about the longer-term independence of the central bank. The second strand of the debate has to do with the merits of introducing a new monetary regime of inflation or price level targeting. The basic logic is that, while nominal interest rates may be bounded at zero, negative real rates may nevertheless be attainable if some means can be found to foster expectations of a rebound in prices. Proponents of a new monetary regime say that inflation expectations would indeed be shifted upwards in consequence, with price level targeting becoming the more attractive the longer prices had been dropping. Opponents, including the Bank of Japan, hold that this spontaneous shift in expectations simply would not happen in the absence of credible means to change the underlying reality of ongoing economic stagnation.

A final point on which virtually everyone would agree is that, by default, the primary challenge for continental Europe is structural reform. Major macroeconomic imbalances of the sort that increasingly confront the United States and Japan are neither evident nor in prospect. Current account balances for the region as a whole do not pose a problem. Equities, which have seen sharp price increases in many countries, still constitute only a small (if rising) proportion of household wealth. And while the continuing weakness of the euro clearly has the potential to raise inflationary pressures, a forward-looking and vigilant monetary policy would seem sufficient to allay most concerns. Fiscal restraint might also be recommended, particularly in those smaller European economies which are already pushing the limits of potential, but in most countries policies of restraint have already been in place for some time. Of course, all of these macroeconomic prescriptions for holding a steady course presume that the current European expansion will continue uninterrupted by any dramatic events elsewhere.

The enthusiasm for structural reform in Europe has clearly been stimulated by the introduction of the euro, with elements of both carrot and stick coming into play. A single currency could catalyse enormous efficiency gains in product markets, if only other reforms would let it. Conversely, failure to effect labour market reforms, which would allow more rapid response to market signals, could lead to rising unemployment given asymmetric shocks in a single currency area. Much has already been done, as indicated by the recent unusual drop in the EU unemployment rate at a very early stage of the recovery, but the lessons from the United States and “best practice” in Europe indicate that further progress is possible. The heads of government pledged to pursue structural reforms actively at their recent meeting in Lisbon but, as always, the difficult task will be to push this commitment through at home.

Exchange rate movements among the major currencies have generally provided support for cyclical stabilisation over the last few years. Recently, however, the strength of the yen and the persistent weakness of the euro have been less consistent with domestic objectives, raising the question of what might be done about it, aside from moving policy rates. The current answer appears to be, not much. However, circumstances could conceivably change. Unilateral intervention by the Japanese has the disadvantage that its signalling function has limited credibility, since rates already at zero can be lowered no further (although the possibility of “unconventional” measures remains open). Bilateral intervention with European involvement has also been eschewed to date, even though, *prima facie*, it would seem potentially useful in the right market conditions. One reason might be concerns in Europe that intervention would be misread as signalling a dilution of the commitment of the newly created central bank to domestic price stability. And as for multilateral intervention, involving the United States as well, concerns have been expressed that this might be interpreted as the harbinger of a managed global exchange rate system, for which there currently seems to be little official enthusiasm.

Looking further ahead, the biggest policy challenge could be coping with a sudden reversal in the fortunes of the dollar. The additional disinflationary impact on Japan would clearly be unwelcome, although much less so in Europe, where inflationary concerns have mounted. Even here, however, problems could arise if a rebound of the euro went too far and too fast. Given the extent to which the recent decline in the euro was unexpected, and that momentum-related factors could reverse, this possibility should not be dismissed. Of course, were the euro to rebound sharply due to renewed optimism about structural reforms in Europe, accompanied by both increased consumer and investment spending, the dangers posed for the current expansion would be significantly mitigated. This would seem to be another very good reason for proceeding with structural reforms.

Exchange rate issues loom even larger from the perspective of emerging market economies, as they are relatively more open and even more prone to sentiment-driven swings in capital flows. For the moment, prospects of improved economic performance in Asia, Latin America and eastern Europe have encouraged inflows, of direct investment in particular. Nevertheless, concerns remain that external shocks or internal policy failures could suddenly

put those flows into reverse. Current account deficits and structural fiscal problems are potential worries in Latin America, while a heavy dependence on the technology sector and slow progress in corporate and bank restructuring may pose risks in Asia. Although most emerging market countries nominally have floating exchange rates, it is also true that many, especially in Asia, have been intervening heavily to stop a loss of competitiveness through currency appreciation. While touted as being consistent with the need to build reserves, and better than capital controls, which have evoked surprisingly little interest to date, such policies could eventually lead to excessive credit creation. This is just another way to lose competitiveness. Perhaps more pernicious is the danger that borrowers will revert to a fixed rate mentality and be encouraged once again to borrow in foreign currency at lower cost. While this might seem unlikely in the light of recent crises, it is astonishing how quickly people forget even hard-learned lessons.

Some emerging market countries have been clearer in their advocacy of alternative policy regimes. In just the last year, for example, South Africa, Brazil, Poland and the Czech Republic have all announced the adoption of inflation targeting regimes. In making this choice, they have joined a club of industrial countries which set policy to reach preannounced targets for inflation within the framework of a floating exchange rate. Whatever the merits of such a framework in industrial countries, the balance of advantages and disadvantages may be somewhat different when adopted elsewhere.

Among the advantages for emerging markets would be its potential transparency. Thus, under an inflation targeting regime, policymakers might be less subject to accusations that they had personal interests at stake when setting both interest rates and exchange rates. A further advantage would be the possible anchor provided for inflation expectations in countries, like many in Latin America, with a particularly poor track record in controlling inflation. However, in targeting inflation, emerging market economies commonly face some offsetting disadvantages as well. These include a relatively poor capacity to undertake sophisticated economic (including inflation) forecasting, unreliable data and the problem of ongoing structural change. In addition, many emerging markets, most recently in Asia, have proved vulnerable to asset price bubbles, which are not easily handled in an inflation targeting framework. Finally, the fact that food and imports make up such a large part of the consumption basket, and that price deregulation is often pervasive and ongoing, may drive a significant wedge between headline inflation and the index that the central bank actually feels it has a chance of controlling.

The upshot is that emerging market countries face a sharply exaggerated version of the trade-off confronting industrial countries that target inflation. If they set their targets too ambitiously, they will lose credibility if targets are missed. Conversely, if they set more realistic goals, these may be judged to be unambitious and the regime will enjoy no credibility in the first place. As with all regime choices, no one size fits all. Each country must look at its own circumstances and its own history and make a judgment about the best course to take. When it comes to the need for sound fiscal policies, however, no exercise of judgment is required. Without such policies,

history teaches us that any regime aimed at controlling inflation is doomed to failure.

Structural change and the prevention of global financial instability

Financial failures in the 1930s seriously aggravated the economic downturn in many industrial countries, and led to a sharp tightening of the regulations governing financial activity. The postwar period witnessed a progressive liberalisation as the memories of earlier difficulties faded and the potential benefits of freer financial markets became better recognised. However, recurring financial crises during the last three decades, in both industrial countries and emerging market economies, have focused renewed attention on three issues. How might future crises be avoided? How might they be better managed when they occur? And how might crises ultimately be resolved, including through debt reduction? With respect to each, the actual progress made has been substantial, but is dwarfed by what remains to be done. On some questions there is still no international consensus as to what constitutes sensible policies. And in virtually all cases, the practical challenges involved in actually implementing agreed proposals remain daunting.

Measures directed to preventing financial crises increasingly recognise how microeconomic deficiencies can interact with macroeconomic phenomena with insidious effect. There are three possible market manifestations of such problems: extreme short-term price volatility in some markets, medium-term price misalignments, including those leading to asset price bubbles and excessive capital flows, and contagion across markets and countries unwarranted by the underlying fundamentals. Preventive attention must then focus on each of the three pillars supporting both the domestic and international financial systems: the good health of financial institutions, the proper functioning of markets, and the establishment of a sound infrastructure including legal and judicial processes, payment and settlement systems, and accounting standards. With respect to each pillar, a further trio, this time of incentive systems, can be identified to help promote prudent behaviour. The starting point must be internal governance, based fundamentally on self-interest and the preservation of private capital. To this can be added adequate supervision and oversight. And finally, while recognising its periodic limitations, market discipline must increasingly be assigned a role in a more market-driven world. Given three problems, three pillars, and three prescriptions for each, it is perhaps not surprising that so much still remains to be done.

Promoting healthy financial institutions, especially banks, is a crucial prerequisite for financial stability. The largest number of crises still arise, be it in emerging market economies or industrial countries, from financial institutions overextending themselves when times seem good and then retrenching violently afterwards. Governance would first benefit from a greater internal focus on risk-adjusted rates of return, particularly when rewarding traders and credit officers. The relentless pursuit of shareholder value, without this crucial adjustment, could prove a very dangerous strategy. To this recommendation might also be added greater attention to the way in which public safety nets

may encourage imprudent behaviour, not least through institutions thought to have a state guarantee. The recent explosive growth of such institutions in the United States reinforces long-standing concerns about similar state involvement in both Japanese and continental European banking.

The proposals put forward by the Basel Committee on Banking Supervision for improving the 1988 Capital Accord, to be modified in the light of the recently concluded consultation process, will link the minimum capital requirements for banks with well developed rating systems more closely to the banks' own internal assessments of credit risk. Such a linkage is clearly desirable, provided of course that these assessments are not themselves biased in any way. Eligibility for this approach will thus be subject to sound practice standards and guidelines aimed at ensuring the integrity of the rating system output and process. The standardised approach being proposed for less sophisticated banks perhaps promises fewer benefits, but may also entail fewer risks. It obviously needs to be well thought through since the vast majority of banks in emerging markets are likely to be governed by it.

The proposed new Capital Accord also recognises that supervisors have an important role to play in ensuring that the need for capital is being adequately assessed and that capital requirements are consistent and comparable across institutions. In this latter regard, simple rules ensuring forward-looking provisioning might play a bigger role than is currently the case. The Basel Committee has pointed out that market discipline could also contribute to prudent behaviour on the part of financial institutions. Credit spreads and share prices are traditional mechanisms in this regard, but subordinated debt might also be considered. A necessary but not sufficient condition for the application of market discipline is that the market has enough reliable information to allow it to make a sound judgment. Ensuring the provision of such information, along with a clear explanation of the accounting principles on which it is based, should continue to be of the highest priority.

Of course, one problem with market discipline is that it too might be subject to the same swings of optimism and pessimism that could affect internal ratings. Since such phenomena can have systemic repercussions, much more attention should be paid by the public sector to monitoring developments and to developing analytical procedures for evaluating the risk of systemic problems. Indeed, using stress tests as a corollary to such forecasts also has a lot to recommend it. Whether analyses of this sort should be done primarily by supervisors or by other bodies (commonly central banks) charged with overall responsibility for systemic stability, or by both, needs to be clarified to ensure that this important function does not simply fall between the cracks. One argument for involving central banks is that there may be a useful complementarity between their "top down" approach and the "bottom up" approach more commonly followed by the supervisory community. It is a simple but important insight that many recommendations supporting prudent behaviour at the level of a single firm can have undesirable effects if a large number of firms have simultaneously to alter their behaviour in the same way. Fallacies of composition of this kind are well known in the macroeconomic literature.

While healthy financial institutions remain key to financial stability, especially in emerging market countries, the events of autumn 1998 underlined the growing importance of well functioning financial markets as well. A central point is that markets can provide alternative sources of credit when bank sources run dry, and vice versa. This is one important explanation for the recent interest in developing liquid government bond markets in many emerging market countries. With time, such government bond markets could provide benchmarks to support the issue of private sector bonds as well. Governments in many industrial countries are also facing similar issues pertaining to market functioning, as rising government surpluses reduce the amount of bonds available, potentially complicating the problem of risk management under stress.

Even if more complete financial markets are a public good, it must be recognised that such markets do not always function as efficiently as might be hoped. One remedy, recognising the self-interest of individual market participants, is greater transparency. If participants knew more about the financial condition and exposure of counterparties, they would be less likely to disengage when confronted with uncertainty. In the same vein, if lenders had better information about the debt profiles of sovereign borrowers they might be less likely to suddenly develop fears and head for the exits. A number of initiatives are under way to further transparency of both sorts (see the chapter on the Activities of the Bank) and these should be vigorously pursued.

As for contributions by market overseers to better market functioning, there is evidence that markets are becoming less atomistic, and potentially more subject to herding behaviour particularly at times of stress. Growing concentration among market participants, common risk management and regulatory schemes, increasing use of benchmarks and index tracking, and the exploitation of common and instantaneously available information may all be contributing to this. However, what supervisory authorities might do about these underlying structural trends is significantly less obvious. Finally, there is the most fundamental issue of all. Why do markets overshoot, in effect failing to discipline themselves? In an ideal world, those who pushed prices away from “equilibrium” levels would quickly lose money as prices reverted to the mean. However, in the real world, this often does not happen. Since such phenomena have been seen since time immemorial, it may be that market failures of this sort are simply one of the costs to be borne when reaping the overall benefits of a market-based economic system.

The third pillar of a properly functioning financial system is the underlying infrastructure; in particular, payment and settlement systems, legal and judicial frameworks and proper accounting. In the area of payment systems, a great deal has been done since the late 1980s. Last year, the Basel-based Committee on Payment and Settlement Systems published a consultative document entitled “Core principles for systemically important payment systems”. The main task for the future is to refine these principles in the light of comments received, and to see them successfully implemented in all major financial markets. Given that such systems in the industrial countries alone are now processing around \$6 trillion of transactions a day, it is clearly imperative that they function

flawlessly. As for the legal infrastructure, its crucial importance was brought home by the practical implications of inadequate property laws in Russia and some other transition economies. The crisis in East Asia also revealed certain legal shortcomings which have been only partly addressed. And in many countries, the application of existing law needs to be speedier and much less arbitrary than is currently the case. Finally, significant progress has been made towards agreement on a common set of global accounting standards. This vital work needs to be carried forward, completed and implemented.

The management and resolution of financial crises

While the incidence of financial crises may be reduced through preventive measures, they will never completely disappear. How best to manage a crisis in order to reduce its macroeconomic and social costs will depend very much on how it manifests itself in market processes. Nevertheless, common to virtually all financial crises is a sudden loss of market confidence and the need to quickly evaluate liquidity requirements in the system and how they might best be met. In contrast, crisis resolution is a longer-term endeavour, often requiring some degree of debt reduction. The management and resolution of financial crises can have both a domestic and an international component, and will normally involve private sector creditors as well as public authorities. However, if moral hazard is to be avoided, the latter should be drawn in only as a last resort, when there is clear evidence of some market failure or externality.

Nor should it be automatically assumed that such market failures are likely. Private financial markets, which are increasingly interlinked, have the potential to defuse crises as well as to propagate them. For example, in autumn 1998, many borrowers found it difficult to obtain credit via the short-term paper and derivatives markets. However, the interbank markets expanded enormously and played a crucial role in redistributing credit to those that needed it. Private sector participants, particularly large ones whose behaviour can affect the whole system, will tend to internalise those externalities (indeed, as in the LTCM case, they could be encouraged to do so) and this should lead to more stabilising behaviour. Of course, this is not to say that explicit public sector involvement will never be required, but the public sector itself must retain the right to make judgments in this regard. This discretion must apply not only to possible emergency lending to banks, but also, and even more so, to the possibility of supporting markets suddenly made illiquid for some unforeseen reason.

The nature of any public sector involvement must also be conditioned by two aspects of modern financial markets: the speed with which changes can now occur and their international dimension. With respect to the former, it will be particularly important in the future for the various parties involved to have open lines of communication and agreed procedures for using them. At least among themselves, government bodies should also be clear about who is responsible for what. Such clarity is obviously necessary at the domestic level, including within the euro area, but may apply at the international level as well. Individual financial institutions active in a given country may well have

international roots, and responsibility for their behaviour would then lie with the “home” supervisor. Moreover, the liquidity required might well be in foreign currency, which would add a whole new dimension to the problem. Even if a country’s central bank were prepared to increase liquidity for the system as a whole, and thus reduce interest rates, this would be of little help if the problem were a shortage of foreign currency. Indeed, such a policy could easily prove counterproductive if the domestic currency depreciated in consequence and the servicing requirements on foreign currency denominated debt rose appreciably.

How international liquidity might be provided to emerging markets suffering from such problems has been widely discussed over the last few years. Yet it is not clear that much concrete progress has been made with respect to the two central issues. The first is how the private sector might be induced to provide needed liquidity both by rolling over maturing debt and by providing new money, for example to help finance an ongoing current account deficit. The former can be effected through a temporary suspension of payments, which has the advantage of treating all creditors equally, but is hardly likely to encourage new credits. Another possibility is moral suasion, as was recently applied with regard to Korea, but ultimately such arm-twisting comes close to coercion. A growing problem, moreover, is how to coordinate such financing. As borrowers in emerging markets and lenders in developed countries become ever more heterogeneous, it becomes increasingly difficult to determine who, if anyone, has the authority to make promises and then follow up on them. In this context, the more issuers of bonds that can be persuaded to include collective action clauses, the greater the likelihood of orderly debt reschedulings.

The second issue is the appropriate modalities for the involvement of the public sector. A balance needs to be found between the provision of liquidity by the IMF and the moral hazard that such assistance engenders. One view is that access to the IMF should normally be for far smaller amounts than recently provided, and through a reduced number of facilities. According to this essentially “rules-based” approach, only limited access to public sector money is consistent with the spirit of burden-sharing, and the terms and conditions of that access should be known to everyone in advance. Advocates of this approach would not deny that there might be cases, presumably of systemic import, in which the public sector might consider it appropriate to make far larger loans. However, it would be argued that, in such cases, the approval process ought to be both more formal and more difficult. The principal counterargument to these views is that all crises are different and ways to manage crises need to be found very quickly. This rather argues for more “discretion” on the part of the IMF. In contrast to these opposing standpoints, there seems to be a growing consensus that official financing should be linked more closely to crisis prevention efforts, and that longer-term and repeated borrowing from the IMF should somehow be discouraged.

Ways to resolve crises through explicit debt reduction are no less controversial. Two sets of problems currently occupy centre stage: bank restructuring in a large number of emerging market countries, and debt

reduction for an even larger number of very poor and highly indebted sovereigns. In both cases, two principles should apply. First, if the fundamental issue is who is to pay for losses already incurred, it should be those who contributed to such losses. Taxpayers should not bear the losses incurred by others, unless their governments also have creditor status. Of course, governments and the international financial institutions are the largest creditors of the poorest countries, and therefore bear a special responsibility for alleviating their debt burden. And second, crisis resolution measures must be accompanied by efforts to avoid future crises. Thus, banks must not only be restructured but made efficient and profitable. In the case of debt reduction for sovereigns, steps to ensure good governance and investment in the health and education of ordinary people are crucial. Debt reduction may in some cases be a necessary condition for crisis resolution, but it is by no means sufficient for ensuring future prosperity.

Experience now seems rich enough to hazard a few more suggestions about bank restructuring. Perhaps most important, private sector solutions should always be tried first. Even technically insolvent banks may have franchise values that could attract takeover interest, and sometimes even small capital injections can make a big difference. However, takeovers and mergers must make financial sense; size in itself is no guarantee of survival. And foreign banks should be part of the process, as they bring know-how and technology as well as capital. Also, there seems to be growing agreement that clear criteria for public sector intervention may be useful in avoiding forbearance, and that such intervention should be subject to certain principles. It should be timely, comprehensive, non-political, transparent and, above all, definitive.

Whether in the realm of promoting financial stability, or of managing and resolving crises, making recommendations and setting standards of good practice is the easy part. The actual implementation of good policies is much more difficult. There are many impediments to getting the right thing done: inertia, vested political and oligopolistic interests, often inadequate laws and judicial follow-through, and undertrained (and sometimes underpaid) public servants. These influences are at play in all countries, though most obviously in emerging market economies. Against these factors, incentives to do the right thing must be put in place: market discipline, surveillance, external technical and financial support and, above all, a heightened sense of self-interest. The benefits that derive from an efficient yet safe financial sector can hardly be overestimated. They are well worth the substantial efforts which might be needed to attain them.

Activities of the Bank

The recent series of financial crises, of unanticipated intensity and power of contagion, gave added impetus to the pursuit of financial stability and better management of risk at the institutional and market level. Central banks have been at the forefront of efforts and initiatives in this field. Given its basic mandate and long experience in promoting central bank cooperation, the BIS has provided a forum that is particularly well suited to supplying the analytical background and logistical support for discussions among central bankers and other regulators. Financial stability has been at the centre of many of these discussions. However, the sharpened focus on issues of systemic stability has not distracted central banks' attention from their other core task of monetary policy formulation and implementation. Reflecting the many interlinkages between financial and monetary stability, these themes have remained high on the agenda of the regular and ad hoc meetings organised and coordinated by the BIS.

Over the period under review, the Bank also participated actively in the work of various groupings involved in promoting sound financial activity. The most important forms of participation have been the provision of secretariat assistance to the Finance Ministers and central bank Governors (and their Deputies) of the Group of Ten countries and extensive involvement in the Financial Stability Forum.

The attractiveness of the BIS as a counterparty in the financial operations of central banks was also evident during the past financial year. New financial instruments were introduced and competitive pricing was applied to meet the increasingly sophisticated investment needs of the Bank's customers. Particularly during the transition to the new millennium, central bank customers valued the safety and liquidity of deposits with the BIS. The Bank also continued its traditional role of providing agency and trustee functions for a variety of financial transactions.

This chapter presents an overview of the main activities of the Bank during the past financial year. The reports referred to below, as well as the Bank's research and policy papers, are available on the BIS website (www.bis.org) or, on request, in hard copy.

1. Direct contributions of the BIS to international monetary and financial cooperation

As in previous years, the Bank contributed to central bank cooperation by organising regular meetings of central bank Governors and senior central bank officials, and by providing the secretariat for a number of committees

reporting to the central bank Governors of the G10 countries. A salient feature of last year's meetings was the growing involvement of central banks from systemically important emerging market economies. The BIS Representative Office for Asia and the Pacific has been an important catalyst in this respect. Another recent initiative, the Financial Stability Institute (FSI), has given momentum to the global dissemination of the standards and best practices of sound financial activity.

Regular consultations on monetary and financial issues

In the context of the bimonthly Board meetings of the BIS, central bank Governors met in three groupings: the G10 industrial countries; a broader grouping that brings together the G10 Governors with their counterparts from systemically important emerging markets; and a still more comprehensive group including the Governors of all BIS shareholding banks.

The focal point of the *meetings of the central bank Governors of the main industrial and emerging market economies* is the exchange of views and information on the current state of the global economy and financial markets, as well as the identification of potential medium-term vulnerabilities. In the year under review, the discussions confirmed and welcomed the improved and better balanced growth of the world economy, in conditions of generally well behaved prices. Nonetheless, Governors also voiced concern about the emergence of large imbalances in and between a number of economies, and examined the implications of, and policy responses to, possibly abrupt changes in the exchange rate relationships between the major currencies and/or a sharp correction in certain asset prices.

The economic and financial conjuncture also continued to figure prominently on the agenda of the *meetings of the Governors of the G10 countries*. In addition, the G10 Governors discussed a number of reports prepared by the various standing committees (see below). Several of these reports were approved for subsequent public release. The discussions also focused on issues of current central bank interest, including the proposed revision of the 1988 Basel Capital Accord, liquidity considerations related to the Year 2000 changeover, and the management and prevention of financial crises.

Meetings of the Governors of all BIS shareholding central banks during the past financial year reflected the wide range of topics currently preoccupying the monetary authorities. With a supporting role for public ratings in the new capital adequacy regulations being investigated, Governors explored the wider implications of such a development for the operations of rating agencies. Other financial stability topics included the potential for hedge funds to disrupt the functioning of financial markets, and the design and operation of financial safety nets. Still other topics discussed by the broader group of Governors were the conduct of monetary policy under managed floating, the strengthening of Asian financial systems, the impact of the euro on financial markets and portfolio choices, and the importance of central bank independence, accountability and transparency for good decision-making.

Among the other regular meetings organised by the Bank last year were those of the Gold and Foreign Exchange Committee of the G10 central banks.

The first year of the euro was a recurrent theme. In addition, central bank economists from the main industrial countries convened in late 1999 to discuss the growth of international financial markets and its implications for monetary and financial stability. A similar meeting in early 2000, in which emerging market central banks also participated, reviewed the current state of the world economy.

The Bank has continued to collect, analyse and disseminate information about the activities of central banks and the manner in which they carry them out. This work is performed under the aegis of the Central Bank Governance Steering Group composed of central bank Governors from a number of industrial and emerging market economies. The aim is to provide comparative factual information that will help central banks in their efforts to improve their operations. Last year, work was undertaken on the scope and nature of central bank mandates and the interconnection between autonomy, transparency and accountability.

The increasingly global character of the Bank's cooperative efforts resulted in a growing number of meetings mainly involving senior central bank officials from emerging market economies. During the period under review, two regional working parties were organised outside Basel to discuss strategic monetary policy issues. The first of these was co-hosted by the Banco Central de la República Argentina and focused on monetary policy challenges in Latin America. An Asian regional meeting was co-sponsored by the Bank of Korea. In addition, Deputy Governors from the most important emerging market economies convened in Basel for an in-depth discussion of debt and liquidity management. Finally, an important new initiative was the organisation of a meeting bringing together Deputy Governors of African central banks. The inaugural meeting dealt with financial sector development in Africa.

Promotion of financial stability through the permanent committees

Three committees established by the G10 central banks and supported by the BIS have made a significant contribution to the promotion of financial stability over the last quarter of a century. This issue has been considered from three different angles: institutional soundness (the Basel Committee on Banking Supervision), efficient market functioning (the Committee on the Global Financial System) and a key element of the financial system infrastructure (the Committee on Payment and Settlement Systems).

Given the diversity of their perspectives, the committees have been closely involved in various joint efforts in the area of financial stability in the past few years, most recently with regard to the Financial Stability Forum, in which each committee participates. Similarly, the Basel Committee and the CPSS, alongside the BIS itself, took part in the consultative process for the drafting of the IMF Code of Good Practices on Transparency in Monetary and Financial Policies, including the Supporting Document to the Code.

Basel Committee on Banking Supervision

Over the past year, the Basel Committee on Banking Supervision has launched several new initiatives that provide guidance on key banking supervisory issues

and highlight the role that effective banking supervision programmes play in the global financial system. Efforts to reform the 1988 Basel Capital Accord culminated in the release of a consultative paper in June 1999 setting out a proposed new capital framework. This is proving to be the largest and most resource-intensive initiative the Basel Committee has ever undertaken. Since its implementation, the 1988 Accord has been adopted in more than 130 countries throughout the world. The proposed new Capital Accord is designed to improve the way regulatory capital requirements reflect underlying risks and to better address the financial innovations that have occurred in recent years. The review is also aimed at rewarding the improvements made in risk measurement and control and providing incentives for further enhancements. While there is a continued focus on internationally active banks, the underlying principles should be suitable for application to banks of varying levels of complexity and sophistication in all countries.

The proposed capital framework consists of three essential and complementary pillars: minimum capital requirements, which seek to develop and expand on the standardised rules set forth in the 1988 Accord; supervisory review of an institution's capital adequacy and internal assessment process; and effective use of market discipline as a lever to strengthen disclosure and encourage safe and sound banking practices. With regard to the first pillar, the Committee has proposed two primary approaches: an enhanced standardised approach that builds on the foundations of the current Accord; and an internal ratings-based approach that would draw on banks' own assessment of credit risk. The Committee believes that this will be an important step in the effort to align capital charges more closely with underlying risk.

The release of these and other proposals in the June 1999 consultative paper has resulted in an extensive dialogue within and between the supervisory and financial communities around the world. The consultation period ended on 31 March 2000 and elicited more than 200 written comments. These comments will be instrumental in providing guidance as the Committee continues its deliberations and drafts a comprehensive set of proposals.

The Basel Committee plays a vital role in developing global standards for prudential regulation and supervision. A large number of countries have declared their intention to implement these standards – the Core Principles for Effective Banking Supervision. The standards are also used by the IMF and the World Bank as a basis for judging the effectiveness of banking supervision in individual countries. An important vehicle for the dissemination of the standards is the Basel Committee's Core Principles Liaison Group, in which the supervisors of many non-G10 countries are involved and in which the IMF and the World Bank also participate. In October 1999, the Committee released the Core Principles Methodology, which is designed to assist evaluators in assessing adherence to the Principles by defining essential and additional criteria for each Principle.

Other policy papers and consultative documents recently released by the Basel Committee have covered a wide range of topics including corporate governance (September 1999), credit risk (July 1999), highly leveraged institutions (January 1999 and January 2000), loan accounting (July 1999), transparency

and disclosure (July 1999 and January 2000), and the Year 2000 (September 1999 and March 2000). These papers are distributed as they are released, but the policy documents also become part of the Basel Committee Compendium, which is reissued early each year.

Progressively over recent years, the Committee has been actively expanding its links with supervisors in non-member countries with a view to strengthening prudential supervisory standards in all the major markets. As these contacts have developed, the Committee's pronouncements have become more and more influential as standards to which supervisory authorities, both in developed countries and in the emerging markets, aspire. Through its cooperation with non-G10 supervisors and its dissemination of topical information and guidance on important banking issues, the Basel Committee has contributed to strengthening financial systems in emerging markets. In addition, the Committee plays an active role in the provision of technical training and assistance, most recently through the Financial Stability Institute (see below). It also ensures efficient communication channels through maintenance and regular distribution of the "Bank Supervisors' Contact List" and through sponsorship and organisation of the biennial International Conference of Banking Supervisors (ICBS), which was initiated by the Basel Committee in 1979. The 11th ICBS will be held in Basel in September 2000 and will be co-hosted by the Swiss National Bank, the Swiss Federal Banking Commission and the BIS. This year's themes are (i) the review of the Capital Accord, and (ii) the financial industry in the 21st century. Attendance at the ICBS has doubled since its inception to an expected 300 delegates from 120 countries in September 2000.

Committee on the Global Financial System

During the period under review, the CGFS continued its monitoring of international financial markets and the assessment of specific issues related to the functioning of the global financial system. The Committee focuses on vulnerabilities in global financial markets, as well as in systemically important industrial and emerging market economies.

The specific topics addressed by the CGFS were: the design of liquid debt markets, market dynamics under stress, transparency in the information provided to market participants, and improvements in the BIS international banking statistics.

In May 1999, the Committee released a report on market liquidity containing research findings and selected policy implications. This was followed by the publication in October 1999 of a report with specific recommendations on how to develop deep and liquid government bond markets. The recommendations covered five areas: debt management strategies, taxation, transparency, trading rules and infrastructure, and the development of the repo, futures and options markets.

The CGFS devoted considerable attention to the issue of financial market dynamics under stress conditions. A study on the financial market events in the second half of 1998, published in October 1999, analysed the causes of the sudden increase in risk and liquidity premia and the speed with which markets

subsequently stabilised. The report focused on the mechanisms which led to the evaporation of market liquidity across a variety of segments and amplified movements in relative asset prices. These included: the inadequate assessment of counterparty risks, which permitted excessive use of leverage by some institutions; the widespread emulation of certain financing, trading and risk management strategies; the failure to incorporate in risk management systems the potential feedback effects of market liquidity on price setting; compensation schemes encouraging a short-term focus in decision-making; and the lack of market information about aggregate positions.

The CGFS also established a working group to investigate the current use of stress testing at large financial institutions, and to explore the possibility that an aggregation of financial firms' stress test results might produce information of use to the authorities and market participants. The group's report summarised current practices in stress testing, discussed some of its limitations and acknowledged the practical difficulties involved in aggregation. As a follow-up to this initiative, the CGFS decided to prepare a survey of the scenarios used by risk managers. Other work in progress in early 2000 included a study on the potential impact on financial market dynamics of the increasing use of collateral and one on the implications of electronic trading systems for the functioning of financial markets.

Last year, the CGFS took forward its cooperation with the IMF in developing standards of disclosure by national authorities. Following the joint production in 1998 of a disclosure template for foreign currency assets, the CGFS cooperated with the IMF on a more detailed document containing guidelines for the implementation of this template in the context of the IMF's Special Data Dissemination Standard. Moreover, over the course of the year, the CGFS debated issues related to transparency in the information provided by private market participants. A working group which brings together various international regulatory groupings is analysing ways of improving the disclosure of the risk profile of a broad spectrum of financial institutions.

Finally, the CGFS continued to play its traditional role of overseeing and considering improvements to the BIS banking statistics. In this regard, a redesign of the consolidated banking statistics was proposed, with greater emphasis on the notion of ultimate risk. The coverage of derivatives exposures and contingent liabilities will also be strengthened.

Committee on Payment and Settlement Systems

During the period under review, the CPSS continued its efforts to promote robust payment and settlement systems and thereby strengthen financial market infrastructures and reduce systemic risk. In the process, the Committee intensified its cooperation with other international groupings, particularly the International Organization of Securities Commissions (IOSCO), and associated an increasingly wide group of non-G10 central banks with its work.

In December 1999, the CPSS Task Force on Payment System Principles and Practices, comprising G10 central banks and an equal number of non-G10 central banks as well as the ECB, the IMF and the World Bank, published a consultative report on Core Principles for Systemically Important Payment

Systems. The report will be finalised in the course of 2000, taking account of comments received from interested parties.

A further major cooperative effort was the creation of the joint CPSS/IOSCO Task Force at the end of 1999. This task force will draw up recommendations for securities settlement systems and identify the minimum requirements that such systems should meet in order to minimise systemic risks at both the domestic and international level. Recommendations will also address issues raised by cross-border settlement activity, such as cross-border linkages between settlement systems.

The previous joint CPSS/IOSCO Working Group on Securities Lending published its report on Securities Lending Transactions: Market Development and Implications in July 1999. The report provided an overview of the dynamics of the securities lending market, including the underlying motivations for securities lending, and considered legal, regulatory, tax and accounting issues. It also addressed the risks still present in these transactions and the practices and procedures that might be adopted by market participants to manage and reduce them.

The CPSS has continued to monitor and encourage the development of private sector schemes to reduce foreign exchange settlement risk and has also encouraged central banks worldwide to adopt strategies to address this risk. To assist them in the formulation and implementation of such strategies, a “toolkit” of relevant materials has been produced, which has already been sent to the monetary authorities in over 50 countries. In addition, the CPSS has worked closely with the Basel Committee on Banking Supervision to develop guidance for supervisors on foreign exchange settlement risk.

To assess adequately the challenges posed by recent and expected innovations in the retail payments area, the Committee’s Working Group on Retail Payment Systems is carrying out a review of retail payment instruments and systems and related policy issues. In a report published in September 1999, the group identified and analysed recent and prospective trends in the use of retail payment instruments. A second report, to be published in mid-2000, will analyse clearing and settlement arrangements for retail payments. With respect to electronic money, the Committee, through its Secretariat at the BIS, has continued to monitor global developments of card-based and network-based products.

The Committee has continued to strengthen its cooperation with non-G10 central banks, particularly those from emerging market economies. Various individual central banks or regional central banking groups are preparing, with the support of the Committee’s Secretariat at the BIS, publications that describe the payment systems in their country or geographical area. The Committee has also continued to support payment system workshops and seminars organised by the BIS in cooperation with regional central banking groups. Following its first meeting outside Basel in May 1999, the Committee organised a workshop in Hong Kong for central banks and monetary authorities from the Asia-Pacific region that was attended by over 26 institutions. The proceedings were published in December 1999.

In other areas of cooperation, the Committee, through its Secretariat, has actively supported and provided guidance to the World Bank's western hemisphere payments and securities clearance and settlement initiative. In addition, the CPSS has cooperated with the Group of Computer Experts on operational risk issues and electronic authentication, and has participated in the work of the G10 Working Party on Financial Sector Consolidation.

Representative Office for Asia and the Pacific

Since its opening in July 1998, the Representative Office for Asia and the Pacific located in the Hong Kong Special Administrative Region has undertaken a number of activities to enhance information exchange and cooperation among central banks in the region, and between them and central banks in the rest of the world. These activities include: (i) hosting meetings for central bank officials from within and outside the region; (ii) contributing to the Bank's financial and economic research and analysis in the Asia-Pacific region; and (iii) promoting BIS banking business relationships with regional central bank customers.

During the period under review, the Office actively supported over a dozen meetings in the region. These included a meeting of central bank officials in June 1999 to discuss risk management in investing international reserves. A special Governors' Meeting in January 2000 in Singapore provided an opportunity to discuss the global financial situation and review the management of national debt and liquidity. In March, a meeting of internal auditors compared recent changes and ongoing developments in their area of interest.

The Office also arranged a number of meetings in the region in support of work of the Basel-based committees and has worked closely with regional groupings of central banks. In May 1999 the Office co-hosted a meeting of the CPSS and a regional workshop (see above). In September 1999 it hosted a regional meeting of the Joint Year 2000 Council which reviewed preparations for the date change. The Office also co-hosted a seminar of financial market authorities on credit risk. A number of subcommittees of the Basel Committee on Banking Supervision also met in Hong Kong over the last year. In addition, in November 1999 the Office hosted a Financial Stability Forum Task Force meeting addressing the implementation of standards. In March 2000, it participated in and provided analytic support to an EMEAP (Executive Meeting of East Asian and Pacific Central Banks) forum reviewing developments in foreign exchange and related markets. In addition to writing background notes for such meetings, the Office's economists have researched topics of interest to central banks in the region and elsewhere. The Office also contributed to the Financial Stability Forum's study of the impact of highly leveraged institutions on market dynamics.

In the banking area, the BIS has decided to establish a dealing room at the Office to better serve central banks in the region. Dealing from the Hong Kong office is expected to begin towards the end of 2000.

Financial Stability Institute

The FSI is a joint initiative of the Bank for International Settlements and the Basel Committee on Banking Supervision with a mandate to help improve

financial systems worldwide, initially through the strengthening of prudential supervision. Since the start of its programme in mid-1999, the FSI has concentrated on banking issues given that banking is the primary form of financial intermediation in many parts of the world. Securities and insurance supervision will gradually be added.

During its first year, the FSI has offered senior supervisors focused seminars on risk management, information technology, operational risk, fraud, consolidated supervision and corporate governance and has organised special seminars on capital adequacy and deposit insurance. In addition, the FSI has held a series of regional seminars and workshops on common supervisory problems and solutions. The programmes are based upon the Core Principles for Effective Banking Supervision and their accompanying Methodology, with emphasis on both the underlying concepts and techniques for implementation. Moreover, the FSI provided senior supervisors with relevant information on the latest supervisory developments and on key issues affecting banking supervision, from both official and market sources, to support efforts to enhance financial supervision and regulation.

The programmes have been designed to meet the needs of banking supervisors as expressed by 120 countries in an FSI survey conducted in spring 1999. Since then the FSI has organised 19 events with participation from 121 countries, resulting in a balanced global representation. Several of these events were held jointly with regional groups of supervisors. The FSI also presented its activities at conferences of regional development banks and annual meetings of regional groups of supervisors in order to reach out on relevant issues and to be in continuous contact with its worldwide audience.

The FSI coordinates activities and collaborates with other organisations providing programmes of assistance to financial supervisors. There is a strong working relationship with the Toronto International Leadership Centre for Financial Sector Supervision. Joint seminars with the Toronto Centre and also with IOSCO and the International Association of Insurance Supervisors have been scheduled.

The FSI's programme is designed to offer a variety of seminars and techniques in order to ascertain what is most relevant for the targeted countries. The IMF's Article IV consultations and the FSI's workshops on the assessment of progress give clear indications that many supervisory issues need to be addressed in greater detail. Good progress has been made but much more must be done to accomplish the challenging task of implementing effective supervisory systems in many countries.

2. BIS contributions to broader international financial cooperation

Group of Ten

Through both its participation as an observer institution and the provision of secretariat support, the BIS has traditionally contributed to the work undertaken by the G10 Finance Ministers and central bank Governors, their Deputies and the working parties set up under their auspices. During the

period under review, the G10 focused on improvements in the functioning of the markets for emerging market bonds and the contribution that changes in contracting practices could make. To promote better understanding of the implications of the use of collective action clauses in sovereign bond issues, the G10 engaged in a dialogue with the private sector. G10 countries also examined the possibility of using such clauses in their own bond issues.

One of the most notable changes in the financial landscape in many industrial countries in recent years has been an acceleration of the consolidation process. During the period under review, the G10 established a working party to analyse the forces driving these changes and to assess their broader implications. The working party will look at six issues: patterns of financial consolidation; causes of consolidation; the implications of consolidation for financial risk; the conduct of monetary policy; competition and credit flows; and payment and settlement systems. The working party is expected to report to the Ministers and Governors by the end of 2000.

Financial Stability Forum

The FSF was established by the G7 Finance Ministers and central bank Governors in February 1999 to promote international financial stability through enhanced information exchange and cooperation in financial supervision and surveillance. The Forum comprises national authorities responsible for financial stability in significant international financial centres, international financial institutions, international supervisory and regulatory bodies, and central bank expert groupings. It is chaired by Andrew Crockett, General Manager of the BIS, in a personal capacity. Detailed information about the Forum, including the reports it has endorsed, is available on its website (www.fsforum.org). The FSF website also contains a directory of training opportunities worldwide in the field of financial supervision; this is a joint project between the IMF, the World Bank and the BIS.

At its meeting in Singapore on 25–26 March 2000, the Forum endorsed the recommendations of three working groups set up in April last year to address concerns related to highly leveraged institutions (HLIs), capital flows and offshore financial centres (OFCs).

The working group on HLIs recommended a package of measures to address both systemic risk and market dynamics concerns arising from the activities of HLIs (especially hedge funds). The key measures include strengthened risk management practices by HLIs and their counterparties, enhanced regulatory oversight of HLI credit providers and greater public disclosure by HLIs and other counterparties. The group also considered, but did not recommend at this stage, direct regulation of currently unregulated HLIs. The Forum emphasised that direct regulation would be reconsidered if a review to be carried out by 2001 revealed that the implementation of the report's recommendations was not adequately addressing the concerns identified.

The working group on capital flows recommended that national authorities put in place a risk management framework for monitoring and assessing the risks faced by their economies as a result of large and volatile

capital flows. With the encouragement of the FSF, work is under way in the IMF and the World Bank to develop a set of guidelines for sound practice in sovereign debt and liquidity management. The group's report pointed to important ways in which national authorities and international bodies could support the process of enhancing risk management procedures in other sectors of the economy, for example by addressing gaps in available statistics, promoting greater transparency and eliminating laws and regulations that inadvertently encourage imprudent behaviour.

The working group on OFCs concluded that enhanced implementation of international standards by OFCs, particularly as regards regulation and supervision, disclosure and information-sharing, would help address concerns about some OFCs. The group's recommendations spell out a process for assessing OFCs' adherence to international supervisory standards, identify standards for priority implementation and assessment, and propose a menu of incentives that could be applied to enhance their adherence to international supervisory standards. The Forum stressed the urgency of making this framework operational. The working group also classified OFCs based on a survey it conducted of onshore and offshore supervisors and regulators to help set priorities for the standards assessment process recommended by the working group.

The Forum discussed how to foster the implementation of international standards to strengthen financial systems, based on a report prepared by a task force set up in September last year. The Forum endorsed a set of 12 key international standards particularly relevant to sound financial systems that countries should seek to implement with priority, depending on their circumstances. This set of key standards will be highlighted in the Forum's Compendium of Standards, which groups together internationally accepted standards relevant to sound financial systems and is available on the Forum's website.

The Forum also set up a working group to develop international guidance on deposit insurance arrangements, and undertook a study of developments in the insurance industry. Its discussions gave impetus to work being carried out elsewhere, including a review within the Joint Forum of the Basel Committee, IOSCO and IAIS, of the consistency of capital adequacy frameworks across banking, securities and insurance firms.

International Association of Insurance Supervisors

The BIS has hosted the Secretariat of the IAIS since the Secretariat's establishment in January 1998. Similar to the Basel Committee on Banking Supervision, but directed at insurance supervision, the IAIS aims to contribute to global financial stability by improving supervision of the insurance industry through the development of practical standards for insurance supervision, provision of mutual assistance and exchange of information on members' respective experiences.

So far, the IAIS has issued several international insurance supervisory principles, standards and guidance papers. The papers include the Insurance Core Principles, the Insurance Concordat, Principles for the Conduct of

Insurance Business, Guidance on Insurance Regulation and Supervision for Emerging Market Economies, a model Memorandum of Understanding, and Supervisory Standards on Licensing, On-Site Inspections, Derivatives and Asset Management. In collaboration with other international regulatory bodies (in the Joint Forum), the IAIS has also developed principles for the supervision of financial conglomerates. Moreover, the IAIS actively participates in the Financial Stability Forum.

The IAIS is currently formulating standards in the areas of solvency (capital adequacy) requirements, insurance accounting, reinsurance, market risk, electronic commerce, transparency, the coordination of supervision of international insurance groups, and the prevention of financial crime and regulatory abuse.

The IAIS has arranged several training programmes and provided training materials for insurance supervisors in order to help members comply with IAIS supervisory standards. In 1999 it organised regional training seminars for insurance supervisors in Asia (Singapore in February), Latin America (Argentina in April), central and eastern Europe (Poland in May), Africa (South Africa in July), all emerging markets (Tokyo in September) and offshore jurisdictions (Aruba in November).

Joint Year 2000 Council

The Joint Year 2000 Council, established in April 1998 by the Basel Committee, CPSS, IOSCO and IAIS, continued to take initiatives last year to ensure proper coordination of Year 2000 remediation efforts within the regulatory community as well as between public and private sector financial market organisations. At the beginning of 1999, there were indications of clear progress in making the worldwide financial market infrastructure ready for the Year 2000 changeover. Nevertheless, risks to market stability were still judged to be significant. These included uncertainty surrounding the preparedness of individual firms and markets, failures in the major support infrastructures, such as electricity, telecommunications and water, and potential overreaction by the general public. Therefore, the Council's attention shifted progressively to risk mitigation procedures, public communication and event management.

The Council intensified its communication efforts with the global regulatory community through various policy papers, newsletters, advisories and meetings. A second large-scale Round Table meeting in July 1999 provided a unique opportunity for senior policymakers and private sector executives to discuss strategies to minimise uncertainties and disturbances in markets during the transition to 2000.

In order to assist market authorities in preparing for the transition and understanding private sector expectations and strategy, the Council developed a monitoring strategy to help its sponsoring organisations and central banks in key financial centres identify critical issues and emerging developments.

Recognising that efficient cross-border communication among market authorities would be a vital ingredient for a smooth transition to 2000 in financial markets, the Council set up an information-sharing infrastructure

(Market Authorities Communication Services – MACS) in the second half of 1999 to meet the cross-border information needs of the regulatory community. The services provided by MACS included maintaining contact information for regulators in major markets, collecting and disseminating information on the operational status of core market components, and facilitating the organisation of conference calls. MACS, which was operated by the Council Secretariat at the BIS and relied on a dedicated website and teleconferencing facilities, eased communication amongst financial market authorities worldwide during the critical transition period. Overall, the Council's activities were effective in preparing financial market authorities for the changeover and in providing them with support during the transition to the new millennium.

3. Other areas of central bank cooperation

Cooperation with regional central bank groupings

The work of the BIS and the committees hosted by it has reflected both the accelerating speed of globalisation and the trend towards enhanced regional cooperation among central banks in various parts of the world. To foster closer interaction between central banks which share similar economic, financial and political challenges, the BIS and the Basel-based committees further intensified their contacts with various regional central banking groups in the period under review. These contacts included the AMF (Arab Monetary Fund), CEMLA (Centro de Estudios Monetarios Latinoamericanos), EMEAP (Executive Meeting of East Asian and Pacific Central Banks), GCC (Gulf Cooperation Council), SAARC (South Asian Association for Regional Cooperation), SADC (Southern African Development Community) and SEACEN (South-East Asian Central Banks).

As in previous years, BIS representatives were invited to address regional Governors' meetings as well as to participate in regional central bank workshops and seminars on specific topics relating to monetary and financial stability. The various regional groupings also assisted the BIS and the committees in disseminating standards and best practices to central banks in their regions by conducting an increasing number of joint meetings with Basel-based groups. Finally, as mentioned above, a number of BIS-sponsored meetings were organised in individual regions which brought together senior members of the various Basel-based committees with their counterparts from different areas of the world.

With respect to the training needs of the central banks of countries in transition, the BIS continued to contribute actively to the work of the Joint Vienna Institute (which is sponsored by the BIS, EBRD, IBRD, IMF, OECD and WTO). In close coordination with the FSI and various Basel-based committees, the BIS also organised several seminars for central banks and other financial market authorities.

Group of Experts on Monetary and Economic Data Bank Questions

Last year the number of participants in the BIS Data Bank, which is overseen by the Group of Experts on Monetary and Economic Data Bank Questions,

increased to 23 institutions. They comprise the central banks of the G10 and EU countries, including the ECB, and of Australia, New Zealand and Norway. Apart from ongoing efforts to increase the number of macro-economic and financial statistics reported and maintained in the Data Bank, attention centred last year on challenges and opportunities presented by the Year 2000. Moreover, under the guidance of a steering committee of central bank business and IT experts, a more modern and highly secure web-based technology was introduced for electronic data exchange with the BIS (known as Central Bank Information Services – CBIS). Finally, in cooperation with central banks and other international institutions, a new international generic statistical data exchange message for central banks was implemented (GESMES/CB). These various innovations will permit central banks to move away from mainframe connectivity for data exchange with the BIS, to implement improved communication facilities for the transmission of bulk data to Basel, and to achieve interactive web-based access to the BIS Data Bank. It should also allow participation in the Data Bank to be extended to central banks from key emerging market countries.

Group of Computer Experts

Discussions in the Group of Computer Experts focused on the efforts of central banks' IT departments to prepare for the Year 2000 date change, covering both technical issues and the organisational aspects of effective system and contingency support. The transition was successfully accomplished and some of the lessons learnt, for example in the area of contingency planning, are likely to be particularly valuable for the future.

During the period under review, the Group and its Working Party on Security Issues actively developed sound practices for central banks and considered measures to address the recurring threat of computer viruses. The Group also examined appropriate countermeasures to the risks posed by malicious mobile code and potential security weaknesses in widely used software components. Attention focused on the importance of effective electronic communications and, in this context, on the requirements of central banks for information exchange through extranet arrangements. Of particular interest in this area was central bank experience with the growing use of internet technologies, their integration with legacy environments and the securing of wide-area networks through the establishment of virtual private networks based on public key infrastructure technology.

4. Functions as Agent and Trustee

Trustee for international government loans

The Bank continued to perform its functions as Trustee for the funding bonds 1990–2010 of the Dawes and Young Loans during the year under review (for details on the Bank's functions in this regard see the 63rd Annual Report of June 1993). With regard to these funding bonds, the Deutsche Bundesbank as Paying Agent notified the Bank that in 1999 it had paid out approximately DM 7.2 million in respect of redemption and DM 7.1 million

in respect of interest. Redemption values and other details were published by the Bundesschuldenverwaltung (BSV – German Federal Debt Administration) in the Bundesanzeiger (Federal Gazette).

The Bank maintained its reservations regarding the application by the BSV of the exchange guarantee clause for the Young Loan (stated in detail in its 50th Annual Report of June 1980), which also extend to the funding bonds 1990–2010. The Bank has also drawn attention to the fact that the introduction of the euro does not entail any change with regard to these reservations.

Collateral Agent functions

Under a number of agreements, the BIS acts in the capacity of Collateral Agent to hold and invest collateral for the benefit of the holders of certain foreign currency denominated bonds issued by countries under external debt restructuring arrangements. Current Collateral Pledge agreements include those for Brazilian bonds (described in detail in the 64th Annual Report of June 1994), Peruvian bonds (see the 67th Annual Report of June 1997) and Côte d'Ivoire bonds (see the 68th Annual Report of June 1998).

5. Financial assistance to central banks

Within the framework of an international financial support programme put together for Brazil in late 1998, the BIS coordinated a Credit Facility for up to \$13.28 billion in favour of the Banco Central do Brasil. Funds made available by the BIS under this Facility were for the most part provided with the backing or guarantee of 19 participating central banks. A parallel Facility for up to \$1.25 billion was also granted by the Japanese monetary authorities. Drawings on both arrangements were made in conjunction with Brazilian purchases under an IMF Supplemental Reserve Facility.

A first drawing of \$4.15 billion was made on the BIS Facility on 18 December 1998. This drawing was partially renewed on 18 June 1999 for an amount of \$2.9 billion, which was fully repaid on 20 December 1999. A second drawing of \$4.5 billion occurred on 9 April 1999 and was partially renewed on 12 October 1999 for an amount of \$3.15 billion, which was fully repaid on 12 April 2000. Proportional amounts were made available in each case under the Japanese Facility. Both facilities have now been terminated.

As part of its normal business activity, the BIS also made various short-term advances to central banks during the course of the year on an uncollateralised as well as on a collateralised basis.

6. Operations of the Banking Department

At 31 March 2000 the Balance Sheet stood at 74,836 million gold francs, a record for the end of a financial year and a 13% increase over the total of 66,237 million registered 12 months previously. The modest overall appreciation of the US dollar between the beginning and the end of the financial year had a slightly negative impact (some 180 million gold francs) on the size of the Balance Sheet.

Reflecting in part customer concern about the liquidity of financial markets ahead of the millennium change, the BIS Balance Sheet expanded steadily last autumn to reach a maximum of 87,049 million gold francs at the end of December 1999 (this total fell a little short of the all-time record of 89,466 million registered in December 1998). As liquidity concerns diminished, this trend was largely reversed during the first quarter of 2000.

Liabilities

During the past financial year, the BIS took measures to further improve the quality of the financial services which it offers exclusively to central banks and international institutions. Pricing in certain areas was made significantly more competitive and a new collective investment vehicle was made available to customers. Subscriptions to US dollar Medium-Term Instruments (MTIs) continued to rise, encouraging the BIS to also issue MTIs in pounds sterling and euros.

On 31 March 2000 borrowed funds in gold and currencies (excluding repurchase operations) totalled 68,724 million gold francs, compared with 60,898 million at the end of the previous financial year. Gold deposits declined by 373 million gold francs to a total of 2,820 million, representing 4.1% of total borrowed funds against 5.2% a year earlier. Currency deposits, on the other hand, grew by a substantial 8,198 million gold francs over the period. The level of currency deposits can fluctuate significantly during the course of a year, reflecting the Bank's role as a safe haven in uncertain market conditions as well as the active use which central banks make of the BIS for liquidity management. Nonetheless, the daily average volume of borrowed currencies was 3.3% higher than in the previous financial year, a development assisted by the overall growth in global foreign exchange reserves as well as by more active marketing of a wider range of BIS financial products.

There was an increase of 5 billion gold francs (13.1%) in US dollar placements compared with the end of the 1998/99 financial year, and this accounted for the bulk of the expansion of 8.2 billion gold francs in borrowed currencies. The US dollar constituted 65.3% of total borrowed funds in currencies on 31 March 2000, little changed from 65.9% a year earlier. The share of the euro declined slightly over the same period from 20.2% to 19.4% of total borrowed funds in currencies.

Deposits by central banks rose from 54,016 million to 60,667 million gold francs, representing 92.1% of total borrowed funds in currencies at end-March 2000 against 93.6% the previous year. Funds placed by other depositors (mainly international institutions) amounted to 5,236 million gold francs, compared with 3,690 million on 31 March 1999.

Assets

The BIS conducts its operations in a highly prudent manner to ensure the safety of the deposits entrusted to it; credit risk, maturity transformation and exchange rate risk are rigorously monitored. A major objective in investing the Bank's assets is to preserve a high degree of liquidity in order to respond effectively to unforeseen cash requirements of customers.

Investments in currencies stood at 71,127 million gold francs on 31 March 2000, compared with 62,189 million a year earlier. These assets represent deposits with first-class institutions of international standing as well as short-term negotiable securities, including treasury bills. The Bank also grants advances to central banks: at end-March 2000 the total of such advances outstanding amounted to 1,941 million gold francs, the bulk of which represented funds extended under the multilateral Credit Facility coordinated by the BIS in favour of the Banco Central do Brasil and guaranteed by the participating central banks (see Section 5 above).

The Bank's assets in gold declined from 3,879 million to 3,506 million gold francs during the financial year, reflecting the decrease in gold deposits received.

Apart from its holdings of 192 tonnes of gold, the Bank's own funds are largely held in liquid securities issued or guaranteed by the governments of the major industrial countries as well as top-rated supranationals.

The Bank also makes use of certain derivative instruments, essentially with a view to managing its own funds more efficiently and hedging risks on its borrowed funds (see Note 8a to the Balance Sheet).

7. Net profits and their distribution

The accounts for the 70th financial year ended 31 March 2000 show a net profit of 307,824,257 gold francs, compared with 303,618,800 gold francs for the preceding financial year. Although the volume of the Bank's own funds increased, interest income from own funds investments fell slightly, because interest yields, while rising, were on average lower than in the previous year. Underlying income from borrowed funds operations also showed a slight decline as a result of a narrowing of margins on deposit intermediation, which more than offset the increased income from the higher average Balance Sheet total during the year. These declines were outweighed by significant book gains, which were realised as a number of central banks became more active in trading their portfolios of BIS instruments in an environment of rising interest rates. However, the rise in rates also led to realised capital losses on the Bank's investment portfolios and a reduced contribution from securities trading. Finally, the Board of Directors reduced further the amount deducted from profits and transferred to the provision for banking risks and other eventualities.

This year's result is shown after deduction of 68,731,981 gold francs in respect of costs of administration, an increase of 3% over the previous year. Most of this increase was attributable to the rise in the depreciation charge, which resulted from the Bank's higher investment in IT and other equipment, particularly for its new property in Basel. Costs of administration before depreciation increased by 10% in terms of Swiss francs, the currency in which most of the Bank's expenditure is incurred, and this was attributable to the Bank's expanding activities. The fall in value of the Swiss franc restricted the growth of costs of administration before depreciation expressed in gold francs to 1%.

On the basis of Article 51 of the Statutes, the Board of Directors recommends that the net profit of 307,824,257 gold francs be applied by the General Meeting in the following manner:

- (i) an amount of 54,658,243 gold francs in payment of a dividend of 340 Swiss francs per share (the dividend payable in respect of the 12,000 new shares which were issued in the second half of the financial year 1999/2000 being settled on a pro rata basis according to the relevant date of subscription);
- (ii) an amount of 50,633,203 gold francs to be transferred to the general reserve fund;
- (iii) an amount of 3,000,000 gold francs to be transferred to the special dividend reserve fund; and
- (iv) an amount of 199,532,811 gold francs, representing the remainder of the available net profit, to be transferred to the free reserve fund. This fund can be used by the Board of Directors for any purpose that is in conformity with the Statutes.

The Board of Directors has proposed that the above-mentioned dividend be paid on 1 July 2000 to the shareholders whose names are contained in the Bank's share register on 20 June 2000.

The Bank's accounts have been duly audited by PricewaterhouseCoopers AG, who have confirmed that the Balance Sheet and the Profit and Loss Account, including the notes thereon, give a true and fair view of the Bank's financial position at 31 March 2000 and of the results of its operations for the year then ended. Their report is to be found immediately following the accounts.

8. Increase in the number of shareholding central banks

With a view to further strengthening central bank cooperation, the Board of Directors decided on 8 November 1999 to invite the Banco Central de la República Argentina, the European Central Bank, Bank Indonesia, Bank Negara Malaysia and the Bank of Thailand to become members of the Bank and subscribe 3,000 shares each of the third tranche of the capital of the BIS. By the close of the financial year, which also marked the end of the subscription period, all except Bank Indonesia had taken up the Board's offer, thereby becoming members of the BIS.

The Board's decision on this sixth issue of the third tranche of the Bank's capital was taken in accordance with Articles 6 and 8(3) of the Statutes. The founder central banks represented on the Board waived their rights to the subscription in equal proportions of at least 55% of any additional shares (ie 8,250 of the 15,000 shares issued for subscription). It was decided that these 8,250 shares would be made available to new shareholding central banks.

At its meeting in November, the Board fixed the issue price until the end of the subscription period at 5,020 gold francs per share, equivalent to 1,475.317 grams of fine gold. As the Bank's shares are paid up to the extent of 25%, or 625 gold francs per share, the issue price of 5,020 gold francs included a premium of 4,395 gold francs per share. The subscribing central banks were given the option of settling the issue price for the new shares

either in gold or by paying, in a convertible currency acceptable to the BIS, the amount which would be necessary to purchase the same weight of gold on the market on the value date of the payment.

As a consequence of the subscription of 12,000 new shares of the third tranche of the Bank's capital by the close of the financial year, the number of the Bank's issued shares has risen from 517,165 to 529,165 shares, and the amount of the paid-up capital of the Bank appearing in the Balance Sheet at 31 March 2000 has increased by 7.5 million gold francs to stand at 330.7 million gold francs. The aggregate premium received from the subscribing central banks amounted to 52.7 million gold francs, of which 750,000 gold francs has been allocated to the legal reserve fund and 51,990,000 gold francs to the general reserve fund.

9. Amendment of the Bank's Statutes

In connection with recent developments relating to the Bank's membership, administration and immunities, an Extraordinary General Meeting was held on 8 November 1999 with a view to amending Articles 31, 55 and 56 of the Statutes. The changes to Article 31 of the Statutes provide for a reduction of the minimum number of Board meetings which must be held each year and expressly allow for decisions of the Board to be taken by means of teleconference or in writing. The purpose of the amendments to Article 55 of the Statutes is to redefine the Bank's immunities from jurisdiction and execution in the light of general practice in international law. Finally, amendments to the definitions contained in Article 56 of the Statutes were made to accommodate membership in the BIS of cross-border central banking systems.

10. Changes in the Board of Directors

Guy Quaden, Governor of the National Bank of Belgium, appointed Alfons Verplaetse as a member of the Board of Directors from April 1999 to February 2000, ie for the unexpired part of the mandate of Philippe Wilmès, who had previously decided to relinquish his membership. In February 2000, Mr Quaden reappointed Mr Verplaetse for a further term of three years until 28 February 2003.

Eddie George, Governor of the Bank of England, reappointed Lord Kingsdown as a member of the Board of Directors for a further period of three years expiring on 6 May 2002. Upon the proposal of Urban Bäckström, Chairman of the Board of Directors, Lord Kingsdown was also re-elected as Vice-Chairman of the Board for a period terminating on 6 May 2002.

On 1 September 1999, Ernst Welteke succeeded Hans Tietmeyer as President of the Deutsche Bundesbank and became an ex officio Director of the Board. To replace Helmut Schlesinger, who resigned as a member of the Board at end-August 1999, Mr Welteke appointed Mr Tietmeyer for the unexpired period of Mr Schlesinger's term of office until end-December 1999. From January 2000, Mr Tietmeyer was reappointed for a further period of three years expiring on 31 December 2002.

Antonio Fazio reappointed Vincenzo Desario as a member of the Board for a further period of three years ending on 7 November 2002.

There were two changes amongst the Alternates of ex officio Directors. In September 1999, Alan Greenspan, Chairman of the Board of Governors of the Federal Reserve System, appointed Edward W Kelley as his Alternate to succeed Alice M Rivlin. Mr Kelley was replaced in November 1999 by Roger W Ferguson.

The Bank was saddened to hear of the death of Bernard Clappier on 25 September 1999 at the age of 85. Mr Clappier – as Governor of the Bank of France – held the position of ex officio Director from 1974 to 1979, and of Vice-Chairman of the Board from 1983 to 1985 and from 1989 to 1991.

With deep regret, the Bank took note of the death of two former members of the Bank's senior management. Hans Heinrich Mandel died on 31 January 2000 at the age of 92; Mr Mandel was Head of the Banking Department from 1962 to 1972. Frédéric-Edouard Klein, who was appointed Legal Adviser in 1974 and who held this position until his retirement in 1986, died on 28 April 2000 at the age of 78.

Balance Sheet and Profit and Loss Account

at 31 March 2000

Balance Sheet at 31 March 2000

(in gold francs – see Note 2(a) to the Accounts)

1999	Assets	2000
	Gold	
2 801 471 476	Held in bars	2 265 425 772
<u>1 077 182 612</u>	Time deposits and advances	<u>1 240 342 623</u>
3 878 654 088		3 505 768 395
8 289 300	Cash on hand and on sight account with banks	11 382 465
7 314 049 359	Treasury bills	7 853 868 515
	Time deposits and advances in currencies	
21 413 790 799	Not exceeding 3 months	33 292 191 933
<u>11 009 185 563</u>	Over 3 months	<u>8 561 682 741</u>
32 422 976 362		41 853 874 674
276 014 585	Securities purchased under resale agreements	
	Not exceeding 3 months	1 268 088 300
	Government and other securities at term	
4 658 672 728	Not exceeding 3 months	4 295 857 750
<u>17 509 173 124</u>	Over 3 months	<u>15 844 081 595</u>
22 167 845 852		20 139 939 345
124 693 036	Land, buildings and equipment	120 715 280
44 554 468	Miscellaneous	82 028 737
<u>66 237 077 050</u>		<u>74 835 665 711</u>

After allocation of the year's net profit		Before allocation of the year's net profit	After allocation of the year's net profit
1999	Liabilities	2000	
323 228 125	Paid-up capital	330 728 125	330 728 125
2 605 641 703	Reserves	2 658 381 703	2 911 547 717
265 360 020	Valuation difference account	191 954 649	191 954 649
	Deposits (gold)		
2 775 616 571	Sight	2 240 270 927	2 240 270 927
233 632 571	Not exceeding 3 months	197 558 564	197 558 564
183 327 484	Over 3 months	382 379 118	382 379 118
<u>3 192 576 626</u>		<u>2 820 208 609</u>	<u>2 820 208 609</u>
	Deposits (currencies)		
3 005 634 040	Sight	3 423 192 926	3 423 192 926
51 674 794 423	Not exceeding 3 months	55 284 677 726	55 284 677 726
3 025 353 687	Over 3 months	7 195 784 903	7 195 784 903
<u>57 705 782 150</u>		<u>65 903 655 555</u>	<u>65 903 655 555</u>
	Securities sold under repurchase agreements		
121 452 148	Not exceeding 3 months	103 048 449	103 048 449
1 965 670 119	Miscellaneous	2 519 864 364	2 519 864 364
	Profit and Loss Account	307 824 257	
57 366 159	Dividend payable on 1 July		54 658 243
<u>66 237 077 050</u>		<u>74 835 665 711</u>	<u>74 835 665 711</u>

Profit and Loss Account

for the financial year ended 31 March 2000
(in gold francs)

	1999	2000
Interest and discount, and other operating income	4 050 134 509	4 222 389 680
Less: interest and discount expense	3 679 753 312	3 845 833 442
Net interest and other operating income	370 381 197	376 556 238
Less: costs of administration		
Board of Directors	1 330 121	1 177 264
Management and staff	40 819 397	40 619 621
Office and other expenses	18 596 527	19 363 373
Costs of administration before depreciation	60 746 045	61 160 258
Depreciation	6 016 352	7 571 723
	66 762 397	68 731 981
Net profit for the financial year	303 618 800	307 824 257
<p>The Board of Directors recommends to the Annual General Meeting that the net profit for the year ended 31 March 2000 be allocated in accordance with Article 51 of the Statutes as follows:</p>		
Dividend: 340 Swiss francs per share on 517 165 shares (1999: 320 Swiss francs)	57 366 159	54 444 185
on 12 000 newly issued shares (pro rata as from the value date of share subscription)	–	214 058
	57 366 159	54 658 243
	246 252 641	253 166 014
Transfer to general reserve fund	49 250 528	50 633 203
	197 002 113	202 532 811
Transfer to special dividend reserve fund	3 000 000	3 000 000
	194 002 113	199 532 811
Transfer to free reserve fund	194 002 113	199 532 811
	–	–

Movements in the Bank's paid-up capital and reserves

during the financial year ended 31 March 2000

(in gold francs)

I. Paid-up capital

	Number of shares	Gold francs
Shares of 2 500 gold francs, of which 25% is paid up:		
Balances at 31 March 1999 as per Balance Sheet	517 165	323 228 125
Shares issued during the financial year 1999/2000	12 000	7 500 000
Balances at 31 March 2000 as per Balance Sheet	529 165	330 728 125

II. Development of the reserve funds

	Legal reserve fund	General reserve fund	Special dividend reserve fund	Free reserve fund	Total of reserve funds
Balances at 31 March 1999 after allocation of net profit for the financial year 1998/99	32 322 813	1 156 441 190	65 530 055	1 351 347 645	2 605 641 703
Add: allocation of the premium received on the issue of 12 000 new shares	750 000	51 990 000	–	–	52 740 000
Balances at 31 March 2000 before allocation of net profit	33 072 813	1 208 431 190	65 530 055	1 351 347 645	2 658 381 703
Add: allocation of net profit for the financial year 1999/2000	–	50 633 203	3 000 000	199 532 811	253 166 014
Balances at 31 March 2000 as per Balance Sheet	33 072 813	1 259 064 393	68 530 055	1 550 880 456	2 911 547 717

III. Paid-up capital and reserve funds at 31 March 2000 (after allocation) were represented by:

	Paid-up capital	Reserve funds	Total of capital and reserves
Net assets in			
Gold	330 728 125	330 985 192	661 713 317
Currencies	–	2 580 562 525	2 580 562 525
Balances at 31 March 2000 as per Balance Sheet	330 728 125	2 911 547 717	3 242 275 842

Notes to the Accounts

for the financial year ended 31 March 2000

1. Introduction

The Bank for International Settlements (BIS) is an international financial institution which was established pursuant to the Hague Agreements of 20 January 1930. The headquarters of the Bank are in Basel, Switzerland. The objects of the BIS, as laid down in Article 3 of its Statutes, are to promote the cooperation of central banks, to provide additional facilities for international financial operations and to act as trustee or agent for international financial settlements. Forty-nine central banks are currently members of the Bank and exercise the rights of representation and voting at General Meetings in proportion to the number of BIS shares issued in their respective countries. The Board of Directors of the Bank is composed of the Governors of the central banks of Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States of America, as well as appointed directors from six of those countries.

The accounts for the financial year 1999/2000 are presented in a form approved by the Board of Directors pursuant to Article 49 of the Bank's Statutes.

2. Significant accounting policies

(a) Unit of account and currency translation

The unit of account of the Bank is the gold franc, which is equivalent to US\$ 1.94149... . Article 4 of the Bank's Statutes defines the gold franc (abbreviated to GF) as representing 0.29032258... grams of fine gold. Items representing claims on gold are translated into gold francs on the basis of their fine weight. Items denominated in US dollars are translated into gold francs on the basis of a gold price of US\$ 208 per ounce of fine gold (this price was established by the Bank's Board of Directors in 1979, resulting in the conversion factor of GF 1 = US\$ 1.94149...). Items denominated in other currencies are translated into US dollars at the spot market rates of exchange prevailing at the balance sheet date, with the resulting US dollar balances converted into gold francs accordingly.

Exchange differences arising on the translation of currency assets and liabilities denominated in currencies other than the US dollar are taken to the valuation difference account.

The net balance resulting from exchange differences on the translation of forward currency contracts and swaps is included under miscellaneous assets or liabilities.

(b) Basis of valuation and determination of profit

Except as otherwise stated, the accounts of the Bank are drawn up on the historical cost basis and income and expense items are recorded on the accruals basis. Profits and losses are determined on a monthly basis, translated into US dollars at the spot market rate of exchange prevailing at each month-end and translated into gold francs as set forth above; the monthly profits thus calculated are accumulated for the year.

Profits and losses arising on the sale of investment securities are taken to the securities equalisation account, which is incorporated within miscellaneous liabilities. Credit balances accumulated in this account are amortised to the Profit and Loss Account over a period corresponding to the average term to maturity of the Bank's investment portfolio; a net debit balance at the year-end would be charged immediately to the Profit and Loss Account.

(c) Gold

Gold assets and liabilities are stated on the basis of their fine weight.

(d) Treasury bills; Government and other securities at term

Treasury bills and Government and other securities at term are stated at cost, plus accrued interest where applicable, adjusted for the amortisation of premiums or discounts over the period to maturity; interest and discount income includes such amortisation.

(e) Time deposits and advances in currencies

Time deposits and advances are stated at their principal value plus accrued interest.

(f) Securities purchased under resale agreements

Securities acquired in connection with purchase and resale agreements are stated at the amount advanced to the counterparty plus accrued interest.

(g) Land, buildings and equipment

The Bank capitalises its land, buildings and equipment, which are recorded in Swiss francs, and depreciates its buildings and equipment on a straight line basis over their estimated useful lives, as follows:

Land – not depreciated.

Buildings – 50 years.

Building installations and machinery – 15 years.

Information technology equipment – 4 years.

Other equipment – 4 to 10 years.

(h) Valuation difference account

The valuation difference account records the effect of exchange differences as described in item (a) above; these valuation changes relate essentially to

that portion of the Bank's own funds held in currencies other than the US dollar.

(i) Deposits

Deposits are book claims on the Bank and are stated at their principal value plus accrued interest. Certain claims are issued at a discount to the value payable on the maturity of the deposit; in such cases the accounting treatment is analogous to that applied to dated securities held by the Bank (see item (d) above).

(j) Securities sold under repurchase agreements

Securities sold in connection with sale and repurchase agreements are stated at the amount received from the counterparty plus accrued interest.

(k) Provision for banking risks and other eventualities

The Board of Directors sets aside an amount each year from the Profit and Loss Account to the above provision, which is incorporated in miscellaneous liabilities.

Notes to the Balance Sheet

for the financial year ended 31 March 2000

1. Gold holdings

The following table shows the composition of the Bank's total gold holdings:

Assets	1999	2000
Gold bars held at central banks	2 801 471 476	2 265 425 772
Gold time deposits:		
Not exceeding 3 months	274 154 547	261 412 650
Over 3 months	803 028 065	978 929 973
	<u>3 878 654 088</u>	<u>3 505 768 395</u>

The Bank's own gold holdings at 31 March 2000 amounted to GF 661.7 million, equivalent to 192 tonnes of fine gold (1999: GF 662.0 million; 192 tonnes).

2. Treasury bills

The Bank's holdings were as follows:

	1999	2000
Book value	<u>7 314 049 359</u>	<u>7 853 868 515</u>

The market value of Treasury bills at 31 March 2000 was GF 7 854.1 million (1999: GF 7 319.2 million).

3. Government and other securities at term

The Bank's holdings were as follows:

	1999	2000
Book value	<u>22 167 845 852</u>	<u>20 139 939 345</u>

The market value of Government and other securities at term at 31 March 2000 was GF 20 120.0 million (1999: GF 22 331.4 million). The excess of book value over market value is covered by the provision for banking risks and other eventualities.

4. Land, buildings and equipment

	Land & buildings	IT & other equipment	Total
Cost:			
Opening balance at 1 April 1999	133 888 421	46 802 899	180 691 320
Capital expenditure	10 703 595	6 742 218	17 445 813
Exchange adjustments	-15 013 674	-5 328 015	-20 341 689
Cost at 31 March 2000	<u>129 578 342</u>	<u>48 217 102</u>	<u>177 795 444</u>
Depreciation:			
Accumulated depreciation at 1 April 1999	29 358 673	26 639 611	55 998 284
Depreciation charge for the current year	2 048 614	5 523 109	7 571 723
Exchange adjustments	-3 105 119	-3 384 724	-6 489 843
Accumulated depreciation at 31 March 2000	<u>28 302 168</u>	<u>28 777 996</u>	<u>57 080 164</u>
Net book value at 31 March 2000	<u>101 276 174</u>	<u>19 439 106</u>	<u>120 715 280</u>

The cost of the Bank's land at 31 March 2000 was GF 23 769 312 (1999: GF 26 610 450).

5. Capital

The Bank's share capital consists of:

	1999	2000
Authorised capital: 600 000 shares, each of 2 500 gold francs	1 500 000 000	1 500 000 000
Issued capital: 517 165 shares 529 165 shares of which 25% paid up	1 292 912 500 323 228 125	1 322 912 500 330 728 125

6. Reserves

The Bank's reserves (after allocation)
consist of:

	1999	2000
Legal reserve fund	32 322 813	33 072 813
General reserve fund	1 156 441 190	1 259 064 393
Special dividend reserve fund	65 530 055	68 530 055
Free reserve fund	<u>1 351 347 645</u>	<u>1 550 880 456</u>
	<u>2 605 641 703</u>	<u>2 911 547 717</u>

The yearly allocation to the various reserve funds is governed by Article 51 of the Bank's Statutes. The amounts transferred are shown in the table entitled "Development of the reserve funds".

7. Deposits

Gold deposits placed with the Bank originate entirely from central banks. The composition of currency deposits placed with the Bank was as follows:

	1999	2000
Central banks		
Sight	2 890 343 276	3 351 789 605
Not exceeding 3 months	48 100 323 078	50 119 848 005
Over 3 months	3 025 353 687	7 195 784 903
Other depositors		
Sight	115 290 764	71 403 321
Not exceeding 3 months	3 574 471 345	5 164 829 721
	57 705 782 150	65 903 655 555

8. Off-balance sheet items

(a) Derivatives

In the normal course of business, the Bank is party to off-balance sheet financial transactions including forward exchange contracts, currency and interest rate swaps, forward rate agreements, futures and options. These instruments are used to hedge the Bank's interest rate and currency exposure on assets and liabilities, and to manage the duration of its liquid assets. The Bank applies the same credit criteria in considering off-balance sheet commitments as it does for all other investments.

Notional principal amounts

(in millions of gold francs)	1999	2000
Exchange rate contracts:		
Foreign exchange swaps and forwards	10 470.4	9 291.3
Currency swaps	2 796.1	2 259.3
Interest rate contracts:		
Interest rate swaps	7 222.0	9 842.5
Forward rate agreements and futures	5 987.8	15 629.6

The notional or contracted principal amounts of the various derivatives reflect the degree to which the Bank is active in the respective markets but give no indication of the credit or market risk on the Bank's activities. The gross replacement cost of all contracts showing a profit at prevailing market prices on 31 March 2000 was GF 354.4 million (1999: GF 484.1 million).

(b) *Fiduciary transactions*

Fiduciary transactions are not included in the balance sheet, since they are effected on behalf of and at the risk of the Bank's customers, albeit in its own name.

(in millions of gold francs)	1999	2000
Nominal value of securities		
Held in safe custody	7 167.8	7 093.0
Gold held under earmark	671.2	666.1

(c) *Staff Pensions System and Savings Scheme*

The Bank operates a Pensions System and a Savings Scheme. The two funds are similar to trust funds, having no separate legal personality. Their assets are administered by the Bank for the sole benefit of current and former members of staff who participate in the two schemes. All payments under these schemes are charged to the fund concerned.

The Bank is committed to maintaining a minimum coverage ratio of 105% for both funds and remains ultimately liable for all benefits payable under the Pensions System and Savings Scheme. The Bank's share of the contributions in respect of current service is included in its costs of administration each month.

At 31 March 2000 the market value of the net assets of the Pension Fund was GF 266.7 million (1999: GF 295.5 million), representing a coverage ratio of 125% (1999: 127%) based on the latest annual actuarial value of the fund's obligations as at 30 September 1999. The market value of the net assets of the Savings Fund was GF 23.8 million at 31 March 2000 (1999: GF 25.8 million), representing a coverage ratio of 105% (1999: 109%) with reference to the liabilities of the scheme at that date. The most recent annual accounts of the Pension and Savings Funds relate to the year ended 30 September 1999.

Report of the Auditors

Report of the Auditors
to the Board of Directors and to the General Meeting
of the Bank for International Settlements, Basel

We have audited the accompanying Balance Sheet and Profit and Loss Account, including the notes thereto, of the Bank for International Settlements. The Balance Sheet and Profit and Loss Account have been prepared by the Management of the Bank in accordance with the Statutes and with the principles of valuation described under significant accounting policies in the notes. Our responsibility under the Statutes of the Bank is to form an independent opinion on the Balance Sheet and Profit and Loss Account based on our audit and to report our opinion to you.

Our audit included examining, on a test basis, evidence supporting the amounts in the Balance Sheet and Profit and Loss Account and related disclosures. We have received all the information and explanations which we have required to obtain assurance that the Balance Sheet and Profit and Loss Account are free of material misstatement, and believe that our audit provides a reasonable basis for our opinion.

In our opinion, the Balance Sheet and Profit and Loss Account, including the notes thereto, have been properly drawn up and give a true and fair view of the financial position of the Bank for International Settlements at 31 March 2000 and the results of its operations for the year then ended so as to comply with the Statutes of the Bank.

PricewaterhouseCoopers AG

Ralph R Reinertsen

Anthony W Travis

Basel, 27 April 2000

Five-year summary of the Balance Sheet

(in millions of gold francs)

Financial year ended 31 March	1996	1997	1998	1999	2000
Gold					
<i>Held in bars</i>	4 364.2	3 547.3	3 037.1	2 801.5	2 265.4
<i>Time deposits and advances</i>	637.3	956.7	1 122.4	1 077.2	1 240.4
	5 001.5	4 504.0	4 159.5	3 878.7	3 505.8
Cash on hand and on sight account with banks	9.8	384.4	7.8	8.3	11.4
Treasury bills	4 105.7	2 813.4	1 863.9	7 314.0	7 853.9
Time deposits and advances in currencies	37 328.1	42 355.1	34 862.2	32 423.0	41 853.9
Securities purchased under resale agreements	1 652.2	884.2	2 781.0	276.0	1 268.1
Government and other securities at term	10 488.1	15 651.1	18 517.1	22 167.9	20 139.9
Land, buildings and equipment	–	–	–	124.7	120.7
Miscellaneous assets	32.8	200.8	258.7	44.5	82.0
Total assets	58 618.2	66 793.0	62 450.2	66 237.1	74 835.7
Paid-up capital	295.7	323.2	323.2	323.2	330.7
Reserves <i>(after allocation of the net profit for the year)</i>					
<i>Legal reserve fund</i>	30.1	32.3	32.3	32.3	33.0
<i>General reserve fund</i>	803.3	974.9	1 016.3	1 156.4	1 259.1
<i>Special dividend reserve fund</i>	56.5	59.5	62.5	65.5	68.5
<i>Free reserve fund</i>	893.6	995.1	1 157.4	1 351.4	1 550.9
	1 783.5	2 061.8	2 268.5	2 605.6	2 911.5
Valuation difference account	373.5	351.1	247.2	265.4	192.0
Deposits					
<i>Gold</i>	4 245.0	3 836.4	3 473.7	3 192.6	2 820.2
<i>Currencies</i>	49 649.2	57 585.6	54 023.6	57 705.8	65 903.7
	53 894.2	61 422.0	57 497.3	60 898.4	68 723.9
Securities sold under repurchase agreements	376.6	674.8	30.7	121.5	103.0
Staff pension scheme	283.1	252.6	257.0	–	–
Miscellaneous liabilities	1 558.3	1 658.7	1 773.7	1 965.6	2 519.9
Dividend	53.3	48.8	52.6	57.4	54.7
Total liabilities	58 618.2	66 793.0	62 450.2	66 237.1	74 835.7

Five-year summary of the Profit and Loss Account

(in millions of gold francs)

Financial year ended 31 March	1996	1997	1998	1999	2000
Net interest and other operating income	254.3	263.8	314.9	370.4	376.6
Less: costs of administration					
<i>Board of Directors</i>	1.5	1.3	1.3	1.3	1.2
<i>Management and staff</i>	46.6	42.9	39.4	40.9	40.6
<i>Office and other expenses</i>	18.3	16.3	15.0	18.6	19.4
<i>Costs of administration before depreciation</i>	66.4	60.5	55.7	60.8	61.2
<i>Depreciation</i>	–	–	–	6.0	7.6
	66.4	60.5	55.7	66.8	68.8
Net operating surplus	187.9	203.3	259.2	303.6	307.8
Less: amounts transferred to					
<i>Provision for exceptional costs of administration</i>	3.5	3.0	–	–	–
<i>Provision for modernisation of premises and renewal of equipment</i>	3.1	6.0	–	–	–
	6.6	9.0	–	–	–
Net profit for the financial year	181.3	194.3	259.2	303.6	307.8
Dividend	53.3	48.8	52.6	57.4	54.7
	128.0	145.5	206.6	246.2	253.1
Transfer to general reserve fund	38.4	41.0	41.3	49.2	50.6
	89.6	104.5	165.3	197.0	202.5
Transfer to special dividend reserve fund	3.0	3.0	3.0	3.0	3.0
	86.6	101.5	162.3	194.0	199.5
Transfer to free reserve fund	86.6	101.5	162.3	194.0	199.5
	–	–	–	–	–

Board of Directors

Urban Bäckström, Stockholm
Chairman of the Board of Directors,
President of the Bank

Lord Kingsdown, London
Vice-Chairman

Vincenzo Desario, Rome
Antonio Fazio, Rome
Edward A J George, London
Alan Greenspan, Washington
Hervé Hannoun, Paris
Masaru Hayami, Tokyo
William J McDonough, New York
Hans Meyer, Zurich
Guy Quaden, Brussels
Gordon G Thiessen, Ottawa
Hans Tietmeyer, Frankfurt am Main
Jean-Claude Trichet, Paris
Alfons Verplaetse, Brussels
Nout H E M Wellink, Amsterdam
Ernst Welteke, Frankfurt am Main

Alternates

Roger W Ferguson or
Karen H Johnson, Washington
Jean-Pierre Patat or
Marc-Olivier Strauss-Kahn, Paris
Ian Plenderleith or
Clifford Smout, London
Jean-Jacques Rey or
Jan Smets, Brussels
Carlo Santini or
Stefano Lo Faso, Rome
Jürgen Stark or
Helmut Schieber, Frankfurt am Main

Senior Officials of the Bank

Andrew Crockett	General Manager
André Icard	Assistant General Manager
Gunter D Baer	Secretary General, Head of Department
William R White	Economic Adviser, Head of Monetary and Economic Department
Robert D Sleeper	Head of Banking Department
Marten de Boer	Manager, Special Adviser to the General Manager
Renato Filosa	Manager, Monetary and Economic Department
Mario Giovanoli	General Counsel, Manager
Guy Noppen	Manager, General Secretariat
Günter Pleines	Deputy Head of Banking Department