Bank for International Settlements

68th Annual Report

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Table of Contents

Page

The chapters of this Report went to press between 13th and 20th May 1998.

List of Graphs (*) and Tables

Page

Developments in the advanced industrial countries

Economic policies and developments in the rest of the world

Monetary policy in the advanced industrial countries

Page

Asset prices and the asset management industry

Exchange rates and capital flows

Financial intermediation and the Asian crisis

Page

International financial markets

68th Annual Report

submitted to the Annual General Meeting
of the Bank for International Settlements
held in Basle on 8th June 1998

Ladies and Gentlemen,

It is my pleasure to submit to you the 68th Annual Report of the Bank for International Settlements for the financial year which began on 1st April 1997 and ended on 31st March 1998.

The net profit for the year amounted to 259,160,599 gold francs, compared with 194,289,449 gold francs for the preceding year. Details of the results for the financial year 1997/98 may be found on page 182 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 52,549,459 gold francs in payment of a dividend of 300 Swiss francs per share. It may be noted that the dividend payable in respect of the 40 new shares which were issued in the course of the financial year will be settled on a pro rata basis according to the relevant date of subscription.

The Board further recommends that 41,322,228 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 162,288,912 gold francs – to the free reserve fund.

If these proposals are approved, the Bank's dividend for the financial year 1997/98 will be payable to shareholders on 1st July 1998.

Basle, 20th May 1998

ANDREW CROCKETT
General Manager

I. Introduction: distinguishing symptoms from causes

It is understandable that the recent Asian crisis has attracted enormous attention. Although some difficulties had been foreseen, the suddenness with which the crisis began, the relentless process of contagion across countries and the magnitude of the collapse in exchange rates and asset prices were all unexpected and unprecedented in recent times. And the shock was all the greater in view of the emerging consensus that Asia was the model for the future. Nor is it totally clear that the worst is over. While financial markets have stabilised somewhat, the full impact on domestic companies and the institutions that have lent to them remains to be seen, as do the full social costs. The domestic sources of the crisis are, with hindsight, all too obvious. They might and should have been avoided. Excessive credit growth and associated over-expansion of the capital stock, inadequately supervised banking systems, asset price bubbles and excessively rigid exchange rate regimes played roles of varying importance in all of the countries affected. Nevertheless, it would be a mistake to conclude that all the difficulties could have been easily avoided if only domestic policies had been somehow better. These events have occurred against a backdrop of international macroeconomic imbalances which contributed materially to developments in Asia and may yet have further manifestations.

An important external influence has been the divergence of the cyclical positions of the major industrial countries, which has lasted much longer than anticipated. Strong domestic demand in the United States has contrasted sharply with stagnant and falling domestic spending in Germany and Japan respectively (see Chapter II). In large part, the recent strength of the dollar against the Deutsche mark and the yen could be seen as simply a normal reflection of these cyclical divergences. Yet such divergences are themselves the result of unusual domestic circumstances. In the United States, unexpectedly weak domestic inflation has allowed the upswing to continue with only the mildest response from monetary policy. In Japan, continuing headwinds arising from difficulties within the financial sector have contributed to unprecedentedly low interest rates and a marked expansion of liquidity in the banking system. And in a number of European countries, rates have also remained near historically low levels.

Against this background, it is not surprising that capital inflows into other parts of Asia surged, with associated upward pressures on real exchange rates and growing trade deficits (see Chapter III). The strong rebound of the dollar from its 1995 lows, together with the strong competitive position of a resurgent China, exacerbated such pressures given the policy decision by many Asian countries to link their currencies to the dollar. In the end, markets responded by forcing large nominal depreciations, which were then compounded as domestic weaknesses became increasingly evident. In some respects, this process seems reminiscent of the ERM crises of the early 1990s when cyclical divergences, between a US economy facing difficulties in the financial sector and a Germany embarking upon reunification, led to currencies linked to the strengthening Deutsche mark being attacked one after the other.

At the same time as the cyclical positions of the major industrial countries have diverged, measured inflation has tended to converge at a relatively low level. In part this is because exchange rate movements have acted to shift demand away from countries facing stronger inflationary pressures to those with higher levels of excess capacity. However, this convergence also reflects deeper forces: in particular, a more resolute policy commitment to low inflation (discussed in Chapter IV), fiscal restraint in Europe and North America, the greater contestability of markets that are increasingly integrated internationally, and the cumulative effects of heavy investment in computer-based technologies and related industries. The Asian crisis, and its impact on world prices for electronic products, oil and other commodities, will reinforce these disinflationary trends even if the crisis spreads no further.

Whatever the source of these disinflationary pressures, financial markets worldwide have reacted to them, the Asian crisis apart, extremely favourably. Even the Asian crisis, which did precipitate a generalised flight to quality late last year, has more recently been viewed as having beneficial disinflationary side-effects for some industrial countries. Accordingly, prime-quality bond rates declined through much of last year, and particularly sharply in the first few months of 1998. Credit risk spreads, which also narrowed during 1997, widened as the Asian crisis unfolded but by April 1998 had reversed a large part of the increase. Indeed, international capital has again begun to flow back into a number of the countries that succeeded in rebuffing speculative attacks at the time of the Asian turmoil. And finally, after a setback in October, stock markets in most industrial countries recovered briskly to record levels (see Chapter V), indicating that the effects of lower inflation and interest rates still outweighed any investor concerns about potential risk exposure or a possible slowing of earnings growth in the future.

Part of this financial optimism rests on a certain set of beliefs which may or may not prove justified: that a "new era" of productivity and profit growth can already be discerned in recent US economic statistics; that a wave of restructuring in Europe will lead to the same result; and that rates of return in many emerging economies will continue to be high enough to compensate for associated risks. However, the strong price performance of financial assets may also reflect some underlying and potentially more worrisome developments. The first is a marked expansion in global liquidity, manifest in the recent acceleration of monetary growth in many countries and the atypically low level of interest rates referred to above. The second is the effects of ongoing change in the pattern of international financial intermediation. The financial services industry has clearly entered a period of sharply increased competition and some banks may have been tempted to engage in unusually risky business in an attempt to offset declining rates of return on intermediation. A related consideration is the continued growth in the size and international presence of non-bank institutional investors such as insurance companies, pension funds, mutual funds and the like.

The downward trend of nominal interest rates on high-quality assets may have predisposed both the owners and the managers of such funds to seek to maintain yields without adequate regard to the increased risks involved.

The Asian crisis, like the Mexican and Nordic crises before it, has underlined again the complementarity between macroeconomic stability and financial stability. Alone, neither is sufficient. Moreover, temporising with either greatly increases the risks of undermining the other as well, threatening potentially large multiplicative effects. It is true that the policy commitment to both fiscal restraint and price stability has received growing public support over the last two decades. Such objectives are now the norm in most industrial countries and are increasingly being accepted in developing economies as well. Yet a recognition of the need to strengthen banking and financial systems has emerged only more recently, and indeed still seems to be subject to strong political resistance in some countries, reflecting both nationalist sentiments and entrenched interests.

Over the last few years, the various committees of national experts which are supported by the BIS have focused increasing attention on issues having implications for the stability of the international financial system. In recognition of the globalisation of financial markets, representatives of emerging markets are playing a role of growing importance in bodies recommending international standards and practices. While implementation will certainly be made easier if those affected also have a part in drawing up the rules, no one should be under any illusions as to the magnitude of the problems still to be faced and the potential difficulties along the way. If the Asian crisis has given impetus to bringing forward these necessary initiatives for financial reform worldwide, then its heavy costs will have had at least one important offsetting benefit.

Contagion processes and policy responses

After the initial depreciation of the Thai baht in July 1997, a wave of speculative pressure engulfed a host of currencies and countries in the region. Again with hindsight, a dynamic of this kind should not have been unexpected once some trigger had set the process in motion. Many of the countries affected had a similar mix of exports to that of other countries in the region (see Chapters III and VI), and their prices (especially for electronic products) had recently been weakening. This implied a significant vulnerability to competitive depreciation. Many had recently received large inflows of short-term foreign capital. Moreover, many of these countries were suspected to have weak financial institutions, even if an almost universal lack of transparency made firm conclusions impossible.

In such an uncertain environment, it was all too easy for investors to lose confidence in the Asian region as a whole, and this tendency was reinforced by inadequate policy responses to the crises in those countries which were hardest hit (see Chapter VII). A particularly important factor was the large exposure of domestic residents to short-term foreign currency liabilities, perhaps to be expected after a decade of currency stability, and their increasingly frantic attempts to hedge their positions as the spreading crisis made losses look more probable. In the end, with even trade credit drying up in some cases, the events took on the character of a liquidity crisis or “bank run” of classic dimensions.

Broadly speaking, the severity of the damage done to date by higher interest rates and lower exchange rates has reflected the strength or weakness of the underlying fundamentals, in particular the relative strength of domestic banking systems. Indonesia has suffered the most and Singapore, Taiwan and Hong Kong the least. In the last case, the authorities managed to preserve the currency board link with the US dollar, albeit at the expense of sharply higher interest rates for some time and lower asset prices. The Hong Kong authorities, and many others, were aided materially by the repeated statements by the Chinese authorities that the renminbi would not be devalued. Such a development would have added a further vicious twist to the process of contagion both within and outside the region.

As it was, other parts of the world were already being affected to varying degrees. In Eastern Europe, the Czech koruna had to be devalued and an austerity package imposed around the time of the Thai crisis. The Russian rouble was also subject to speculation, and was successfully defended only through brutally high interest rates. The Brazilian currency and stock market also came under heavy pressure in the autumn of 1997, but recovered in response to sharp fiscal and monetary tightening. And many other countries, including Poland, Greece, Estonia and South Africa, experienced similar strains at one time or another. Subsequently, markets in Asia seemed to regain some stability; exchange rates strengthened in some cases and interest rates generally came down somewhat in consequence. It is, of course, too early to conclude that the crisis is over, particularly for countries with weak financial systems or whose real exchange rates have risen sharply in recent years.

The industrial countries have thus far been affected less by these events than some initially feared. In part this is because exports from Asia have not yet responded to lower exchange rates, but it must also be due to lower commodity prices and increased spending associated with the generally easier conditions prevailing in world financial markets over the last year or so. An important and worrying exception may be Japan, whose considerable domestic problems are already being exacerbated by the difficulties elsewhere in Asia and are contributing to them in turn.

After a promising start to 1997, Japanese domestic demand fell steeply following the sharp tightening of fiscal policy in April. Consumer and business confidence has been further eroded by a series of shocks: rising unemployment and fears of prospective industrial restructuring, the Asian crisis and a resulting decline in exports to the region, and the fragile state of the Japanese financial system. Credit rationing, particularly for smaller enterprises which commonly have no alternative source of funds, is already hampering the economy and the substantial exposure of Japanese banks to doubtful Asian debtors can only amplify such effects. The Japanese authorities have responded with two more stimulative economic packages, supplementing many other such efforts. However, in view of the earlier consensus on the national need to save more to deal with demographic pressures, and the temporary nature of the tax cuts made so far, the ultimate effects on spending remain to be seen. Liquidity in the banking system has also been increased in response to widening credit premia, particularly for Japanese financial institutions. After many years of delay, due to public antipathy to the use of public funds to support the financial sector, the authorities have finally begun to address this fundamental problem. In March 1998, ¥13 trillion was committed to the recapitalisation of banks and another ¥17 trillion to improving the deposit insurance system. The efficacy of the first of these measures remains unclear in that it is not yet known how "good" and "bad" banks are to be distinguished and how the latter are to be dealt with definitively.

In continental Europe, the repercussions of the Asian crisis are appreciably more difficult to identify. While a significant proportion of external European trade is done with Asia, export orders have not yet begun clearly to falter and effects related to foreign direct investment (Asian into Europe and European into Asia) thus far seem small. The fact that the exposure of European banks to Asia is almost as great as that of Japanese banks could be a source of concern, although this is somewhat mitigated by the better health of the former. Yet this shock does come at an inauspicious time for some countries at least. There may still be a lingering degree of vulnerability in France, although domestic demand has recently begun to replace exports as the primary source of growth. In Germany, there are still few signs of a similar process beginning, even though unemployment in the western part of the country has fallen more than had been predicted. Moreover, throughout Europe there has been persistent and significant fiscal tightening associated, in part at least, with efforts to meet the Maastricht criteria. And uncertainties about other government policies – the planned 35-hour working week in France and Italy, and social security and tax reform in Germany – continue to play a role.

Nevertheless, as the acceleration of growth during 1997 in continental Europe attests, there have also been some powerful forces for continued expansion. Not only have longer-term interest rates declined and stock markets risen, but European currencies have weakened against those of countries further ahead in the economic cycle. Indeed, as financial markets became increasingly convinced that the euro would be introduced on time and in a broad group of countries, the effect of convergence on asset prices in peripheral countries was little short of phenomenal. In some of these countries, the primary concern now is excessively easy financial conditions and the potential for more generalised inflationary pressures. Paradoxically, the Asian crisis may have served to heighten such fears if the Bundesbank's decision to eschew further monetary tightening was due, in part at least, to concerns about how these Asian developments might affect a still sluggish German economy.

The macroeconomic implications of the Asian crisis, both for the United States and for the United Kingdom, could on balance be interpreted as not unwelcome, especially given the more limited exposure of their domestic banks to affected countries. In both economies, strong growth of domestic demand has pushed output to, and potentially beyond, levels previously thought incompatible with non-accelerating inflation. To date there have been fewer than expected overt signs of inflation, perhaps owing partly to productivity increases, but some easing of external demand in the wake of the Asian crisis could be considered as insurance against such an eventuality. It is also the case in both economies that the rise in the external value of their currencies has played a significant role in keeping down measured inflation. Safe-haven considerations, linked to both

Asian and euro-related developments, may have given further impetus to these currency movements.

One implication of the associated good inflation performance is that interest rates in the United States, and to a lesser extent the United Kingdom, have been kept lower than would otherwise have been possible. A latent complication, however, is that widening trade deficits may eventually feed back to the exchange rate, implying that disinflationary gains from this source would also have to be surrendered. Indeed, the first indications of this might be seen when the dollar and pound sterling simply cease to rise. A further problem is that unusually low interest rates may help drive asset prices to levels which could prove unsustainable should inflationary pressures and interest rates eventually move upwards. Should either eventuality occur, even only with long lags, it would confirm what common sense would seem to suggest: the final effects of the Asian crisis will prove deleterious to all the parties involved, even if more harmful to some than to others. The obvious conclusion is that efforts directed to crisis prevention must continue to be a high priority for the public sector and the private sector alike.

Crisis prevention and crisis management

The fact that financial and exchange rate crises have continued to occur, and indeed have become more frequent in the 1990s, clearly indicates that preventive measures to date have been inadequate. Nevertheless, a great deal of work has been undertaken in recent years and considerable progress has been made in some areas. The Group of Seven summit communiqués from Halifax, Lyon and Denver gave significant impetus to such work, as have the documents issued after the Birmingham Summit.

If preventive action is to be taken to head off a crisis, market participants and regulatory authorities must first have adequate access to information likely to be useful in predicting such a crisis. Over the past year, an increasing number of countries have committed themselves to the IMF's Special Data Dissemination Standard. Moreover, agreement has already been reached on a number of useful changes (among them, broader country coverage, allocation according to ultimate risk and quarterly frequency) to the BIS semi-annual data recording the maturity, sectoral and nationality distribution of international bank lending. At the same time, it must be recognised that better information is a necessary, but in itself not sufficient, condition to prevent crisis. What is also needed is the vision to imagine crises and the will to act pre-emptively. The Asian experience makes this very clear. In spite of the ready availability of BIS data showing the increasing vulnerability of some of these countries to a sudden withdrawal of short-term international bank loans, the volume of these loans simply kept on rising (see Chapter VIII). Other evident problems, such as growing current account deficits and declining rates of return on investments, were similarly ignored. This illustrates that the use made of information is every bit as important as its mere availability.

A number of initiatives have already been taken to help prevent crises by strengthening financial systems, at both the national and the international level. A report on financial fragility in emerging markets, prepared jointly by representatives of emerging markets and the Group of Ten countries, set out a strategy for formulating sound principles and practices in this regard. Further, the report, which has been broadly endorsed by over 50 countries, made specific recommendations as to how the strategy might be implemented with the help of the international financial institutions and other bodies. Consistent with this, the Core Principles for Effective Banking Supervision, drawn up by the Basle Committee on Banking Supervision in conjunction with supervisors from a number of non-G-10 countries, were presented at the World Bank/IMF meetings in Hong Kong. The Core Principles have received wide acceptance from the international financial community and the Basle Committee is now working to promote effective implementation with the help of these two institutions among others. With a similar objective of strengthening the international financial system, the Committee on Payment and Settlement Systems and the Euro-currency Standing Committee, both of which meet at the BIS, published studies and recommendations covering a wide range of topics. These included foreign exchange settlement risk, settlement arrangements for securities and derivatives, market liquidity in times of stress and the Year 2000 problem among many others. The broad scope of these initiatives underlines the complexity of the issues being addressed, as well as the magnitude of the effort that will be required to reduce significantly current vulnerabilities in the international financial system.

The international community, led by the International Monetary Fund, sought to stabilise the situation in Asia with successively larger packages of liquidity support. These were combined not only with traditional demand-side conditionality and financial reform, but also with supply-side measures to support longer-term growth. In some cases, efforts were also made to encourage foreign banks to roll over or restructure the maturing liabilities of Asian borrowers. While some have questioned the appropriateness of certain of these policy initiatives, as well as the way in which they were to be implemented, the complexity and even novelty of the task being undertaken by the Fund should not be underestimated. Many of the countries affected did indeed have relatively sound fiscal policies but their exposure to a deterioration in market confidence on other grounds was nevertheless exceptionally great. Moreover, this was the first crisis in the postwar period featuring the combination of banks as the principal international creditors and private sector entities as the principal debtors. The principles of how to manage and resolve a crisis of this sort were not known in advance and, indeed, are still under discussion. In this area, as with crisis prevention, it will take some years before all the lessons have been understood and probably longer before they have all been accepted and applied. With this caveat clearly in mind, the Conclusion of this Annual Report nevertheless turns to some of the possible policy prescriptions suggested by the many surprising events of the period under review.

II. Developments in the advanced industrial countries

Highlights

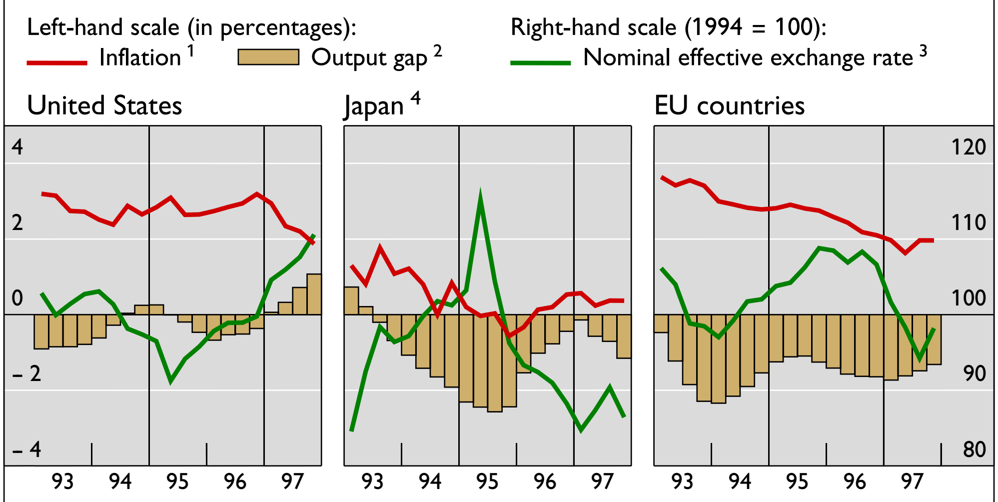
Contrary to expectations, the international divergences which have characterised much of the current cyclical recovery widened further last year. In the *United States* real output growth accelerated to almost 4%, even though most forecasters had predicted a gradual slowdown. In contrast, following rapid growth in early 1997, which mainly reflected purchases in advance of a rise in the consumption tax, the *Japanese* economy stagnated as the momentum of private domestic demand was too weak to compensate for the more restrictive fiscal stance. In the *European Union* countries, average growth in 1997 was higher than in 1996 but below most forecasts. Moreover, cyclical divergences within the region increased further, with the *United Kingdom* and several of the smaller countries moving well ahead of the larger continental countries.

These divergences in output growth, allied with an appreciation of the US dollar and the pound sterling against most other major currencies, were also reflected in widening external imbalances. Rapid import growth raised the US current account deficit to 2% of GDP. At the same time, the Japanese surplus, which had narrowed significantly in 1996, started to grow again as the economy stalled. The combined surplus of the EU countries, since 1996 the major counterpart to the US deficit, increased further last year, reaching historical highs in some countries. However, the potential exchange rate impact of larger current account imbalances was mitigated by capital flows. In particular, foreign direct investment rose substantially, driven by cross-border mergers and acquisitions and the continued search for more efficient production structures.

The differences in output growth and in initial cyclical conditions also led to widening divergences in labour and product markets. The US economy entered 1997 with little or no spare capacity and, in the course of the year, the rate of unemployment fell to 4.7%, the lowest rate for 24 years. In Japan, by contrast, the rate of unemployment increased to a new high. Continental Europe saw a further rise in labour market slack, although there were wide divergences between large and small countries; however, in most cases, unemployment was falling towards the end of the year. As a result of sluggish investment spending, the output gap was rather small in most continental countries.

Notwithstanding the cyclical differences, inflation rates converged rather than diverged both between major countries and regions and within the EU area. Indeed, while in 1992 the standard deviation of consumer price inflation in the industrialised countries was about 3¼%, it fell to only 1% last year; in the continental EU countries it dropped even more. One reason for this favourable outcome was that the currencies of the countries most advanced in the cycle tended to appreciate against those of countries still in the early phase of recovery

Inflation, output gaps and exchange rates



[1] Measured by changes in consumer prices over four quarters. [2] As a percentage of potential GDP; positive figures indicate excess demand. [3] For EU countries, composite index excluding the United Kingdom and intra-regional trade. [4] As from April 1997, inflation excludes the effect of the consumption tax increase.

Sources: OECD Economic Outlook, national data and BIS estimates. Graph II.1

(Graph II.1). Moreover, despite the late stage of the cycle and contrary to historical patterns, productivity growth in the US business sector accelerated last year while output per hour declined in Japan. Productivity growth also accelerated in *Germany* but, with the resulting decline in unit labour costs mostly absorbed in wider profit margins rather than lower prices, this did not impede the convergence of inflation within the EU area. Finally, convergence was also helped by the continuous fall in computer prices, which had a particularly large dampening influence on US inflation.

This combination of diverging product and labour market conditions and widening external imbalances, in association with converging wage and price developments, raises a number of questions. Some of these have to do with measurement issues, but others with the appropriate setting and coordination of policies.

Developments in the seven major economies

Among the major economies, the three furthest advanced in the business cycle all expanded at a pace well above their potential rates of growth. Whereas both the United States and the United Kingdom entered 1997 with limited or no spare capacity, the recovery in Canada was helped by the availability of unused resources. Another feature distinguishing the English-speaking countries from other major economies was that the expansion was driven by domestic demand whereas the external sector acted as a drag.

The exceptional performance of the US economy …

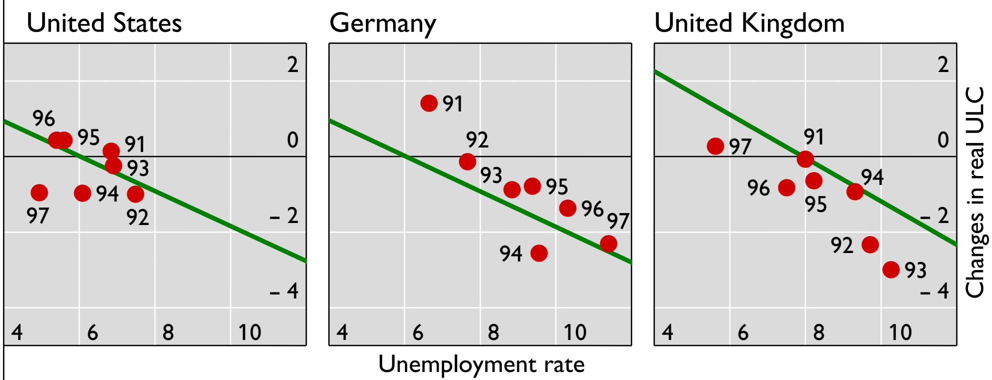
The performance of the *United States* economy last year was exceptional by international as well as historical standards. Despite rapid output and credit growth, macroeconomic imbalances (rising inflation, excess labour demand, unsustainable debt/income ratios, etc.) have been less in evidence than is usual at this stage of the cycle. Strong productivity gains have allowed real wages to grow along with profits. Consequently, the stance of monetary policy was left largely unchanged (see Chapter IV). However, even though fears of near-term inflationary pressures gradually dissipated, financial markets continued to act as a stabilising factor. Nominal interest rates did not decline by as much as either actual or expected rates of inflation so that real interest rates tended to increase. Another stabilising influence was the appreciation of the dollar, which appears to have had an unusually large dampening effect on import and consumer prices (see below). Despite the real appreciation of the dollar, the volume of merchandise exports grew by nearly 16%, raising the US share of world exports to a 20-year high. Although this performance is attributable in part to lower margins on exported goods, foreign producers seem to have reduced margins on their exports to the United States even more. Thus, terms-of-trade gains provided a further boost to disposable income.

… could point to an improvement in underlying fundamentals …

These developments raise the question of whether the level of output at which inflation starts to accelerate has increased compared with historical patterns. Some factors, such as the appreciation of the US dollar and the fall in import prices, are clearly of only a temporary nature, although they may continue to dampen inflation in the near term. Similarly, the acceleration of labour supply growth, as a result of stricter social welfare regulations and the slower growth of employee benefit costs, will only temporarily moderate the rise in labour costs. Other factors, however, could involve more permanent changes. First, the rate of capacity utilisation in manufacturing has remained below earlier peaks suggesting that rapid investment growth has significantly increased output potential; other sectors, where output is more difficult to measure, may have experienced a similar boost to output potential. Second, as in the United Kingdom, there are signs that wage behaviour has changed, possibly lowering the rate of unemployment at which inflation starts to accelerate (Graph II.2). Third, as the distribution of demand has shifted towards sectors where the "split" between real and nominal changes is more difficult to measure, the rate of inflation may be overstated and output growth, although not necessarily output capacity, understated. Fourth, the rapid growth of investment in information

Unemployment and changes in real unit labour costs *

In percentages



* Changes in unit labour costs in the business sector deflated by the GDP deflator. The historical relationship (green line) is estimated over the period 1980-97.

Sources: Bank of England Inflation Report, OECD Economic Outlook and national data. Graph II.2

The information industry in the US economy[1]			
	1992	1997	1992–97
	as a percentage of the total		annual percentage changes
Real output of information industry	0.8	4.0	40.6
Real investment in information equipment	5.6	20.1	38.7
Real net stock of information equipment[2]	1.7[3]	2.6[3]	24.5
Real GDP, excluding information industry	99.2	96.0	2.2
Real GDP, total	100.0	100.0	2.9
GDP deflator, excluding information industry	–	–	3.0
GDP deflator, total	–	–	2.4

[1] Based on 1992 prices. [2] Data refer to 1992 and 1995. [3] Net stock of computers and peripheral equipment relative to net stock of private non-residential capital.

Source: US Department of Commerce Survey of Current Business (and special submission). Table II.1

technology may have boosted the level of potential output and contributed to the large productivity gains recorded last year. As shown in Table II.1, the information technology sector has had a significant and positive impact on actual GDP growth and has also helped to dampen inflation over the past five years.

… though the magnitude remains uncertain

Nevertheless, the return on such investment as well as the contribution to output potential and total factor productivity remains uncertain. Even though the growth of technology investment has been very fast, a high obsolescence rate has kept the share of such equipment in the net capital stock of the private sector and thus the contribution to long-run growth rather low. Moreover, given the speed with which technologies are changing and investment has grown, firms may not yet have been able to adapt their organisation and production structures to reap the full benefits of the new technologies installed. Finally, it needs to be kept in mind that measurement errors associated with new technologies and productivity only influence growth potential to the extent that they affect final, and not just intermediate, output.

Strong rebound of demand in Canada …

Following rather sluggish growth in 1996, domestic demand in *Canada* strengthened significantly last year, reflecting the lagged effects of lower interest rates and higher confidence related to improving labour market conditions. With the general government budget moving into surplus, the restrictive stance of fiscal policy was also relaxed but, more importantly, the risk premium on Canadian bonds disappeared in response to the successful fiscal consolidation. As a result, private fixed investment increased by almost 15% and, with consumer confidence and household spending also strengthening, the household saving rate fell to the lowest level in the postwar period. Considering the buoyancy of the US economy, a relatively favourable competitive position and a large output gap, the resulting deterioration in net export growth in Canada was surprisingly large. Real imports expanded by 12½% as the composition of domestic demand shifted towards import-intensive components. Moreover, for the second consecutive year, the growth of exports was far below that of Canada's export markets. One reason for this may be that Canadian exporters have increased their margins; the rise in relative export prices has tended to exceed that of relative unit labour costs.

Household consumption also grew strongly in the *United Kingdom*, due in part to buoyant labour market conditions but also reflecting sizable wealth gains from the demutualisation of building societies and insurance companies. Together with higher property prices, wealth and disposable income gains also stimulated residential and non-residential investment. Moreover, as in the United States, disposable income was boosted by terms-of-trade gains, which facilitated a rise in real wages as well as profits without generating inflationary pressures. However, there are also signs that wage behaviour has moderated as the rate of unemployment at which wage earners resist a fall in the share of wages seems to have declined compared with the 1980s (Graph II.2). In contrast to Canada, the drag from net exports remained modest for most of the year, as exporters reacted to the appreciation of the currency by reducing margins to preserve market shares. While the real effective exchange rate, measured by relative unit labour costs, has appreciated by 26% since 1995, the appreciation is only 12% when measured by relative export prices.

… and in the United Kingdom

Turning to continental Europe, output growth in *Germany* remained slightly below the predicted rate for 1997. In part, this reflected the unexpectedly deep slump in the construction sector whose repercussions on activity were most pronounced in the eastern Länder. Moreover, despite fiscal transfers amounting to 4% of GDP per year since reunification, self-sustaining forces of growth have not yet emerged in the eastern Länder. Per capita income has remained below 60% of that of western Germany and, due to a high level of real unit labour costs, the service sectors in the eastern Länder are not sufficiently competitive and flexible to absorb labour released from the construction sector. As a consequence, the rate of unemployment rose to almost 20% last year.

Uneven recovery in Germany …

Labour market conditions also deteriorated in western Germany as employment declined for the third consecutive year against a background of continued efforts by German enterprises to reduce costs and improve efficiency. As a result, the rate of productivity growth accelerated and unit labour costs declined, both in absolute terms and relative to Germany's trading partners. However, despite a consequent improvement in export growth and a rising profit share, the pick-up in business fixed investment was fairly modest, possibly reflecting low, albeit rising, confidence as a reaction to inadequate structural reforms. Low confidence characterised the household sector as well and the expected rebound in household spending did not materialise.

… with falling labour demand and sluggish household spending

Sluggish growth of household spending was also a main cause of the relatively weak expansion in *France* during the first half of 1997. In contrast, the second half saw a shift from net exports to domestic demand as the main engine of growth. In response to lower interest rates, residential investment started to pick up and consumption also strengthened. However, as in Germany, business fixed investment was rather weak despite favourable profit conditions. One reason may have been a redistribution of taxes from labour to capital. In addition, uncertainty about the cost effects of the 35-hour working week to take effect from the year 2000 may have held back investment.

Shift towards domestic demand both in France …

In *Italy*, the recovery that started in late 1996 gained further momentum last year despite certain "headwinds". First, mainly to satisfy the Maastricht criterion both the measured and the structural fiscal deficits were reduced by an

… and in Italy despite "headwinds"

unprecedented 4% of GDP, amounting to almost half of the consolidation achieved since 1991. Second, even though nominal short and long-term interest rates declined in response to fiscal consolidation and lower inflation, real rates remained relatively high, which may have held back residential construction and business investment. Third, despite moderate wage growth, exporters were faced with a real appreciation of the lira and appear to have cut margins to maintain market shares. Consequently, household spending was the main source of growth in Italy last year. However, this was mainly the result of special incentives for purchases of automobiles and a further fall in the saving rate.

Japan moving to the edge of recession

While growth in *Japan* had been the highest among the major countries in 1996, and output was still expanding briskly during the first quarter of 1997, activity stagnated for the rest of the year. One reason for the slowdown was the marked fiscal tightening from 1st April. With direct and indirect taxes raised, and expenditure on public works sharply cut, the structural deficit was reduced by 1½% of GDP. Moreover, the self-sustaining forces of the private sector turned out to be weaker than initially foreseen, suggesting also that the various fiscal stimuli introduced during 1992–95 may in fact have been more effective than so far assumed. Indeed, as the fiscal stimuli were removed, household spending as well as residential construction and business fixed investment all fell sharply while the level of excess inventories rose. Later in the year, as the economy moved to the edge of, if not into, recession and equity and property prices continued to fall, banks' large stocks of bad loans from the earlier period of volatile asset prices increasingly constrained their ability and willingness to lend. In particular, small and medium-sized companies, which are more dependent on the domestic economy and less able to raise external funds in capital markets than the larger export-oriented enterprises, were severely affected by the tightening of credit standards and led the downturn in business investment spending. Massive liquidity injections by the Bank of Japan and various fiscal measures to strengthen the financial system (see Chapter IV) were only partially successful in alleviating these circumstances. Finally, as labour market conditions weakened and the adverse effects of the crisis in other Asian countries began to be felt, household and business confidence fell. Combined with increasing uncertainty about the health of the financial system, this further exacerbated the deflationary forces in the economy. All in all, domestic demand declined by almost 2% in the course of last year and only a marked rise in net exports prevented an equally large decline in real GDP.

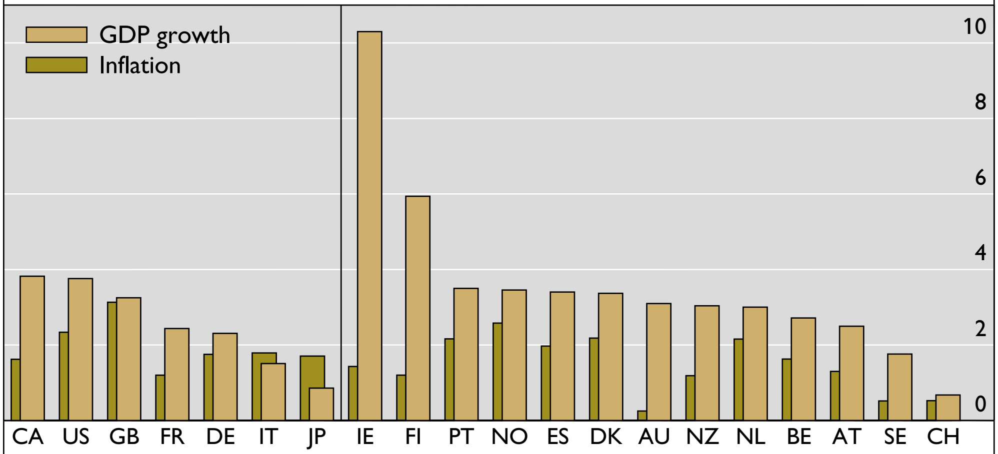
Developments in other industrial countries

Strong performance in smaller European countries

One remarkable feature of developments in the smaller industrial countries last year was that not only did output grow much faster than in the Group of Seven countries but inflation was actually lower (Graph II.3). This was particularly noticeable in Europe, where several smaller countries entered 1997 with relatively low real exchange rates and were able to combine strong domestic demand growth with positive growth of net exports. On balance, smaller countries have also gone further than the larger countries in terms of deregulating labour and product markets and, in several cases, incomes policies

Real GDP growth and consumer price inflation in 1997 *

In percentages



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

* Annual averages; national definitions. The standard deviations (across all countries) for GDP growth and inflation are 2.00 and 0.72 respectively.

Source: National data. Graph II.3

and/or exchange rate commitments have helped to keep inflation low. In addition, the smaller countries seem to have benefited more from the convergence of interest rates than some of the larger ones. However, in a few countries with exceptionally rapid demand growth, the convergence of nominal interest rates seemed clearly at odds with the monetary conditions required to reduce the risk of higher near-term inflation (see Chapter IV).

Favourable supply-side developments in Ireland …

Buoyant supply-side developments have been particularly evident in *Ireland*, where output growth has averaged more than 9½% per year since 1994. Moreover, despite a widening productivity differential between export-oriented "high-tech" industries and the non-tradable sectors and emerging shortages of skilled labour, nominal wage growth has remained low. Nonetheless, with an expansionary fiscal policy and rapid asset price and domestic credit growth, there is a potential risk of overheating. To reduce this risk, the Irish pound was revalued within the ERM early this year. A similarly buoyant high-tech sector was observed in *Finland* and, allied with a brisk recovery of the forestry sector and growing confidence in the macro policies being pursued, this led to a 6% expansion of GDP last year. Investment spending and exports were particularly strong. Furthermore, households seem to have reduced saving in step with fiscal consolidation and the decline in unemployment associated with the spread of the recovery to the labour-intensive service sectors. However, at just below 13%, the rate of unemployment remains much higher than in most other countries.

… and Finland

Also strong growth in Norway …

Underpinned by the oil and gas sector and a broad incomes policy agreement, the *Norwegian* economy has recorded average output growth of 4½% per year since 1993. Even though short-term interest rates have been kept low to prevent upward pressure on the exchange rate from adversely affecting the competitive position of traditional industries, the average rate of inflation has been limited to around 2½%. However, with fiscal policy easing, the labour market is tightening and wage growth is accelerating. In *Iceland*, investment in power-related industries and a marked rise in household spending were the main sources of growth last year. Tax-based incomes policies, allied with some appreciation of the exchange rate, prevented higher wage growth from pushing up price inflation. *Denmark* has also enjoyed rapid output growth in recent years, though mainly reflecting buoyant household spending induced by higher house prices and improvements in the labour market. Fiscal consolidation, by helping to narrow the interest differential vis-à-vis Germany, has stimulated interest-sensitive demand components. However, because such components tend to be import-intensive, net exports as well as the external surplus declined.

… Iceland and Denmark

Demand growth in the *Netherlands* has been stimulated by wealth gains associated with higher house prices and strong employment growth, the latter a result of supply-promoting labour market policies. It further appears that moderate nominal and real wage growth, together with a rising profit share and low interest rates, has encouraged capital-widening business investment, with a likely positive effect on output potential. Very similar factors seem to have been at work in *Spain*, which last year recorded its best performance this decade. Output growth accelerated to 3½% while inflation fell below the central bank's target of 2½%. In part, this was because lower interest costs helped to offset a rise in real unit labour costs and prevented a profit squeeze. Backed by labour and product market reforms, employment expanded by 3%. Moreover, since Spain entered 1997 in a relatively favourable competitive position, net exports contributed positively to output as well as the external balance. In contrast, the contribution of net exports to growth in *Portugal* fell to a negative 2½% of GDP, even though incomes policies helped to moderate nominal wage increases. Infrastructure investment was a principal source of domestic demand growth but other investment components strengthened too as interest rates declined. *Greece* also recorded a fall in net exports as exchange-rate-based stabilisation policies seem to have received little support in the labour market and relative unit labour costs increased. Partly as a result, the exchange rate became subject to strong downward pressure early this year, a pressure that only eased after Greece became a member of the ERM and the drachma was devalued by 12.3% against the ECU.

Broad-based recovery in the Netherlands and Spain …

… while net exports decline in Portugal and Greece

The four remaining Western European countries all experienced a strengthening of economic activity last year but growth remained below the European average. Another common feature was that net exports assisted the upturn, whereas there were major differences regarding the role of domestic demand. *Belgium* benefited from buoyant business fixed investment and a recovery in household spending, the latter reflecting real wage growth following the expiration of the real wage freeze. In *Austria*, rapid export growth, notably to Eastern Europe, was a major source of stimulus, while consumption was sluggish as a result of higher taxes and stagnating real disposable income. In *Sweden*, by contrast, consumption growth accelerated. Having regained confidence, households responded to the continued fall in employment, partly due to relatively high wage growth, by reducing saving. Business investment spending was also strong whereas residential investment collapsed following the

Strengthening economic activity in Belgium, Austria and Sweden …

termination of temporary tax rebates. In *Switzerland*, the stagnation since 1991 seems to have ended in mid-1997 as exports picked up in response to the depreciation of the exchange rate. Although labour demand and real household disposable income continued to decline, consumption growth was positive because, as in Sweden, households cut back saving. In fact, the household saving rate in Switzerland has fallen from over 10% to about 7% during this decade.

… while Switzerland recovers from prolonged stagnation

Australia, in contrast, has seen a marked improvement in household saving in recent years, possibly reflecting the effects of a gradual build-up in private pension funds. Nonetheless, household consumption and a turnaround in residential investment were among the principal sources of growth in 1997. As interest rates were lowered in step with falling inflation and firms' cash flows improved, business fixed investment also picked up. However, under the influence of falling demand in Asian countries, and weakening commodity markets, net export growth turned negative. In *New Zealand*, output growth slowed during the first half of 1997, reflecting the lagged effects of tighter monetary policy and a consequent appreciation of the exchange rate. Monetary conditions have subsequently been eased in response to declining inflation and fears of larger repercussions from the crisis in Asia.

Asian crisis affects growth in Australia and New Zealand

The macroeconomic policy mix

Ongoing shift in the policy mix

The developments discussed above have been strongly influenced by an ongoing shift in the mix of fiscal and monetary policies, which was taken a significant step further last year. Fiscal policy was tightened considerably in virtually all countries. Indeed, for the industrial countries as a group, structural deficits were cut by more than 1% of GDP. With the exception of Japan, all countries recorded surpluses on their primary balances. Against this background, monetary policy was generally eased in 1997 and in several countries depreciating exchange rates reinforced the relaxation of monetary conditions.

Significant fiscal consolidation …

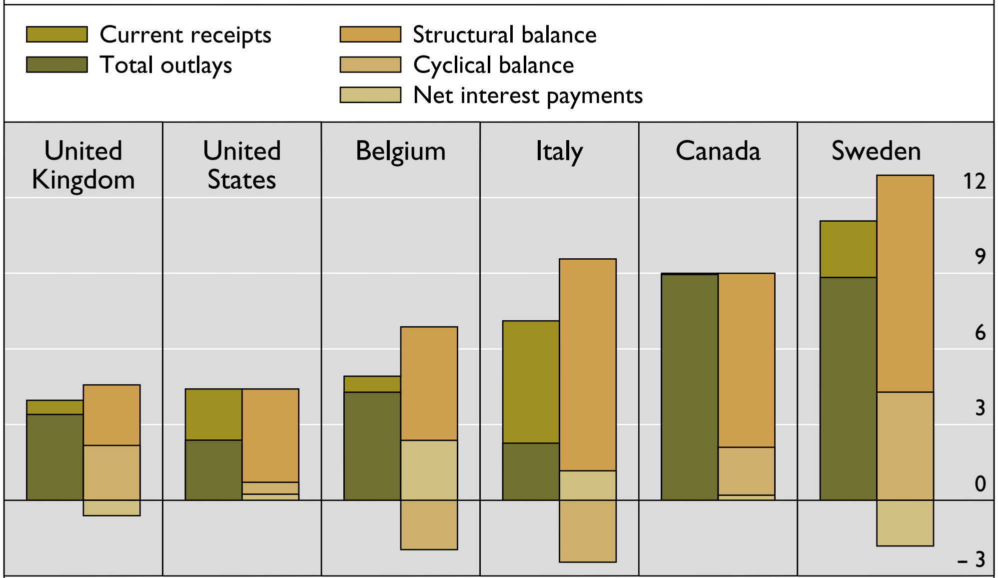
Seen in a slightly longer perspective, fiscal deficits have been reduced by over 3% of GDP since their peak in 1992–93 and in some countries by substantially more. For instance, the general government borrowing requirement has been reduced by more than 11% of GDP in Sweden and by 7–10% in Italy, Canada, Finland and Greece. The United Kingdom has also seen a marked strengthening of the budget balance. To consolidate the gains, the UK Government recently proposed a "Code for Fiscal Stability" which would limit future deficits to government investment and strengthen accountability.

… mostly reflecting expenditure cuts

Determined consolidation policies have been followed in all countries and discretionary measures account for a major part of the deficit reductions achieved. Nonetheless, there are some differences with respect to the sources of fiscal improvements. As Graph II.4 shows, expenditure cuts have figured prominently in most cases. However, the improvement in Italy is mostly due to higher taxes and in the United States it is evenly split between higher taxes and lower expenditure. Except in Italy and Belgium, net interest payments have fallen only little or have actually increased, suggesting that fixed rate securities account for a sizable part of governments' debt financing but also reflecting the influence of large deficits in some countries.

Changes in general government balances,* by component

In percentage points



* Between the peak post-1990 deficit and 1997, as a percentage of GDP.
Source: OECD Economic Outlook. Graph II.4

Widespread decline in household saving …

In spite of the fiscal consolidation achieved, the rise in total domestic saving has been relatively small. In fact, in several countries household saving rates have declined in step with lower fiscal deficits (Graph II.5), most notably in Canada and Sweden. As discussed below, one reason for this decline might be the marked rise in equity prices and resulting wealth gains seen in recent years. The shift in the distribution of factor income in favour of profits may also have raised company saving at the expense of household saving (Table II.2).

… raises concerns about the burden of future pension and health care obligations

The failure of domestic saving to rise in step with fiscal consolidation may also have prevented a more substantial decline in long-term interest rates. Another reason for continued high real interest rates is probably that government debt/GDP ratios have remained high (Graph II.6) and have actually increased in countries with relatively slow GDP growth this decade. With the ageing of populations in the industrial countries and the approaching retirement of the

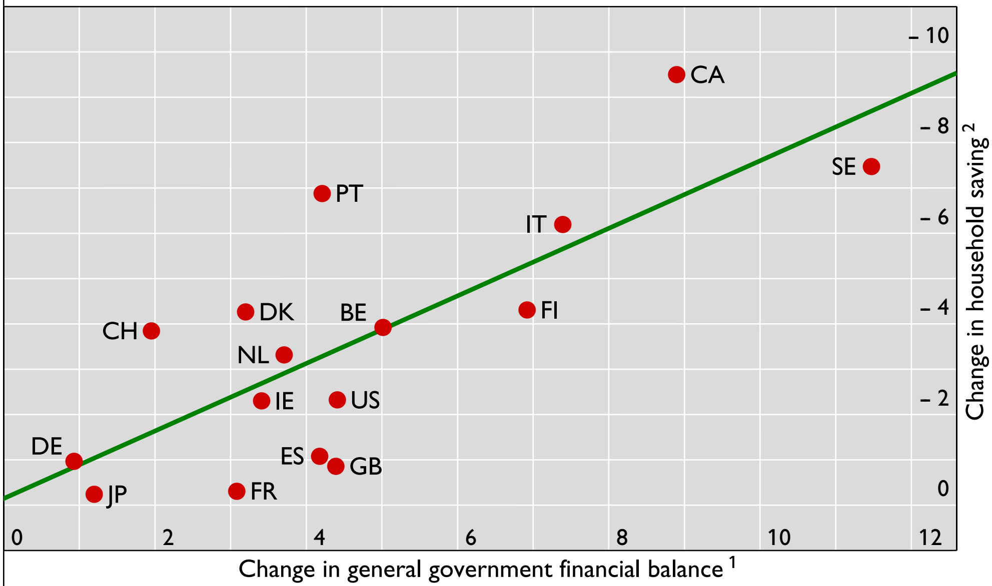
Developments in domestic saving in selected countries

	United States		Canada		Italy		Sweden		Denmark	
	1992*	1997	1992*	1997	1991*	1997	1993*	1997	1993*	1997
	as a percentage of GDP									
Domestic saving	14.5	17.2	14.3	18.7	18.5	20.7	11.2	17.4	20.0	20.6
Public saving	–1.1	2.8	–4.7	2.4	–5.2	0.7	–7.6	0.9	–0.7	2.1
Private saving	15.6	14.3	19.0	16.3	23.7	19.9	18.8	16.5	20.8	18.4
Households	4.6	2.8	7.6	1.1	15.9	10.7	4.9	0.4	4.6	1.8
Enterprises	11.0	11.5	11.4	15.1	7.8	9.2	13.9	16.1	16.2	16.6

* Year of peak post-1990 general government deficit.
Sources: National data and BIS estimates. Table II.2

Changes in budget balances and household saving

In percentage points



Note: For an explanation of the country codes, see Graph II.3.

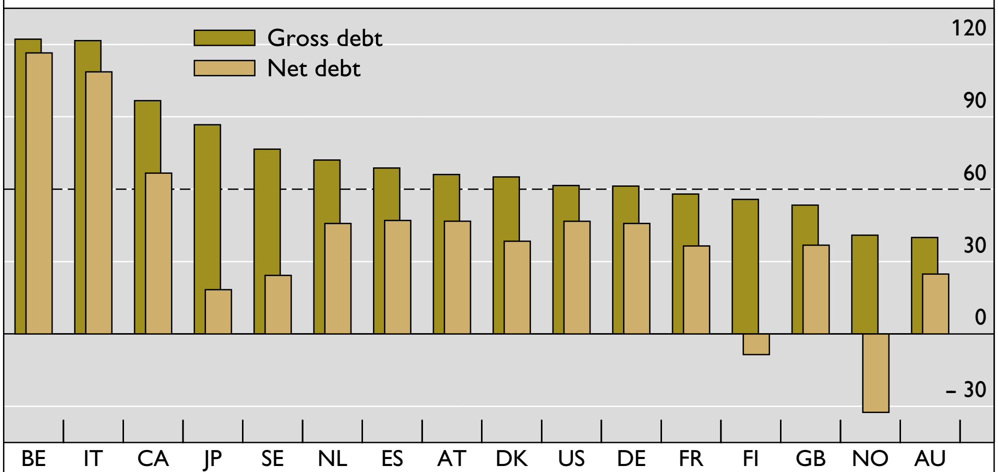
[1] Between the peak post-1990 deficit and 1997, as percentages of GDP. [2] Over the corresponding periods, as percentages of household disposable income.

Sources: OECD Economic Outlook, national data and BIS estimates. Graph II.5

"baby boom" generations, these developments prompt additional longer-term concerns. Rising pension and health care obligations mean that fiscal balances could deteriorate sharply in future decades. The prospects of such a deterioration, combined with high government debt, imply that medium-term fiscal sustainability is not yet assured. More importantly, irrespective of any reform to reduce the fiscal burden of ageing, supporting the baby boom generations in retirement without adversely affecting the living standards of future

Public debt in 1997 *

As a percentage of GDP



* For EU countries, Maastricht definition. For an explanation of the country codes, see Graph II.3.

Sources: EMI Convergence Report and OECD Economic Outlook. Graph II.6

workers will require higher output growth per hour worked. Since this is unlikely without higher saving and investment rates, the relatively tepid response of national saving to fiscal consolidation so far is worrisome, particularly given the contemporaneous moves in some countries to reduce the supply of labour input by cutting weekly working hours and the general failure to remove disincentives to continued labour participation by older workers.

Changes in financial wealth and spending

Equity-induced wealth gains …

A potential explanation for the relatively modest rise in national saving during a period of substantial fiscal consolidation could be the large wealth gains recorded by households in recent years, due in particular to higher equity prices. If household plans for spending and saving depend in part on net wealth, then increases in asset values will tend to reduce saving rates. As discussed in Chapter V, most of the industrial countries have seen strong equity price gains in recent years as stock markets have continued to reach new highs.

… boost household spending in the United States and United Kingdom …

Table II.3 presents real equity price movements and their possible impact on consumption growth for four countries during 1995–97. Over this period, the United States enjoyed the sharpest equity price gains, and it is also the country in which households have placed the largest proportion of their financial wealth in equities. In consequence, the estimated impact on consumption growth is substantial. For each of the last three years, the contribution of equity price gains to consumption growth may have steadily increased from about ½ percentage point to nearly 1 percentage point, thus accounting for about one-quarter of total consumption growth over the period. Similar wealth gains substantially boosted consumption growth in the United Kingdom during 1996–97, possibly accounting for some 10% of the total growth in household spending.

… but have only modest effects elsewhere

In contrast, share prices have had only a modest impact on consumption growth in Germany, largely because only 6% of household financial wealth is held in equities. Although the equity share is equally low in Japan, the fact that equity price movements are positively correlated with changes in property prices and consumer confidence may explain the relatively large impact found for Japan.

Changes in real stock prices and household consumption in selected countries

	Real stock prices			Estimated impact on real consumption[1]			*Memo item*[2]
	1995	1996	1997	1995	1996	1997	*1997*
	annual percentage changes[3]						*in %*
United States	26.6	17.8	28.4	0.43	0.51	0.84	*28.0*
Japan	–4.2	5.1	–20.5	–0.51	0.90	–0.65	*6.0*
Germany	0.5	16.9	32.7	–0.13	0.02	–0.13	*6.0*
United Kingdom	12.4	9.0	16.1	–0.19	0.58	0.45	*20.0*

[1] Based on a regression of quarterly consumption growth on its own lagged value, the lagged term spread and four lags of changes in equity prices. [2] Proportion of household financial wealth held in equities. [3] Fourth quarter to fourth quarter.

Sources: National data and BIS estimates. Table II.3

According to the estimates, the 20% decline in real equity prices last year, allied with the record low level of consumer confidence, could account for a considerable part of the fall in real household spending.

Additional influences of equity price changes

In addition to household spending, there are other channels through which equity price movements may influence real economic activity. For instance, higher equity prices lower the cost of corporate investment and therefore stimulate investment spending. Rising share prices can also increase tax receipts, and thus help to reduce government budget deficits. This may have played a role in the United States, where surging tax revenues have led to a sizable decrease in the federal government budget deficit. Finally, higher equity prices allow employers with defined benefit pension plans to reduce their contributions to employee pensions, thus slowing the growth of labour costs and boosting corporate profits.

Labour markets

Divergences widen further …

The international divergences in labour market conditions discussed in previous Annual Reports were observed again last year and, in some respects, widened further (Graph II.7). In the United States and the United Kingdom, rates of unemployment fell well below levels that, in the past, have led to inflationary pressures. Unemployment also declined significantly in Canada, Denmark, Finland, Ireland, the Netherlands, Norway, Portugal and Spain. In some other European countries unemployment rates reached postwar highs, before starting to fall towards the end of 1997, a trend that has continued this year.

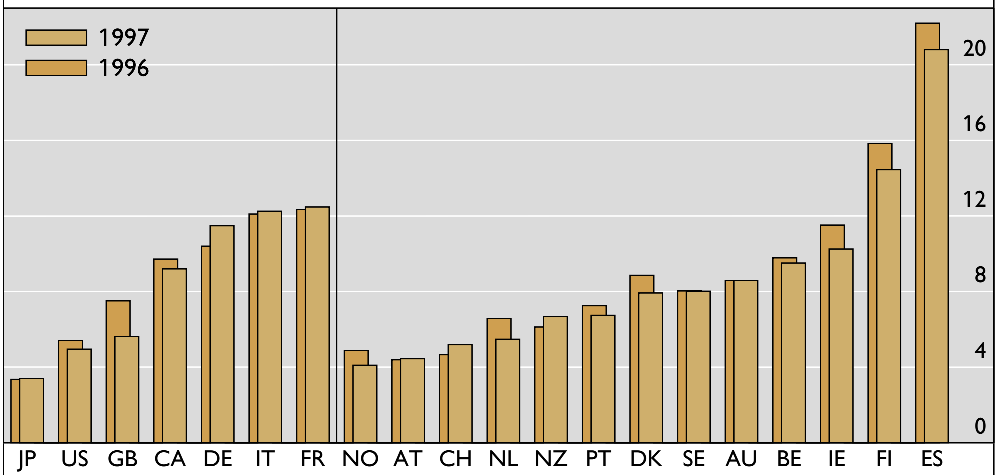
… reflecting cyclical differences …

… and structural policies

Cyclical differences have been one important factor behind these developments. Unemployment has generally fallen most in those countries that are furthest advanced in the current cycle or in which output expansion has been well above potential rates of growth. However, structural factors and policies have also played a role. For instance, in the United Kingdom and Denmark, unemployment has fallen by far more than employment growth would suggest as various policy measures have reduced labour supply. In contrast, unemployment

Unemployment rates in 1996 and 1997*

In percentages



* Annual averages; national definitions. For an explanation of the country codes, see Graph II.3.

Source: National data. Graph II.7

Developments in aggregate and manufacturing employment

	Real GDP	Total employment	Manufacturing employment	Relative prices[1]	Manufacturing/total employment	
	1980–97				1980–90	1990–97
	annual percentage changes				cumulative changes[2]	
United States	2.6	1.6	–0.5	–1.7	–4.4	–1.7
Japan	3.1	1.0	0.3	–2.0	–0.6	–2.1
Canada	2.4	1.4	–0.1	–0.9	–2.1	–1.6
Australia	3.0	1.7	–0.5	–0.3	–5.0	–1.4
EU countries	2.1	0.2	–1.4	–1.0	–3.4	–2.9
Germany	2.1	0.2	–1.7	–0.4	–2.3	–5.4
France	1.9	0.2	–1.8	–0.4	–4.3	–2.8
Italy	1.8	–0.2	–0.9	–2.8	–3.6	0.5
United Kingdom	2.3	0.3	–2.0	–1.4	–6.1	–2.9

[1] Ratio of manufacturing to non-manufacturing prices; for the United States, 1980–93; for Canada, 1980–92; for the United Kingdom, 1980–94; for other countries and most EU countries, 1980–95. [2] In percentage points.

Sources: OECD Economic Outlook, OECD Labour Force Statistics, OECD National Accounts, national data and BIS estimates. Table II.4

has increased in France, reflecting a policy-induced rise in participation rates. Unemployment has also risen in Germany, owing to the aforementioned slump in the construction sector and firms' efforts to lower costs. In fact, over the last two years, productivity growth in the German business sector has averaged 3½% and unit labour costs have fallen.

The falling share of manufacturing employment reflects …

It is frequently argued that an additional reason for the poor labour market performance of the industrial countries as a group is "deindustrialisation", in part induced by growing competition and imports of manufactured goods from low-wage countries. While it is true that the share of manufacturing in total employment has fallen significantly over the last two decades (Table II.4), empirical studies suggest that, with broadly equal growth rates of real demand for manufactured goods and services, the decline can mainly be attributed to a higher rate of productivity growth in manufacturing than in services. This has resulted in a fall in the relative price of manufactured goods. For individual countries, changes in net trade have moderated (Japan) or exacerbated (the United States) the fall in the share of manufacturing employment. While there is little evidence that trade with emerging market countries has had any direct effect on manufacturing employment, it cannot be excluded that competitive pressures have contributed to the high rate of productivity growth in that sector.

… underlying trends in total employment …

The underlying causes of these trends and the cumulative declines in the share of manufacturing employment have been broadly the same in Europe and North America. Nonetheless, the composition of the decline has varied across countries, due to different trends in total employment. In North America, manufacturing employment has been largely stable and the falling employment share mainly reflects the rapid growth of employment in services. In contrast, manufacturing employment has fallen sharply against a stagnating trend of total employment in the EU countries, suggesting that labour market rigidities have constrained the ability of the service sectors to absorb redundant workers from manufacturing. One particular source of rigidity, documented in previous Annual Reports, appears to have been the low flexibility of relative wages, notably in countries with high minimum wages and/or generous unemployment benefit systems. Moreover, in some countries (Germany in particular), enterprises seem to have preferred outsourcing or investing abroad to expanding capacity at home.

… and labour market rigidities

Import prices and inflation

Convergence of price inflation …

Despite the differences in labour market slack, the trend in inflation has been remarkably similar across the industrialised economies. Virtually everywhere, inflation rates have declined during the 1990s, reducing average inflation and its variation across countries. Although the trend in unit labour cost growth has been similar, it has not converged to the same degree as price inflation.

… helped by exchange rates and import prices

Among the factors that could explain the convergence of inflation rates are changes in exchange rates and associated movements in import prices, as well as the extent to which these changes are passed through to domestic prices. The countries furthest advanced in the business cycle, such as the United States and the United Kingdom, have seen their currencies appreciate and their import prices decline. This has contributed to redistributing demand across the industrialised economies, reducing imbalances that otherwise could have exacerbated inflationary pressures. Moreover, global overcapacity in certain sectors has further depressed import prices and lessened the risk of inflationary pressures in the industrialised economies generally.

Pronounced influence of import prices in the United States …

Because goods are more tradable than services, the impact of import prices on domestic inflation will be more readily apparent in changes in producer and consumer goods prices than in overall consumer price indices. As can be seen in Table II.5, the decline in import prices over the last two years has been pronounced in the United States. In addition, the pass-through into producer and

Changes in import price and domestic inflation

	Import prices	Producer prices		Consumer goods prices	
	Actual	Actual	Impact[1]	Actual	Impact[1, 2]
	annual percentage changes, 1995 Q4–1997 Q4				
United States	–4.1	1.1	–1.2	1.8	–0.9
Japan	6.5	1.1	1.2	1.0	0.4
Germany	2.2	0.4	0.3	1.1	0.2
France	1.7	–1.2	0.8	1.4	0.0
United Kingdom	–4.2	1.5	–0.3	2.6	–0.3
Canada	0.8	0.4	0.3	1.6	–0.5[3]
Belgium	3.1	2.3	2.3	1.9	0.4
Netherlands	4.6	2.1	0.0	2.0	0.0

[1] The impact of import prices (PM) on producer prices (PPI) and of producer prices on consumer goods prices (CPI) is estimated from regressions on quarterly data over 1988–97. [2] Impact estimated by the effect of PPI on CPI times the impact of PM on PPI. [3] Impact estimated from the effects of, respectively, US CPI on Canadian CPI and US PM on US CPI.

Sources: National data and BIS estimates. Table II.5

consumer goods prices seems larger in the United States than in other countries, probably reflecting the high degree of competition in US markets. Indeed, without the fall in import prices, the annual rise in producer prices could have been about 1¼ percentage points higher and that of consumer goods prices almost 1 point higher. Thus, the fall in import prices may have dampened overall CPI inflation by about ½ percentage point in each of the past two years.

… and in the United Kingdom but less in Canada

Although the United Kingdom has experienced a similar decline in import prices, the pass-through to domestic prices seems to have been somewhat less. Even so, without the import price decline, the annual rate of producer and consumer goods price inflation would have been about ¼ percentage point higher. In contrast, Canadian import prices rose slightly, with the pass-through explaining most of the increase in producer prices. However, consumer prices in Canada appear to be more heavily influenced by US consumer prices than by Canadian import prices. Consequently, the deceleration in US consumer price inflation associated with the US import price decline may have reduced the annual rate of Canadian consumer goods price inflation by about ½ percentage point and the overall CPI by about ¼ percentage point.

Moderate pass-through in countries with rising import prices

Turning to countries that have experienced significantly higher import prices over the last two years, the greatest increase was in Japan, primarily because of the depreciation of the yen. Although the effect on domestic producer and consumer goods prices has been relatively small, the increase in import prices may have raised producer price inflation by 1¼ percentage points and consumer goods price inflation by almost ½ point.

In Germany and France, the import price increase has been much smaller than in Japan. Still, because the pass-through is relatively large in Germany, higher import price inflation may have raised consumer goods price inflation by about ¼ percentage point, whereas little of the import price rise was reflected in French consumer prices. In Belgium, where a very high proportion of producer goods is imported, higher import prices account for most of the rise in producer prices. However, the effect on consumer goods prices is much smaller, around ½ percentage point. An even lower pass-through is found for the Netherlands, where virtually none of the rise in import prices appears to have fed through to consumer goods price inflation.

Significant overall convergence …

To summarise, it appears that import prices have been an important influence in the convergence of inflation rates across the industrialised countries during the last two years. If there had been no change in import prices, producer and consumer goods price inflation would have ranged from 2 to 3% in the United States and the United Kingdom and from zero to 1% in Germany and Japan. This is a considerably wider spread than that actually observed over the last two years. Also, import prices seem to have a greater effect in the United States than they do in other, ostensibly more open economies. In the circumstances of the last two years, this has reinforced the favourable and convergent redistribution of inflationary pressures.

… with likely implications for future inflation

Although there are many uncertainties about the course of inflation in the years ahead, import price developments could remain an important influence on domestic inflation. Over the long term, the trend towards greater competition within the industrialised economies may mean that there will be a greater pass-through of import price changes. This appears already to be the case in the United States, where competitive forces seem stronger than elsewhere. Moreover, in the near term, the global excess capacity in certain sectors can be expected to exert downward pressure on the prices of imported goods. Therefore, even if their exchange rates remain unchanged, the industrial countries may still see import prices falling. This would help to reduce the risk of rising inflationary pressures in the countries most advanced in the business cycle.

Foreign trade, current account balances and foreign direct investment

Foreign trade

Marked expansion of world trade …

Following a slowdown in 1996, the growth of world trade accelerated to more than twice the estimated rate of growth of total output last year (Table II.6). The expansion was particularly pronounced in the emerging market countries as higher import demand in Latin America and Eastern Europe more than offset the slowdown in Asia. Trade growth also accelerated in the industrial countries, reflecting a particularly strong rise in the United States, but also faster growth in Europe.

… with falling goods prices

As discussed above, the fall in international goods and import prices was one factor contributing to the low rates of inflation seen last year. In fact, world prices for manufactured goods, measured in SDRs, fell by 4½%, a reason for the moderate terms-of-trade deterioration in the industrial countries. Oil prices also declined, particularly towards the end of 1997 and early this year, when a rise in OPEC production quotas combined with lower oil demand in Asia and an unusually mild winter in Europe and the United States to reduce real oil prices to a level only slightly above that existing prior to the first oil crisis. Prices for non-oil commodities also declined towards the end of 1997 but increased slightly for the year as a whole.

World trade and output

	1980–89	1995	1996	1997
	annual percentage changes			
World output	3.3	3.6	4.1	4.1
World trade, volume	4.3	9.5	6.7	9.5
Industrial countries	5.0	8.8	6.1	9.0
Emerging market countries	2.0	11.2	9.6	11.9
Trade prices (in SDRs)	2.6	2.2	3.1	–0.8
Manufactures	3.3	4.1	1.2	–4.4
Oil	..	1.9	24.3	–0.9
Non-oil primary commodities	0.6	2.1	3.1	1.2
Terms of trade, industrial countries	0.3	0.1	–0.1	–0.7

Source: IMF World Economic Outlook. Table II.6

Current account balances in the industrial countries

Owing to cyclical divergences and the tendency for the currencies of the countries most advanced in the business cycle to appreciate, external imbalances (measured in absolute terms) widened significantly last year. Most of this can be attributed to the growing US deficit and the increasing surpluses in Japan and the EU countries.

Divergent current account balances in the United States and Japan …

Despite the appreciation of the dollar, real US exports of goods rose by nearly 16% and, for the second consecutive year, US exporters gained market shares. Nevertheless, because of the booming domestic economy and increased import penetration, the trade deficit widened to about US$ 200 billion. In addition, with the appreciation of the dollar and the growing external debt, the investment income balance moved into deficit (Table II.7). In contrast, Japan's investment income surplus rose, while the stagnation in the domestic economy, allied with the depreciation of the yen, led to a turnaround in the trade and current account balances and a partial reversal of previous losses in market share.

… and a further rise in the surplus of the EU countries

A similar trend to that seen in Japan could be observed in the EU countries, where the aggregate surplus rose to about US$ 125 billion, of which France and Italy accounted for about two-thirds. For Italy, in particular, which became a net international creditor last year, the improvement this decade can to a large extent be attributed to substantial fiscal consolidation, a depreciation of the exchange rate and the fact that the Italian economy has been lagging the European business cycle. Elsewhere in Europe, Switzerland's traditional surplus declined somewhat

Foreign trade indicators and the current account balance

	Real effective exchange rate[1]	Export performance[2,3]	Volume of imports[3]	Terms of trade[3]	Trade balance	Net investment income	Current account balance	
	1997	1996–97, cumulative changes					1997	
	index, 1995=100	in percentages			in billions of US$		in billions of US$	as a % of GDP
United States	114	7.9	25.9	0.2	–23.1	–18.8	–166	–2.1
Japan	77	–10.2	5.0	–9.7	–27.7	11.2	97	2.3
Germany	90	0.4	11.8	–2.3	10.7	– 6.2	– 1	0.0
France	93	1.7	9.2	–1.4	16.9	10.3	40	2.9
Italy	118	– 5.7	7.4	1.3	2.3	5.2	37	3.2
United Kingdom	130	– 3.1	14.4	1.8	– 3.0	3.2	7	0.6
Canada	107	– 9.1	23.7	3.7	– 6.9	0.5	– 12	–2.0
Australia	119	8.6	15.5	0.9	6.0	– 0.4	– 13	–3.4
Belgium	97	– 6.3	10.9	1.3	– 1.2	– 0.2	13	5.5
Netherlands	92	– 2.0	13.6	–0.5	– 4.2	1.4	21	6.0
Norway	109	5.7	19.3	12.0	3.7	0.7	9	5.5
Switzerland	88	– 9.5	9.6	–0.6	– 1.2	0.7	21	8.3
EU countries	102	– 0.7	12.2	–0.9	28.6	10.1	124	1.6

[1] In terms of relative unit labour costs; for EU countries, composite index excluding intra-regional trade. [2] Growth of export volumes less growth of export markets. [3] Goods only.

Sources: OECD Economic Outlook, national data and BIS. Table II.7

due to lower earnings on net investment, while Norway's oil-based surplus remained largely unchanged despite the fall in oil prices towards the end of 1997.

Deterioration in New Zealand and Canada

As for other industrial countries, Australia managed to reduce its deficit despite the fall in commodity prices and exports to Asian countries. Although less reliant on exports to Asia, New Zealand's current account deficit increased to over 7% of GDP, implying a substantial saving deficit for the private sector since the general government surplus declined only a little. The external balance of Canada moved back into deficit owing to the rise in import penetration and poor export performance mentioned earlier. As in New Zealand, the counterpart to the external imbalance was a growing saving deficit for the private sector, notably the household sector. Finally, Turkey's external deficit was limited to 1% of GDP as the nominal exchange rate was allowed to depreciate in line with the growing inflation differential vis-à-vis other OECD countries.

Salient features of recent trends in foreign direct investment

Strong but unstable growth of FDI …

The growth of foreign direct investment (FDI) outflows from and inflows to the industrialised countries since the early 1980s has been very high, far outpacing the expansion of foreign trade and real GDP (Table II.8). Growth, however, has not been very stable. In fact, most of the expansion took place during 1981–89, when outflows from Japan, induced by the appreciation of the yen and comparatively low prices of foreign equities, provided a major stimulus to global investment activities. During the next seven years, real outflows grew by less than 1% per year and inflows declined. However, according to preliminary figures, these trends were significantly reversed last year, as booming equity markets and low interest rates led to a record level of cross-border mergers and acquisitions. Under the influence of a stronger dollar and buoyant profit growth, the United States led the rise in FDI outflows, but US inflows actually increased even more, since the attraction of the high-growth economy more than offset the effect of an appreciating currency. Outflows from Germany also reached a historical high. However, for the second consecutive year, inflows into Germany declined. Led by France and the United Kingdom, other EU countries experienced marked increases in both outflows and inflows.

… with a marked pick-up last year

FDI affected by cyclical changes …

As shown in Graph II.8, short-term movements in FDI flows are highly procyclical, mainly reflecting the influence of reinvestment of retained earnings. Virtually all of the fall in real outflows between 1989 and 1992 can be attributed to the rise in the OECD output gap. Moreover, the subsequent slow recoveries

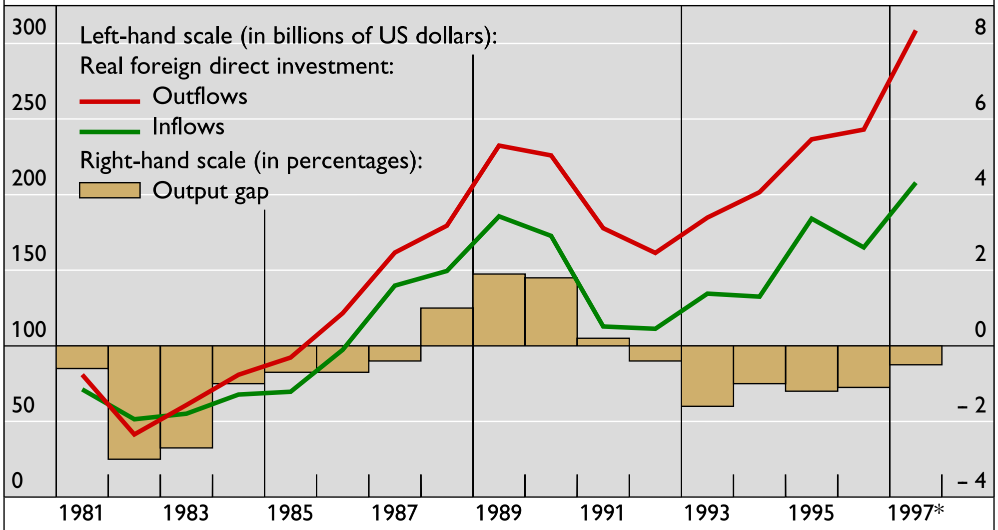
Comparative trends of foreign direct investment[1]

	Outflows	Inflows	Outward stocks	Inward stocks	GDP	Exports	Invest-ment[2]
	annual percentage changes, in constant prices[3]						
1981–89	14.1	12.7	11.9	14.2	3.0	4.5	3.4
1989–96	0.6	–1.7	12.5	10.8	1.9	5.5	2.0

[1] In industrial countries. [2] Gross fixed domestic investment. [3] Except for outward and inward stocks (current prices and exchange rates).

Sources: IMF Balance of Payments Statistics, OECD International Direct Investment Statistics, OECD National Accounts, UN World Investment Report, national data and BIS estimates. Table II.8

Foreign direct investment and the output gap in OECD countries



* Preliminary.

Sources: IMF Balance of Payments Statistics, OECD Economic Outlook, OECD National Accounts, national data and BIS estimates. Graph II.8

in continental Europe and Japan largely explain the continued low level of inflows.

… exchange rates …

Exchange rate movements can also exert a significant influence by affecting countries' relative cost positions as well as their "bidding power" with respect to mergers and acquisitions. As mentioned above, the appreciation of the yen was a major factor behind the rise in Japan's share of global outward stocks in the 1980s, while the recent recovery of US outflows can be ascribed to the stronger US dollar and the advanced stage of the business cycle.

… and changes in interest rates

In addition, since FDIs are essentially financial flows which may or may not be related to investment in real capital, measured outflows tend to be affected by movements in interest rates and equity prices in both source and host countries. This was evident for US outflows in the early 1980s, when a more restrictive monetary policy and higher interest rates encouraged US firms to finance their capital expansions abroad by borrowing in the host countries rather than by capital outflows defined as FDI. In contrast, the recent recovery of US outflows can, in part, be attributed to the fall in US interest rates and to higher equity prices which have substantially strengthened the ability of US enterprises to merge with or acquire firms abroad.

Increasing role of emerging market countries …

Apart from cyclical and other short-term influences, changes in FDI flows and stocks over the last 15 years also reflect the growing number of countries, sectors and firms involved. Although the shares of inward and outward stocks are still dominated by the industrial countries, the participation of emerging market countries has grown considerably. China, in particular, has become a major host country and, by the end of 1996, emerging market countries as a group accounted for about 30% of global inward stocks. Furthermore, even though these countries hold only 10% of outward stocks, the fact that their share of outflows has been close to 14% during the 1990s indicates that they are also becoming more active as source countries (Graph II.9). While the financial crisis in Asia seems to have slowed outflows from emerging market countries, preliminary figures for inflows point to a new historical high in 1997. Moreover, given the marked decline in Asian equity prices, the deregulation of inflows and the improvement in corporate governance contained in the reform policies adopted in several countries affected by the crisis, FDI inflows may fall only marginally this year.

… but also shifts within industrial countries

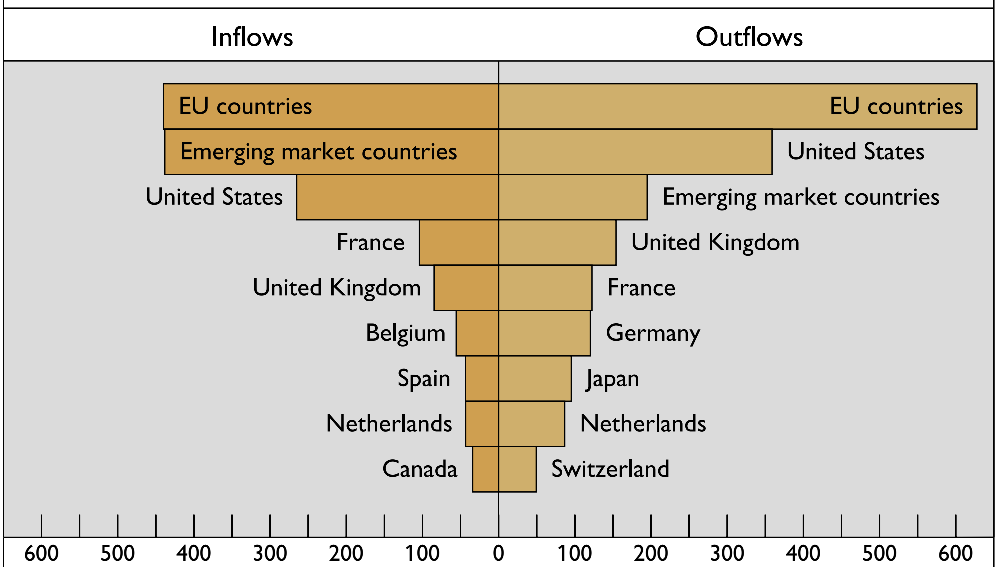
Within the group of industrial countries, relative positions have also changed. In addition to the increase in outflows from Japan in the 1980s, the share of EU countries has risen substantially, notably since the adoption of the Single European Act in 1986. Indeed, the rise in the share of EU countries in global flows and stocks has been driven, not only by growing inflows from non-member countries, but also by larger flows within the EU area itself. Apparently, the effects of liberalising capital account transactions and the integration of markets have more than outweighed the expected fall in investment flows associated with the removal of trade barriers. In contrast, the US share of global outflows and outward stocks has fallen sharply compared with the late 1970s, even allowing for the recent recovery. In fact, the late 1970s seem to have marked a peak in the internationalisation of US production, which coincides with a downward turning-point for US manufacturing. Because manufacturing is far more international than other sectors, its declining role in the US economy, allied with an earlier start to this process than in most other countries, imparted a downward trend to US outflows.

More sectors and firms involved

The last decade has also witnessed a marked rise in the number of sectors and firms involved in FDI activities. Even though the dominant position of large multinational firms is one of the defining features of recent trends, medium-sized enterprises now take a more international approach to their output and

Foreign direct investment in selected countries and regions

1992-96 cumulative totals, in billions of US dollars



Sources: IMF Balance of Payments Statistics, UN World Investment Report and national data.

Graph II.9

employment decisions as well. Overall, it is the expansion in the number of countries, sectors and firms involved that has prevented the declining share of manufacturing from causing either stagnation or a trend fall in FDI flows.

Globalisation in a historical perspective

In order to identify the motives underlying FDI flows and their possible effects on employment and output in the countries involved, it is useful to view recent developments in a longer perspective. While the growth of trade and FDI since 1982 has been impressive, it merely returns the degree of globalisation and internationalisation to that existing prior to 1914 and, by some measures, not even that. For instance, measured by foreign trade relative to GDP, Japan is less open now than before 1914. Moreover, while FDI outflows now equal 5–6% of domestic investment in the industrial countries, UK outflows during the first decade of this century were of about the same size as UK domestic investment.

Shift from horizontal to vertical production structures

Yet, in some respects, international integration and FDI activities are more important today than before the First World War, as the underlying forces and motives have changed substantially, with implications for firms' production and employment decisions. Although earlier FDI outflows were partly motivated by firms' interest in gaining access to raw materials, they mostly reflected attempts to get around artificial and natural barriers to trade. Such outflows favour a *horizontal* production structure as similar plants are set up in different countries and affiliate sales are aimed at markets which cannot be reached by exports. In contrast, more recent trends in FDI activities have been driven by liberalisation and deregulation and, above all, by technological progress, which has added new dimensions to the process of integration. By enabling firms to "slice up the value-added chain", the sharp decline in communication costs has created new and more efficient ways of organising production and distribution at a global level. Moreover, by allowing firms to arbitrage on factor-price differentials, this favours a *vertical* production structure generating stronger interactions between production and employment in affiliates and parent companies.

FDIs complement or strengthen foreign trade …

Nonetheless, for most countries the evidence suggests that FDI outflows and affiliate production continue to complement rather than substitute for exports. Manufacturing affiliates tend to use intermediate goods imported from the source countries while service affiliates improve the distribution of final goods produced in the source countries. It further appears that outflows and imports are complements and that inflows are associated with higher imports, notably in emerging market countries.

… and reduce exposure to external shocks

There is also evidence that globalisation not only helps firms to achieve a more efficient production structure but also allows them to reduce exposure to foreign shocks and spread risks more evenly. Firms with production facilities in several countries can reduce their vulnerability to exchange rate movements by redistributing output in accordance with changes in relative costs. Moreover, assuming that affiliate sales are proportional to outward FDI stocks, the geographical distribution of exports may give a misleading impression of firms' external exposure (Table II.9). Therefore, the overall exposure to the fall in domestic demand in Asia may be much lower than would be implied by exports alone. As the table shows, the exposure of the United States, Germany and Japan seems lower than is suggested by export shares. In contrast, the shares of Asia in UK exports and affiliate sales are more or less equal.

Geographical distribution of exports and foreign direct investment*

	United States		Japan		Germany		United Kingdom	
	Exports	FDI	Exports	FDI	Exports	FDI	Exports	FDI
	in percentages							
Industrial countries	56.5	69.9	46.9	62.5	75.5	86.4	77.6	82.0
EU countries	20.5	43.7	15.3	17.5	58.2	57.0	56.9	43.3
Non-European countries	34.3	20.8	30.5	43.3	11.1	24.3	17.5	36.9
Asia	19.2	8.4	44.2	32.1	8.0	3.0	8.6	8.1
Latin America	17.5	18.1	4.5	4.8	2.5	5.9	1.8	6.6

* Exports of goods in 1996 and outward stock of direct investment at end-1996; for Germany, 1995 data.

Sources: OECD Statistics of Foreign Trade and national data. Table II.9

Globalisation subject to risks and costs

At the same time, the globalisation of production is not without risks. Thus the rise in technology-driven FDI flows amid attempts by multinationals to maintain or expand market shares could generate excess capacities to the extent that multinationals as well as local companies are attracted to the same sectors by low costs and high prospective rates of return. This has been evident in several Asian countries where inflows of foreign capital have raised already high investment/GDP ratios even further (see Chapter III). Moreover, firms with production facilities in several countries can only reduce their exposure to exchange rate movements by allowing a lower rate of capacity utilisation than firms with most of their output produced at home.

III. Economic policies and developments in the rest of the world

Highlights

A series of financial crises in Asia, of unanticipated intensity and power of contagion, dominated developments in the emerging market economies last year. In those most adversely affected – Indonesia, Korea, Malaysia and Thailand – activity and demand slowed sharply in the face of eroded confidence. Elsewhere in the region, economic uncertainty also rose and the dynamic pace of activity marking the preceding decade gave way to more modest output growth.

An intricate and often opaque combination of macroeconomic distortions and financial fragility has been at the core of the crises in Asia. Growing awareness of these vulnerabilities, and the difficult challenge of addressing them through conventional policy measures, not only amplified the downward pressure on exchange rates when confidence broke, but also cast a large shadow over the prospects for engineering a quick recovery. Even though sharp depreciation has been accompanied by only modest inflation, thereby producing sizable gains in competitiveness, activity has so far failed to respond. Demand at home and in several major markets abroad has been generally weak and financing to support output growth has become significantly scarcer.

Spillover from Asia's crisis clouded a number of welcome developments in Latin America last year which, in a more settled environment, would have received greater attention. Policy commitment to stability and reform in several Latin American countries has in recent years produced some of the fastest rates of growth and lowest rates of inflation since the late 1970s. When investor anxiety hit the region, a further tightening of monetary policy and, in the case of Brazil, fiscal restraint helped to limit contagion. Elsewhere in the developing world, sounder macroeconomic and structural policies also contributed to appreciable non-inflationary growth. Developments in Eastern Europe were more uneven, although a first year of recorded positive growth in Russia raised hopes that a larger number of countries may be experiencing a successful if slow transition.

Financial turmoil in Asia: the macroeconomic background

Financial causes of the crisis aggravated by …

A fragile financial sector, weak supervision and prudential regulation, and a corporate sector burdened with high levels of short-term debt were at the heart of a series of crises in Asia in the second half of 1997. In particular, they greatly increased the complexity of managing in a sound and productive manner the foreign funds that surged into Asia in the mid-1990s. Chapter VII deals in detail with the interaction between these aspects of financial intermediation and the recent currency turmoil. However, two of the macroeconomic factors that,

Growth, inflation and current account balances									
	Real GDP			Consumer prices			Current account balance		
	1990–95	1996	1997	1990–95	1996	1997	Average 1990–95	1996	1997
	annual percentage changes						as a percentage of GDP		
China	10.6	9.7	8.8	12.4	8.3	2.8	0.9	0.9	2.3
Hong Kong	5.0	5.0	5.2	9.3	6.0	5.7	3.3[1]	–1.7[1]	–3.8[1]
India	5.1	7.5	5.0	10.3[2]	5.9[2]	5.1[2]	– 1.5	–1.1	–1.2
Other Asia[3]	7.2	7.0	4.6	6.7	5.8	4.6	– 0.5	–1.7	–1.7
Korea	7.8	7.1	5.5	6.6	4.9	4.4	– 1.2	–4.8	–1.9
Singapore	8.6	6.9	7.8	2.7	1.3	2.0	12.7	15.5	15.2
Taiwan	6.4	5.7	6.8	3.8	3.1	0.9	4.0	4.0	2.7
Indonesia	7.2	7.8	4.6	8.7	8.0	6.6	– 2.5	–3.7	–2.9
Malaysia	8.8	8.6	7.8	3.7	3.5	2.7	– 5.9	–4.9	–5.1
Philippines	2.3	5.7	5.1	11.0	8.4	5.1	– 3.8	–4.7	–5.2
Thailand	8.9	6.4	–0.4	5.0	5.8	5.6	– 6.7	–7.9	–2.0
Latin America[3]	2.7	3.4	5.0	206.2	24.6	13.8	– 2.0	–1.9	–2.8
Argentina	4.8	4.3	8.4	114.6	0.2	0.5	– 1.6	–1.4	–3.2
Brazil	1.5	2.8	3.0	954.2	15.5	6.0	– 0.6	–3.3	–4.2
Chile	6.7	7.2	7.1	15.8	7.4	6.1	– 2.6	–5.4	–5.2
Colombia	4.5	2.1	3.0	25.6	20.2	18.5	– 1.7	–5.5	–5.8
Mexico	2.1	5.1	7.0	19.0	34.4	20.6	– 5.1	–0.6	–1.8
Venezuela	3.8	–1.6	5.1	43.7	99.9	50.0	2.5	13.1	6.0
Eastern Europe[3]	–1.2	4.7	5.1	54.8	17.8	13.9	0.1	–3.0	–3.7
Czech Republic	–2.8	3.9	1.0	18.5	8.8	8.5	– 0.1	–7.6	–6.2
Hungary	–2.6	1.3	4.4	25.9	23.5	18.3	– 4.0	–3.7	–2.2
Poland	–0.2	6.1	6.9	83.7	19.9	14.9	1.9	–1.0	–3.2
Russian Federation	–7.9	–4.9	0.4	317.7	47.7	14.8	1.2	2.7	1.7
Israel	6.1	4.5	2.1	13.5	11.3	9.0	– 3.9	–7.4	–3.6
Saudi Arabia	3.7	2.3	2.6	2.2	1.3	0.1	–11.6	0.9	–2.2
Africa	1.7	5.1	2.7	37.4	25.1	11.4	–11.1[4]	–7.8[4]	–6.1[4]
South Africa	0.6	3.1	1.5	11.8	7.4	8.6	0.7	–1.6	–1.5

Note: Data for 1997 are partly estimated.

[1] Balance of goods and non-factor services. [2] Wholesale prices. [3] Weighted average of the countries shown, based on 1990 GDP and PPP exchange rates. [4] As a percentage of exports of goods and services.

Table III.1

ironically, received much of the praise for fuelling the dynamism of the Asian economies in the 1980s and the first half of the 1990s also played a crucial role in provoking the sudden loss of confidence. These were the heavy build-up of capacity in a number of sectors and the impact of the chosen exchange rate regime on both trade competitiveness and the stance of monetary policy.

The economic performance of the emerging market countries in Asia has been impressive over the last decade and a half. Average annual growth rates of 7½% since 1980 have been combined with modest inflation, with much of the growth momentum coming from the increasing openness of most economies.

This striking performance was achieved while keeping macroeconomic policies on a prudent course. Fiscal outcomes tended to be broadly balanced while reasonable price stability suggested cautious monetary policy. Even though current account imbalances widened to levels that would be considered alarming in more consumption-prone countries, the association of these imbalances with high investment spending by the private sector and rising shares of saving in GDP fed the perception of robust and sustainable growth.

… heavy investment in projects with questionable profitability prospects

These strong macroeconomic features were shared equally by the countries that were particularly hard hit during the recent period of financial turmoil (Table III.2). In retrospect, however, they can be seen to have masked the fact that systems of governance in the corporate, financial and government sectors failed to keep pace with a rapidly expanding economy, and that investment strategies increasingly focused on areas with less solid risk-to-return characteristics. To some extent, this was to be expected given that several countries needed to improve their infrastructure, with low immediate returns but high social returns in the long run. In many instances, however, the simple extrapolation of the very rapid growth of the first half of the 1990s motivated decisions to continue increasing the capacity of existing industries. Often, different countries focused on expanding capacity in similar industries. Moreover, as in the case of the Korean industrial conglomerates, deregulation in the course of the 1990s induced firms to enter unfamiliar businesses far removed from the traditional core areas of their earlier specialisation. Frequently, the failure on the part of investors as well as lenders to subject investment decisions to a true market test or due diligence reflected the implicit protection offered by active government sponsorship of projects with high political appeal but not necessarily sound profitability prospects.

1996 export slump illustrates overinvestment in some sectors

As noted in last year's Annual Report, indications of excessive investment in particular sectors had already emerged by 1996. In that year, the massive investment in Asia's electronics industry contributed to conditions of oversupply and a resulting price collapse in world markets. But investment has sharply increased in other areas as well (such as automobile construction, household appliances and electricity generation) at the risk of flooding local and foreign markets. Real estate was one sector where rapid investment created speculative

Macroeconomic structure of selected Asian economies

	Investment		Domestic saving		Fiscal balance[1]		Openness to trade[2]		ICOR[3]	
	Average 1986–95	1996	Average 1986–95	1996	Average 1986–95	1996	1986	1996	Average 1986–90	Average 1991–96
	as a percentage of GDP									
Indonesia	32.6	32.1	33.8	31.2	0.9	–1.0	15.9	20.4	19.2	22.6
Korea	33.9	36.8	36.4	35.2	0.3	0.0	30.7	28.9	32.9	20.2
Malaysia	32.7	42.2	35.8	42.6	–3.2	0.7	44.3	78.9	25.1	22.1
Philippines	20.5	23.2	17.5	15.6	–1.9	0.3	16.4	31.2	20.5	12.2
Thailand	36.3	42.2	33.5	35.9	2.1	0.7	20.9	34.9	32.6	19.6

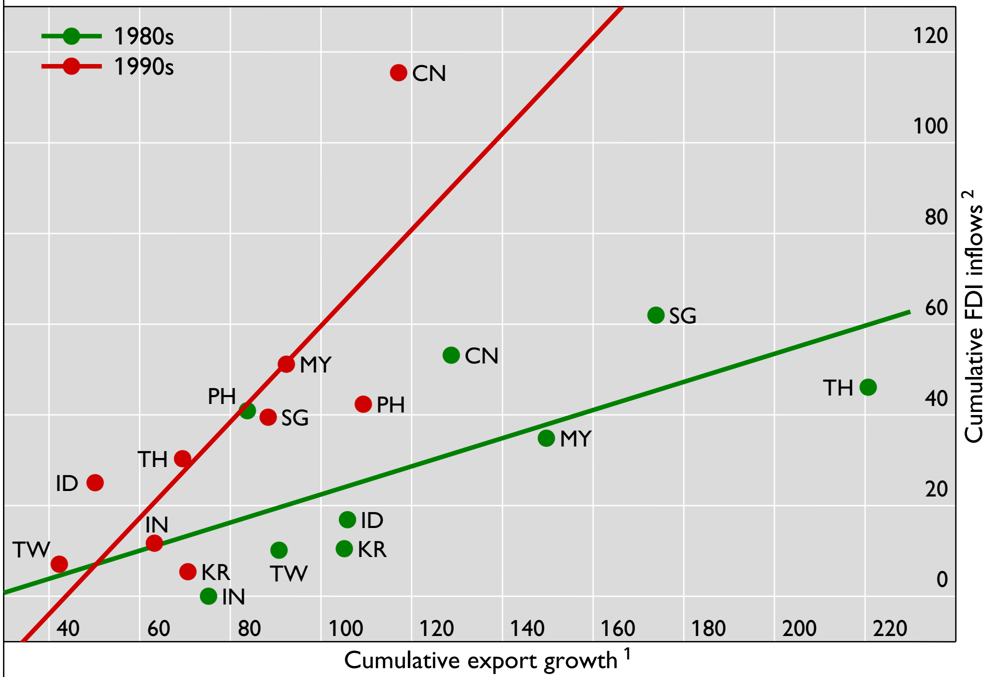
Note: Data for 1996 are partly estimated.

[1] Central government. [2] Ratio of average merchandise exports and imports to GDP. [3] Incremental capital/output ratio, shown here as its inverse, i.e. the real rate of GDP growth over investment/GDP.

Table III.2

Foreign direct investment and exports

In percentages



CN = China; ID = Indonesia; IN = India; KR = Korea; MY = Malaysia; PH = Philippines; SG = Singapore; TH = Thailand; TW = Taiwan.

[1] For the periods 1986-91 and 1992-96, in US dollar terms. [2] For the periods 1984-89 and 1990-94, as a percentage of 1986 and 1992 exports respectively.

Graph III.1

price bubbles, whose subsequent deflation carried many of the seeds of last year's financial turmoil (discussed in greater detail in Chapter VII).

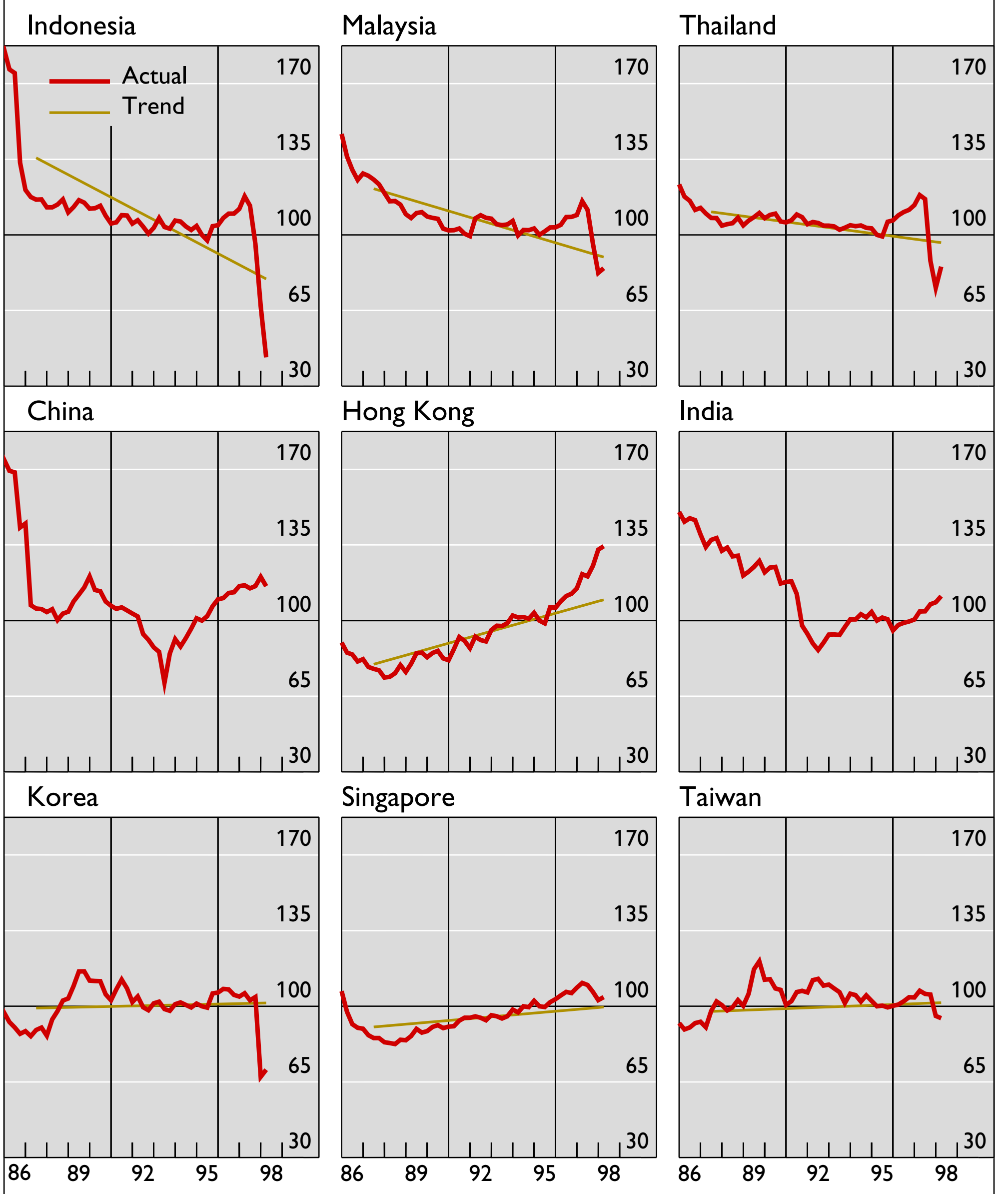
Falling rates of return

Overinvestment in particular sectors has tended to erode the rates of return on new capital in recent years. As shown in Table III.2, in many of the crisis-hit countries the growth rate associated with a given investment rate (the so-called incremental capital/output ratio) fell markedly in the first half of the 1990s. Another telling development has been the significant weakening of the relationship between foreign direct investment and the growth of exports in the 1990s (Graph III.1). Hence, prospects became dimmer that the initial deterioration of the current account, brought about by the imports of capital goods associated with foreign direct investment, would eventually be corrected by new export activity generated by the increase in capacity.

Impact of tightly managed exchange rates on competitiveness ...

A second major underlying cause of the regional crisis has been the increasing difficulty of maintaining exchange rate policies based on a close peg to the US dollar. These exchange rate links have had three unwelcome implications for recent developments. First, the depreciation of the US dollar against the major international currencies up to the first quarter of 1995 implied a steady gain in competitiveness (as shown by the trend line in Graph III.2 based on the 1987–95 period) in Indonesia, Malaysia and Thailand. This promoted rapid growth of exports and capacity expansion. However, when the dollar trend reversed from early 1995, Asian competitiveness deteriorated sharply. On the eve of the outbreak of financial turmoil in mid-1997, the real effective exchange rates of Indonesia, Malaysia and Thailand had been pushed well above what an

Real effective exchange rates in Asia*
End-of-quarter data, March 1995 = 100



* In terms of relative consumer prices; an increase indicates an appreciation. The trend is calculated by applying a Hodrick-Prescott filter over the period April 1987 – March 1995. Graph III.2

extrapolation of the 1987–95 trend would have suggested. This measure may even understate the more difficult competitive environment since the mid-1990s because it does not capture the significant gains in market share made by China in that period. In Korea, however, the competitiveness factor played a much smaller role in precipitating the crisis given that the won had been allowed to depreciate against the dollar since the mid-1990s.

… efficacy of monetary policy …

A further implication of managed exchange rate regimes in Asia has been the reduced ability of monetary policy to focus more directly on the liquidity requirements of the domestic economy. As overheating became apparent in many of the Asian economies in the mid-1990s, exchange rate commitments prevented central banks from raising interest rates to cool domestic demand, in particular investments in property and projects with inherently low rates of return. Increasing international capital mobility and shrinking risk premia for emerging economies' debt heightened this policy constraint. Finally, a third consequence of a long period of relative stability against the US dollar has been the blunting of perceptions of exchange rate risk and the resulting incentive to take large unhedged exposures in foreign currency. Chapters VI and VII consider these issues more fully.

… and borrowing behaviour

Developments in individual Asian countries

The depth of the crisis which unfolded in Asia in the second half of 1997, and the speed of contagion, came as a surprise to most observers and participants. Strong speculative pressure began to mount against the Thai baht in early 1997 and, by mid-year, could no longer be resisted. Given shared vulnerabilities, turbulence quickly engulfed several other South-East Asian economies, in particular Indonesia, Malaysia and the Philippines. As the year went on, the loss of confidence spread further afield, dragging Korea into a deep financial crisis in the final months of 1997 (see Table VII.6 for a more detailed chronology).

Short-term impact of the currency crisis

With each new month of statistical information, the downturn in industrial production and the build-up of price pressures have become more evident in the countries worst hit by the crisis (Table III.3). The swing in trade balances within less than one year has been dramatic and, given that it occurred primarily through a reduction of imports, particularly painful; by early 1998 imports of Korea and Thailand had fallen year-on-year by as much as one-third. Real exchange rates, which in early 1997 still showed significant appreciation, had by early 1998 dropped to between one-quarter and one-half of their level a year earlier. However, caution is advised when interpreting these real depreciations since the indices used here are mainly based on exchange rates against industrial country currencies. As major competitors in world markets in fact include neighbouring countries which also experienced large depreciations, the gains in competitiveness in Asia have certainly been smaller than those shown.

Short-term impact of financial turmoil in Asia[1]

	Industrial production		Consumer prices		Trade balance		Imports		Real effective exchange rate[2]	
	First half 1997	Latest three-month period	First half 1997	Latest three-month period	First half 1997	Latest three-month period	First half 1997	Latest three-month period	First half 1997	Latest three-month period
Indonesia	..	..	5.0	29.7	8.3	18.9	0.7	–21.5	7.0	–64.4
Korea	6.4	– 7.8	4.4	8.9	–18.3	34.5	2.3	–35.1	–2.9	–38.7
Malaysia	11.5	7.8	2.8	4.3	– 2.2	3.2	5.1	–16.5	7.2	–29.8
Philippines	..	..	4.6	7.0	–11.1	–6.6	11.1	0.4	7.7	–28.3
Thailand	6.0	–13.0	4.4	9.0	–13.1	11.0	–8.9	–35.9	7.2	–35.6

[1] Percentage change vis-à-vis the same period of the preceding year, except for the trade balance, which is in billions of US dollars at an annual rate. [2] In terms of relative consumer prices. An increase indicates an appreciation.

Table III.3

Common policy responses include …

A number of common elements have marked the responses of policy-makers to the crisis which, in Indonesia, Korea, the Philippines and Thailand, were formulated in the context of an IMF programme and were backed with official credits (see Chapter VII). First, in all directly affected countries, floating exchange rate regimes had to be adopted soon after their currencies came under attack. Very sharp exchange rate adjustments ensued which contributed to pushing real exchange rates well below the trends seen over the past decade. Exchange rate overshooting is likely to have occurred and may have complicated adjustment by creating price distortions and paralysing corporate and financial activity. A second common feature has been the tightening of monetary policy throughout the region, although the stage at which this tightening was implemented and the determination with which it was applied varied significantly. To a large extent, differences reflected varying degrees of reluctance on the part of the authorities to aggravate, through high interest rates, the financial position of already vulnerable financial and corporate sectors. However, such policy wavering may well have added to the downward pressure on the exchange rate, thus propagating financial distress via the exchange rate channel. Initially, commitments to fiscal restraint were also made, but, as the depth of the crisis became clearer, fiscal stances generally eased. Finally, in recognition of the structural weaknesses at the core of the sudden loss of confidence, adjustment programmes included unprecedented degrees of institutional and structural reform, both in the financial and in the enterprise sector.

… adoption of floating exchange rates …

… tighter monetary policy …

… and structural reform

The crisis in South-East Asia

Crisis hits Thailand first …

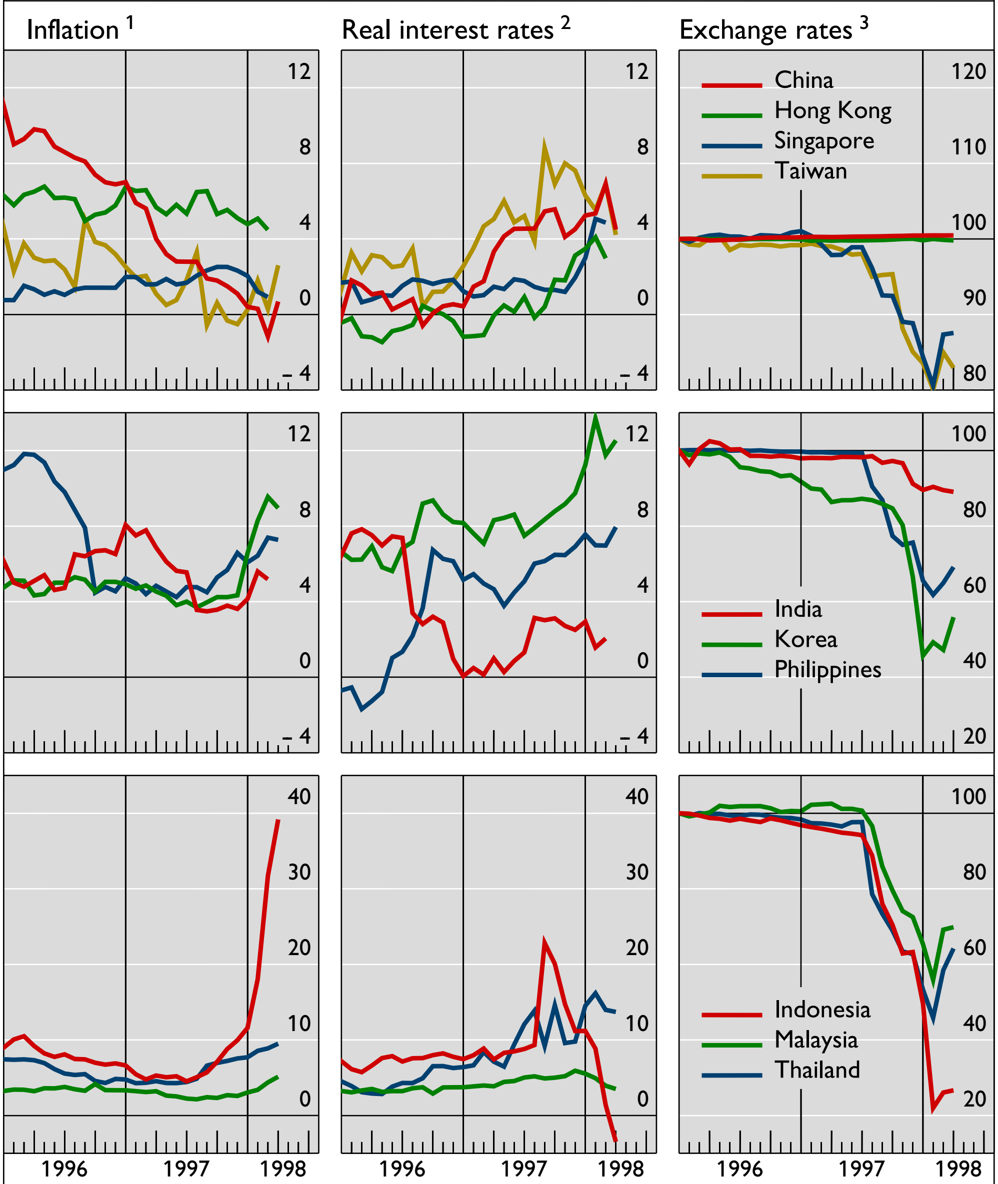
Thailand was the first Asian economy to be faced with the consequences of waning investor confidence. Concerns focused on a continuing slump in exports in early 1997, clouding the prospects of reducing the large current account deficit (8% of GDP in 1996), along with mounting evidence of deep-seated financial and economic vulnerabilities. Intervention could not stem for long the outflow of capital in the first half of 1997 and, by early July, the authorities were forced to let the baht float. Despite an adjustment programme put together in August, confidence remained shaky as the policy response to the crisis, in particular the restructuring of the financial sector, was neither prompt nor appeared to enjoy full government commitment. Even though interest rates were increased significantly (Graph III.3), the baht continued to weaken, losing some 45% of its value vis-à-vis the US dollar by the end of the year. With output stagnating and inflationary pressures building up, domestic demand and imports collapsed and the current account deficit narrowed sharply to just 2% of GDP for 1997 as a whole.

By early 1998, despite considerable lingering uncertainty with respect to the outlook for the property market in particular, a greater degree of stability appeared to be emerging. The financial sector restructuring process seemed to gain momentum; the baht's depreciation came to a halt; the equity market picked up; the exchange rate controls put in place in May last year were abolished; and the tight fiscal stance could be loosened somewhat.

… spreading quickly to Indonesia …

Indonesia quickly became engulfed in the regional financial crisis, notwithstanding strong growth in 1996, a moderation of inflation to around 5% in

Inflation, real interest rates and exchange rates in Asia



1 Annual percentage increase in consumer prices. 2 Short-term rates deflated by the annual rate of inflation. 3 US dollars per unit of domestic currency, December 1995 = 100. Graph III.3

early 1997 and a rather modest current account deficit of about 3% of GDP. Contagion focused on the country's financial weaknesses, in particular a fragile and weakly supervised financial sector, a highly indebted corporate sector and high external debt. The existence of domestic market distortions and associated inefficiencies further heightened uncertainty. Because the progressive widening of the intervention band around the exchange rate failed to accommodate growing pressure, the authorities allowed the rupiah to float freely in mid-August. At that stage, too, they tightened monetary policy. However, recurrent turbulence in the foreign exchange market could not be avoided in the face of doubts about the extent to which the economy could sustain a protracted period of high interest rates; indeed, interest rates were lowered again from late August.

… where its resolution proves very difficult

Despite a comprehensive adjustment programme calling for wide-ranging cuts in public spending, financial sector reforms and economic and trade liberalisation (including the abolition of marketing monopolies and restrictive market arrangements), political uncertainty, policy slippages and major difficulties in establishing a framework for restructuring the large private corporate debt triggered a veritable collapse of the exchange rate in late 1997 and early 1998. The rupiah sank to an absolute low of over Rp 15,000 to the US dollar in late January, less than one-sixth of its value just prior to the outbreak of the crisis in mid-1997. In the subsequent weeks, it settled in a broad range of Rp 8,500–10,500 to the dollar.

At these exchange rate levels, the ballooning cost of servicing the external debt rendered much of the affected corporate sector technically insolvent, while the purchase of even the most basic essentials severely strained the budget of large parts of the population. With a drought also causing agricultural output to stagnate, activity crumbled and annual inflation jumped to 40% in March 1998. Against this background, support was sought by the Government in February for the establishment of a currency board based on a peg well above the prevailing rate. However, several of the necessary preconditions for such an exchange rate regime (see last year's Annual Report) appeared to be lacking at that early stage of economic stabilisation and the plan was withdrawn.

Significant contagion in Malaysia …

Malaysia was also quickly swept into the regional financial turmoil in mid-1997 as markets became increasingly concerned about the large current account deficit, the likelihood of significant price corrections in both property and equity markets and a corporate sector heavily exposed to and dependent on domestic bank financing. In the face of sizable capital outflows, in particular of equity capital, the authorities opted for currency depreciation as the main line of defence, accompanied by some administrative measures to control capital flows and cushion equity prices. Monetary tightening was applied only moderately. Compared with most other countries in the region, the rise in interest rates in Malaysia was much less pronounced (Graph III.3). Fiscal policy, too, responded rather gradually. Only by year-end did the prospects of a steep decline in fiscal revenues trigger expenditure cuts and reductions in or postponements of major development projects.

… but less so in the Philippines

The drying-up of capital inflows in the *Philippines* in the middle of last year also led to a sharp currency depreciation. Nevertheless, a prompt policy response ensured that the adjustment to the currency crisis proceeded fairly smoothly. After the de facto exchange rate peg to the dollar was abandoned in July, monetary policy was tightened and fiscal policy was kept on a cautious course. As exports continued to grow at around 25% in dollar terms, boosted by gains in competitiveness, growth in the Philippines slackened only little and indeed became the strongest in the region.

Republic of Korea

Economic slowdown exposes indebted corporate sector and fragile financial sector

The extensive build-up of industrial capacity, fuelled in the mid-1990s by a long period of very rapid growth and by industrial deregulation, made Korea highly exposed to the slowing of its economy in 1996 and early 1997. Given that the growth of productive capacity had been financed mostly with bank credit (with little reliance on foreign direct investment), pushing debt/equity ratios among the largest industrial conglomerates to nearly 500%, vulnerability to an economic slowdown also extended to the financial sector. Externally, a slump in export receipts widened the current account deficit to almost 5% of GDP in 1996, further heightening the exposure of the economy to swings in external financing flows. The banking sector in particular was heavily reliant on foreign funding in the form of very short-term interbank credit lines.

Growing pressure in the foreign exchange market

Pressure on the won intensified when a number of high-profile bankruptcies of large industrial conglomerates occurred in the first half of 1997 and the associated loan performance problems in the financial sector became more evident. Despite repeated exchange market intervention in the summer and autumn, and a firming of interest rates, the won's slide could not be arrested. By late November, the country seemed on the brink of defaulting on its short-term external liabilities.

Policy responses to and economic costs of the crisis

Macroeconomic policies were tightened significantly and far-reaching structural adjustment measures were proposed in late 1997 and early 1998. Key features of the structural programme included capital account and foreign investment liberalisation, restructuring of the financial system together with strengthened prudential regulation and supervision, and measures to rationalise the activities of the large industrial conglomerates. When, in addition to these measures, an agreement was reached with international banks in late January to reschedule a large part of (non-trade-related) short-term commercial bank debt on favourable terms, a gradual return of confidence seemed to pull the economy out of its immediate crisis. External liquidity constraints were further eased since the current account moved into surplus towards the end of 1997. After January, the exchange rate stabilised and interest rates started falling from the 30% levels to which they had been pushed in late 1997. However, the costs of adjustment also mounted in early 1998. Corporate restructuring and bankruptcies, allied with depressed household spending, caused manufacturing production to shrink by 10% and unemployment to rise to 6½%. Moreover, inflation accelerated to close to 10% in response to rising import prices.

Other Asian countries

Although contagion from the crises in South-East Asia and Korea could not be avoided, the consequences of the turmoil were much less traumatic elsewhere in Asia. In Singapore and Taiwan, this reflected the greater resilience to exchange rate changes provided by a diversified and competitive manufacturing sector and the financial soundness of most economic sectors. In the Hong Kong Special Administrative Region of China, strict policy commitment and a robust financial system enabled the currency board regime to face successfully its severest test yet. And in other cases, a still limited degree of capital account convertibility (China and India) or a large stock of foreign exchange reserves (China) tended to protect the economies from immediate contagion.

Resilience to turmoil in Singapore …

The *Singapore* economy staged a strong recovery from the slump in the electronics industry in 1996, only to slow in the face of the financial turbulence elsewhere. To deal with its impact, fiscal policy was eased (although the fiscal accounts remained in surplus) and interest rates were raised to counter speculative outflows. Moreover, the scope for flexibility in the country's exchange rate regime was more fully used. The exchange rate, traditionally subject to a slow and steady appreciation in effective terms, was allowed to fluctuate in a wider range after mid-1997. It subsequently fell by about 20% against the US dollar before recovering some of its losses in early 1998.

… and Taiwan

Taiwan's economy also showed great buoyancy prior to the outbreak of regional financial turmoil and succeeded in maintaining significant momentum thereafter. Growth picked up to close to 7% last year while consumer price inflation, at less than 1%, fell to its lowest level in ten years. Nevertheless, currency pressure was felt from the middle of last year. Initially, the authorities sought to keep the exchange rate stable vis-à-vis the US dollar, intervening heavily at times and allowing domestic interest rates to rise. The negative implications of this policy mix for equity prices and trade competitiveness, however, induced the authorities to let the exchange rate respond to further market pressure after mid-October. An immediate depreciation of 7% was followed by another bout of weakness in late 1997 when the currency crisis erupted in Korea, one of Taiwan's main trade competitors. As in Singapore, a return of confidence in the economy's strong fundamentals strengthened the currency again in early 1998.

Defence of Hong Kong's currency board

The firm commitment to a fixed exchange rate in a region rapidly converting to exchange rate flexibility, allied with the heavy build-up in early 1997 of pressure in domestic property and equity markets, made *Hong Kong* particularly susceptible to investor anxiety. Confronted with two speculative attacks – the first in August and a more violent one in October – the authorities demonstrated that the defence of a currency board was possible as long as the soundness of the domestic financial system was not in doubt. Interbank rates were allowed to rise sharply (reaching an overnight peak of 280% in late October), leaving equity and property prices to take the brunt of the adjustment. Pressure on the Hong Kong dollar diminished and interest rates came down in early 1998. Nevertheless, the continuing interest rate differential over comparable US rates suggested some remaining degree of uncertainty about Hong Kong's economy.

China's economy slows somewhat

A strong current account position, modest foreign indebtedness, a large stock of international reserves and the existence of capital controls shielded *China's* economy from much of the direct consequences of financial turmoil in the region. However, the indirect impact of the crisis may well accentuate the gentle slowdown of the economy, the first signs of which emerged in 1997. For the year as a whole, growth remained rather robust at close to 9%, but, with domestic demand collapsing in several neighbouring countries, exports lost some of their earlier buoyancy as the year went on. This added to slowing consumer demand at home and contributed to a build-up of inventories. Reflecting weaker demand pressures, inflation fell further, with retail prices actually declining in late 1997.

Medium-term policy objectives

To ensure sustainably high growth in the medium term, the restructuring of state-owned enterprises was put high on the authorities' agenda in key policy-setting meetings in late 1997 and early 1998. The fact that corporate restructuring could also contribute to checking the further build-up of non-performing loans which has severely compromised the solvency of the largest state-owned banks gave this objective even greater weight. In the short term, however, it will have adverse implications for employment growth, while possibly making high claims on public finances as existing bad loans are written off.

India

Notwithstanding some downward pressure on the exchange rate in late 1997, which triggered a tightening of monetary policy, *India* remained largely unaffected by the regional disturbances. Rather, political uncertainties, a slowing pace of structural and financial reform and infrastructure bottlenecks shaped economic developments last year. Compared with the average 7% growth rate achieved in the preceding three years, the Indian economy lost momentum, with growth slowing to around 5% last year. However, the deceleration contributed to a further reduction in inflation while helping to keep the current account deficit at around 1½% of GDP. Despite some windfall revenue gains as a result of a tax amnesty programme, the central government deficit, at 6% of GDP, remained an important constraint on achieving high, sustainable growth. A key positive development, however, was further progress in reducing the automatic monetisation of the fiscal deficit through central bank credit.

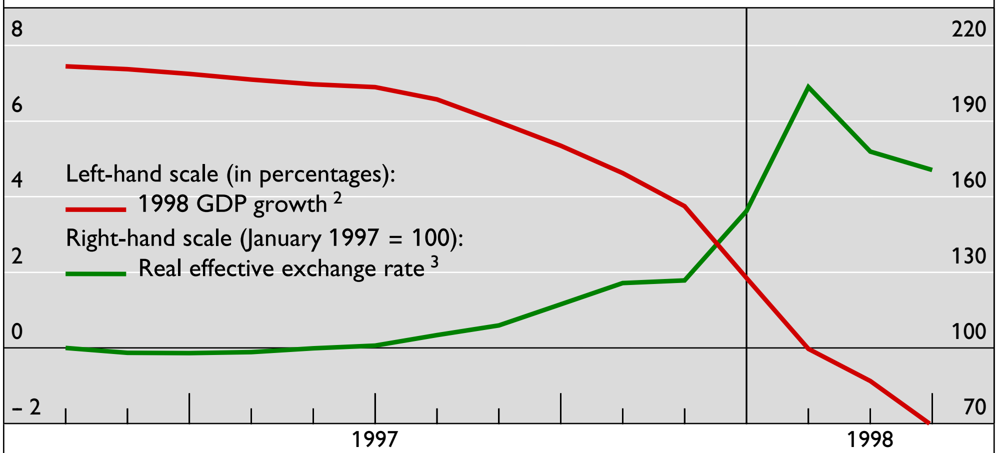
Special issues raised by the crises in Asia

Real exchange rates and output

Real depreciation associated with a slump in activity in Asia ...

A pronounced slowdown of domestic demand and activity has followed large currency depreciation in several Asian economies. As shown in Graph III.4, mounting real depreciation triggered by plunging nominal exchange rates in the four most adversely affected economies went hand in hand with continuous downward revisions of their 1998 GDP forecasts. In Mexico, too, real depreciation triggered by the 1994/95 peso crisis was initially associated with a precipitous drop in output. More generally, empirical studies of the effect of real exchange rate depreciation on the level of activity in emerging economies have often revealed a contractionary effect, at least in the short run.

1998 GDP growth forecasts and the real effective exchange rate [1]



[1] Simple average of Indonesia, Korea, Malaysia and Thailand. [2] 1998 GDP growth forecast in the months shown. [3] In terms of relative consumer prices; an increase indicates a depreciation.
Sources: © Consensus Economics, London, and national data. Graph III.4

… notwithstanding high openness to trade

Structural linkages between exchange rate changes and economic activity, however, are complex and difficult to capture empirically. Conventional theory predicts that devaluation leads to an expansion of output as production in export and import-competing industries is stimulated. Given heavy reliance on trade as the engine of growth, a rapid and strong response of activity could thus be expected from real depreciation in Asia. However, if depreciation is slow in triggering an expansion of exports, and if capital flows suddenly reverse, all the external adjustment has to come from lower imports. This would imply an initial harsh retrenchment of domestic demand. Graph III.4 suggests that forecasters have gradually assigned a higher probability to such a contractionary process in Asia in the short run.

Explanatory factors include weak demand in key markets …

Several factors, some trade-related and others the consequence of financial fragility, may have played an important role in the lack of responsiveness of exports to sizable competitiveness gains. First, the weak response of output, in particular of tradable goods, has reflected in part the importance of intra-regional trade. With exports to Japan and to each other accounting for about one-quarter to one-third of total exports in Indonesia, Korea, Malaysia and Thailand, exporters have faced particularly depressed markets in which to compete. On a year-on-year basis, Japanese imports from other Asian economies shrank by 6% in the three months to end-1997, while the decline in Korea, another major trading nation in the region, was even larger. Moreover, given the prevalence of processing activity in several Asian countries, export industries are highly dependent on intermediate inputs imported from elsewhere in the region. Thus, weakening imports and exports have been feeding upon each other. Mexico's experience in the wake of the peso depreciation in late 1994/early 1995 was quite different in this respect as the US market, which accounts for 85% of Mexican exports, was booming at the time. Interestingly, exports of the Philippines are also directed more towards the US market and continued to expand rapidly in the second half of 1997.

… exchange rate uncertainty …

A further element inhibiting increased production of tradable goods is that, in an environment characterised by exchange rate overshooting and volatile inflation prospects, identifying the level at which the real exchange rate is likely to settle may be particularly difficult. Until greater certainty is gained, especially about the relative price of imports needed as inputs, enterprises may well be reluctant to make longer-term output commitments.

… the need for price concessions …

The dominant market position which several Asian economies have acquired through heavy capacity expansion in particular industries may also have complicated the recovery process. In these industries and markets, an increase in supply often requires price concessions, which accentuate the terms-of-trade deterioration associated with depreciation.

… and economy-wide financial fragility

Other factors contributing to the sharp declines in activity despite real depreciation in Asia relate to the financial weakness of both the corporate and financial sectors. High corporate debt/equity ratios (as in Korea and Malaysia), or heavy exposure to foreign-currency-denominated debt or asset price changes (as in Indonesia and Thailand), forced sudden and sharp downward adjustments in borrowing and spending once monetary policy tightening, depreciation and asset price deflation confronted enterprises and households with mounting debt servicing obligations. This demand contraction is likely to have been aggravated by banks' desire to curtail credit as the increase in bad loans reduced capital ratios.

The credit availability factor may eventually play a more important role in slowing Asia's economy than it did in Mexico in 1995. First, corporate vulnerability, while evident, was less of a concern in Mexico than it seems to be now in Asia. This made it possible, for the larger Mexican enterprises at least, to find other sources of credit outside the country. This was especially the case for those firms with close links to US parent companies. Secondly, the consequences of banking sector fragility for enterprise funding have been amplified by high corporate dependence on bank credit in Asia and the frequent lack of deep and well-developed money and capital markets. By way of contrast, in Africa, depreciation has resulted in rapid increases in activity, consistent with low dependence on bank credit (and bank intermediation in general) and thus an absence of concerns about bank fragility.

Exchange rates and prices

A relatively low exchange rate pass-through into prices in Asia reflects …

Although accelerating in early 1998, consumer price inflation has so far shown a rather subdued reaction to exchange rate depreciation in most of the crisis-affected Asian economies. Despite their openness to external influences, the highest rates of exchange rate pass-through into consumer prices have been no more than 20–25% in Indonesia and Thailand and even less in Korea and Malaysia (Table III.4). This modest pass-through in Asia is similar to that experienced in Italy, Spain, Sweden and the United Kingdom in the wake of the 1992 ERM crisis. However, it contrasts sharply with the nearly complete translation of the May 1997 depreciation into inflation in the Czech Republic, as well as with the pass-through of over 40% recorded in Mexico in 1995. Last year's Annual Report addressed this apparent difference in the relationship between inflation and exchange rate changes in particular regions, noting that the inflationary response to effective depreciation in Asia has traditionally been relatively restrained, while in Latin America exchange rate devaluations commonly contribute to surges in inflation.

… depressed domestic demand and excess capacity …

The severe retrenchment of domestic demand in Asia doubtless explains a large part of the still muted response of prices to sharp exchange rate depreciation. Moreover, with substantial spare capacity in many sectors, a future recovery of demand may engender only a subdued price response even in the medium term. The current and prospective correction of property prices is also likely to contribute. Another important factor may be the traditionally strong aversion to inflation in Asia, an understandable sentiment given still significant pockets of poverty and the absence of social safety nets. Indeed, arrangements such as price indexation, cost-of-living adjustments in wage contracts, or even the practice itself of concluding formal wage agreements have yet to become common in most Asian economies.

… a compression of labour costs …

Initial adjustments to the crisis in the labour market have been swift, absorbing part of the potential pass-through of depreciation into prices. Even in countries with strong trade union movements, such as Korea, measures to enhance labour market flexibility have been promptly proposed and accepted. A

Exchange rate changes and inflation in selected countries				
	Exchange rate[1]	Wholesale prices[2]	Consumer prices[2]	*Imports as a % of total expenditure*[3]
	percentage changes			
Indonesia				
July 1996 – July 1997	7.3	–	5.7	
July 1997 – Feb. 1998	255.4	–	69.9	*27.3*
Korea				
July 1996 – July 1997	9.6	2.7	4.0	
July 1997 – Feb. 1998	82.6	31.0	12.6	*34.0*
Malaysia				
July 1996 – July 1997	3.4	–	2.4	
July 1997 – Feb. 1998	48.2	–	7.9	*95.6*
Thailand				
July 1996 – July 1997	19.6	5.7	6.6	
July 1997 – Feb. 1998	51.6	23.8	9.0	*45.8*
Czech Republic				
April 1996 – April 1997	8.6	4.1	6.3	
April 1997 – Feb. 1998	15.6	7.3	15.3	*61.1*
Memorandum items:				
Mexico				
Nov. 1993 – Nov. 1994	9.1	7.8	7.1	
Nov. 1994 – Nov. 1995	122.5	58.1	52.0	*28.7*
Italy, Spain, Sweden and the United Kingdom[4]				
Aug. 1991 – Aug. 1992	3.9	0.8	4.1	
Aug. 1992 – Aug. 1993	23.4	5.1	3.8	*20.0*

[1] Local currency against the US dollar; for the Western European countries, against the Deutsche mark. [2] Led by one month; at an annual rate. [3] Imports defined as imports of goods and services in 1995; for the Western European countries, 1993. [4] Unweighted average. Table III.4

widespread elimination of end-of-year bonuses and a reduction in nominal wages in hard-hit sectors have also taken place. In Thailand programmed increases in minimum wages have been postponed, while in Indonesia they were recently frozen. One indication of the compression of labour cost growth (and the profit squeeze coinciding with it) might well be the wide gap shown in Table III.4 between the rise in wholesale prices, often indicative of the cost of (imported) intermediate inputs, and that in consumer prices, more indicative of final goods prices. Wholesale prices have reflected the drop in exchange rates more fully. From a somewhat different perspective, if wholesale prices more closely reflect tradable goods prices while consumer price indices include greater shares of non-tradable goods, the data may suggest that the sharpest retrenchment is taking place in those (usually labour-intensive) sectors serving mainly the local market.

… and possibly some suppressed inflation

A final note of caution concerning the favourable outcome to date would be that consumer price inflation may not be a very reliable gauge of inflation pressure in some Asian countries. In particular, the product baskets on which calculations are based may not be representative of current or average spending patterns (for example, they may use historical weights for basic food products or energy although such items have become relatively less important). Moreover, inflation may be partly suppressed, since the setting of prices of particular products in several countries remains under government control and therefore does not always reflect changing market conditions. In Indonesia, for instance, administrative measures were taken to stabilise food prices in early 1998; in Malaysia, selective price controls have been applied to essential food products and energy; and in the Philippines, government regulations kept energy prices steady until early 1998 despite the sharp drop in the external value of the peso.

Developments in Latin America

Strong growth and falling inflation …

Last year the Latin American economies grew by 5% and inflation dropped to 14%. These welcome developments are testimony to sustained structural reform efforts involving privatisation, trade liberalisation, social security reform and the strengthening of financial systems. Growing financial integration with world markets, as well as disciplined monetary policies in recent years, have also made a contribution. A cause of some concern was the widening of the region's current account deficit to about 3% of GDP, reflecting in part buoyant domestic demand growth and in part real currency appreciation in a number of countries. However, during much of the year capital inflows, a large share of which was in the form of foreign direct investment, financed the deficits with ease. In addition, fiscal imbalances remained a problem in several countries. In Colombia, the public sector deficit widened significantly, complicating efforts to reduce the country's persistently high rate of inflation and the rapid pace of real appreciation in recent years. The fiscal deficit has remained large in Brazil, while weakening oil prices are eroding Venezuela's earlier strong fiscal position and are requiring fiscal restraint in Mexico. Moreover, in late 1997, international financial turmoil cast a sudden shadow over the region's economic momentum. However, contagion from Asia tended to be well and quickly contained thanks to the authorities' willingness to strengthen monetary and, in some cases, fiscal discipline.

… but also wider external deficits …

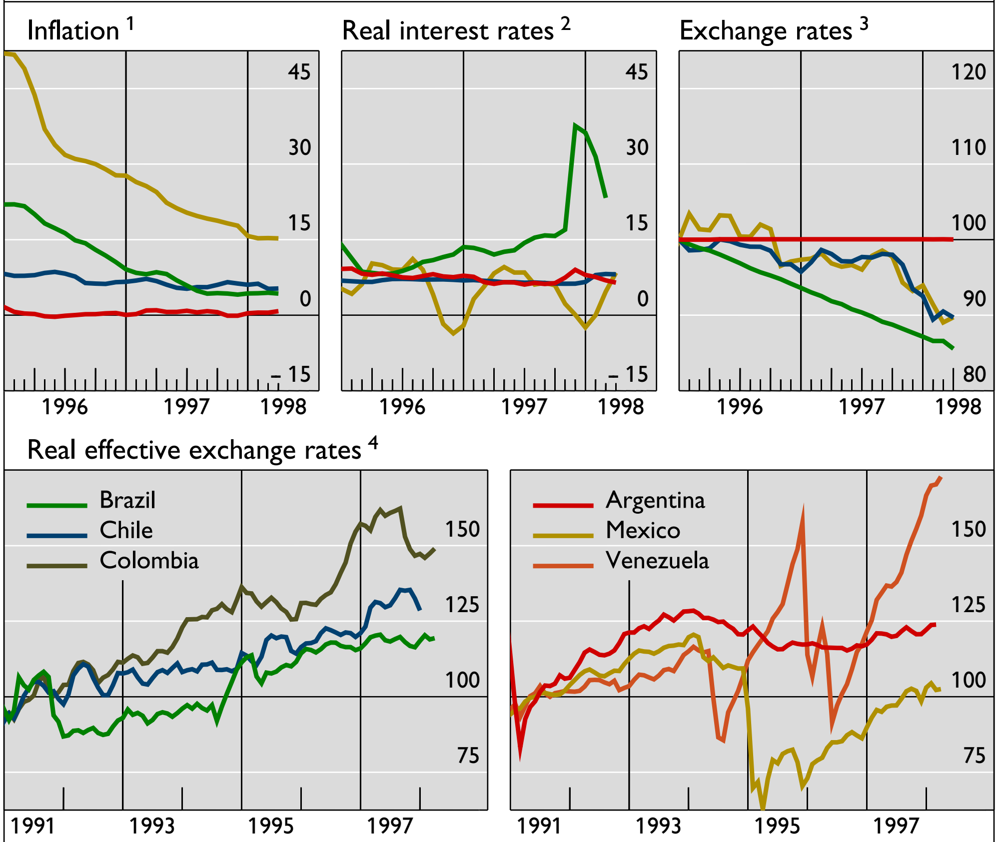
… and sizable fiscal imbalances in some countries

Prompt policy responses to turmoil in Brazil

Vigorous domestic demand propelled the rate of growth of *Brazil's* economy to 5% in the year ending in mid-1997. However, it also caused the current account deficit to widen to over 4% of GDP and led the central bank to tighten its stance from May. A large current account deficit, the perception of insufficient fiscal adjustment and a managed exchange rate regime made Brazil the main victim outside Asia of investor anxiety in late October. The authorities responded to the sudden crisis not only with a swift and determined tightening of monetary policy, but also by pursuing fiscal restraint and advancing the agenda for administrative and social security reform. Central bank interest rates were doubled to real annualised levels of over 40% at the end of the month and a restrictive fiscal package equivalent to over 2% of GDP was announced in November.

This policy resolve, allied with the evidence that the authorities were effectively in control, did much to restore market confidence. By early 1998 interest rates could be gradually reduced (Graph III.5) and equity prices and capital inflows regained strength. A more balanced policy mix may also have enhanced the credibility of Brazil's managed exchange rate regime and its role in

Inflation, real interest rates and exchange rates in Latin America



[1] Annual percentage increase in consumer prices. [2] Short-term rates deflated by the annual rate of inflation (for Mexico, by annualised inflation in subsequent months). [3] US dollars per unit of domestic currency, December 1995 = 100. [4] In terms of relative consumer prices, 1991 = 100. An increase indicates an appreciation.

Graph III.5

promoting non-inflationary growth. Moreover, with the rate of inflation having dropped below the gradual rate of currency depreciation, earlier concerns about potentially unsustainable competitiveness losses have diminished. Instead, the major areas of lingering uncertainty have become the control of public finances at the level of the states and continued high real interest rates. The latter entail significant costs for debt service and have undesirable implications for growth and employment. Indeed, the rate of unemployment rose to 8¼% in early 1998, the highest rate since the mid-1980s.

Currency turbulence spreads to Chile

Chile's record in recent years has been one of prudent policies that produced solid GDP growth, a gradual reduction of inflation, sizable fiscal surpluses, a sound financial system and, until recently, moderate current account deficits. Nevertheless, the turmoil in financial markets in late 1997 also spread to the Chilean economy. Investor concern focused on the current account implications of Chile's heavy trade exposure to the Asian region in general and the very steep fall in the price of several of its main commodity exports, in particular copper. The exchange rate against the dollar, which had remained stable for most of the year, was allowed to fall by nearly 10% between the end of October and early 1998. In addition, monetary policy shifted towards greater restraint, pushing central bank rates in real terms from 6½% on average in the first three quarters of 1997 to over 8% in late March.

Financial resilience in Argentina

GDP growth in *Argentina* accelerated to 8% last year; unemployment – swollen in the wake of the Mexican peso crisis – started to ease; and the 1991 Convertibility Plan, anchored on a fixed peg of the domestic currency to the dollar, continued to deliver price stability. Fiscal discipline improved, while domestic interest rates continued on a gentle downward path only briefly interrupted by the financial turmoil in late 1997. Particularly indicative of the growing financial resilience of the economy was that, in contrast to the 1995 financial crisis, no signs emerged of residents shifting from peso to dollar-denominated deposits during the recent episode of turbulence. As a safeguard against a potential swing in investor sentiment if the current account deficit (3% of GDP in 1997) were to widen, the authorities committed themselves in early 1998 to the rigours of an IMF programme for the next three years, even though drawings on IMF funds were only to be made if market conditions became unsettled. A key element of this programme is further progress in labour market reform and a shift away from payroll taxes, both being considered necessary complements to the fixed exchange rate regime.

Mexico's policy challenges

Fiscal discipline and a monetary policy focused on gradually reducing inflation provided the necessary environment of stability in which *Mexico's* economy, paced by the tradable goods industry, could expand by 7% last year and inflation could fall to 16% by year-end. Imports recovered strongly, causing the trade balance to swing into deficit and the current account deficit to approach 2% of GDP. Weakening oil prices in early 1998 and greater Asian competition in the United States threaten to accelerate this trend, and may have implications for how the balance between maintaining trade competitiveness and reducing inflation is struck. Only in late 1997, when turbulence in international financial markets put downward pressure on the exchange rate, was there a halt to the steady real exchange rate appreciation over the preceding two-year period. At the same time, however, depreciation triggered central bank concern about its inflationary impact. Liquidity conditions were tightened in mid-March this year, with further restraint likely to come from public spending cuts in response to the oil-price-induced weakening of revenue growth.

Another challenge will be to further promote the revival of a domestic financial system still burdened by a large non-performing loan problem. Much of Mexican investment spending over the last two years has been financed from retained earnings or from external sources given that domestic banks have sharply curtailed credit. Yet sustainable growth may depend on a further recapitalisation and build-up of reserves of the domestic banking sector so as to lay the foundations for a recovery of domestic credit expansion.

Africa and the Middle East

Growth in Africa moderated last year, reflecting bad weather conditions, weakening commodity prices and social and political instability in parts of the continent. The adverse consequences of financial turmoil in Asia for both commodity prices and the cost of external borrowing also tended to dampen growth prospects. Notwithstanding the current slowdown, economic performance in many African countries in recent years has improved under the influence of greater macroeconomic discipline and a growing commitment to structural reform. Prime examples have been the CFA franc zone countries and several southern African countries, where growth has averaged between 5 and 10% over the last two years while inflation has come down steadily.

South Africa

In South Africa growth slowed significantly to below 2% last year, with inflation falling to 6% by year-end. The levelling-off of the growth of bank credit (albeit at a high rate), the drop in inflation and the improvement in the balance of payments allowed some easing of monetary policy in late 1997 and again in early 1998. Recently, monetary policy operating procedures have also been revised with a view to making policy implementation more market-oriented.

Saudi Arabia

GDP growth in Saudi Arabia settled at around 2½% last year as oil prices were reasonably firm until late in the year and consumer prices virtually stabilised. While the fiscal deficit narrowed to about 3½% of GDP from 10% in the early 1990s, the intended further consolidation may become more difficult in view of the recent sharp drop in the price of oil.

Israel

In Israel, a cyclical slowdown to 2% GDP growth, as well as fiscal and monetary restraint, dampened inflation to 7% last year and contributed to a narrowing of the trade deficit. In mid-1997 the exchange rate regime was modified to allow a progressive widening of the fluctuation band. Moreover, nearly all restrictions on the use of foreign currency by citizens have been lifted as from May 1998.

Recent economic and financial developments in transition economies

The year 1997 demonstrated again that transition is not a smooth, let alone linear, process. Growth in the Czech Republic slowed considerably and Bulgaria and Romania faced serious recessions. However, growth in Poland, the Baltic states and Hungary remained strong and Russia finally recorded an expansion of its formal economy. Looking at the process of transition since its beginning, progress is evident in an increasing number of economies, with growth and particularly inflation differentials narrowing markedly (Graph III.6).

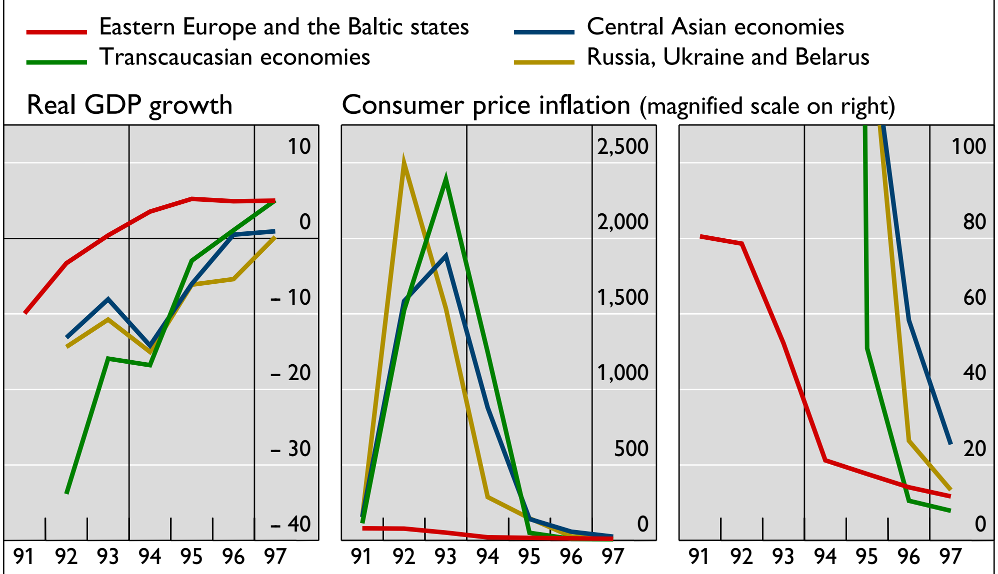
In the wake of the Asian crisis, several economies in the region, in particular Estonia, Russia and Ukraine, became exposed to rapidly shifting investor sentiment. In general, however, spillover effects remained moderate, mainly because of a widespread willingness to raise domestic interest rates in order to stabilise exchange rates.

Eastern Europe

Overall, growth in Eastern Europe has remained fairly modest in the last two years, while inflation appears to be stuck at a rather high level compared with inflation elsewhere. The latter result is due in part to the decontrol of previously administered prices and in part to price pressures in the services sector. Unemployment levels have hardly declined, which has constituted a continuous drain on public finances.

GDP growth and inflation in transition economies *

In percentages



* Calculated using weights based on 1990 GDP and PPP exchange rates.

Graph III.6

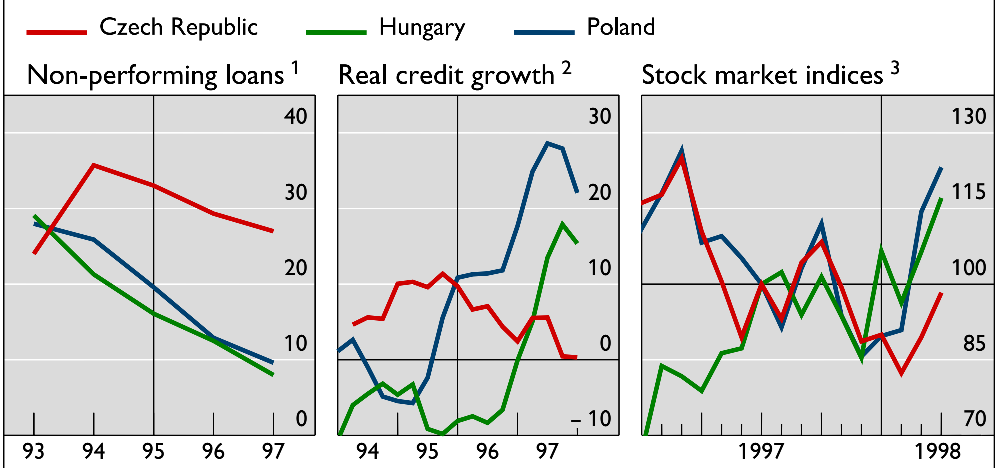
Sustained adjustment in Hungary

Economic and financial developments have differed significantly, however, between individual countries. The resolute adjustment policies adopted by *Hungary* since 1995 to deal with destabilising fiscal and current account deficits have started to bear fruit. The current account deficit fell from 9% of GDP in 1994 to 2% last year and progress was also made in reducing the budget deficit. The non-performing loan problem, which had restrained bank activity in previous years, eased further (Graph III.7). In 1998, a lower monthly rate of currency depreciation and government suasion encouraging more moderate wage settlements are aimed at tackling more effectively the country's still high rate of inflation.

Currency crisis in the Czech Republic

Perceptions of a lack of sustained structural reform and fiscal slippages caused a loss of confidence in the *Czech* economy in early 1997. In particular, concerns focused on the continued existence of soft budget constraints at the enterprise level, heavy external borrowing by enterprises and banks, financial fragility reflected in a large stock of non-performing loans, and the rather piecemeal development of a legal framework for financial transactions. Against the background of rapid real exchange rate appreciation and an associated ballooning of the current account deficit, the koruna thus became subject to increasing speculative pressure. To a more limited extent, the perceptions of institutional investors that Czech and Thai financial assets belonged to the same risk category (see Chapter VI) also made the Czech currency vulnerable to the pressure on the Thai baht in early 1997. Despite heavy intervention and a tightening of monetary policy, the central bank was forced to abandon its exchange rate band regime in late May. Prompt fiscal tightening, continued monetary restraint and a broadened framework of financial oversight did much to restore calm, albeit at the price of slowing growth.

Financial indicators in Eastern Europe



[1] As a percentage of total loans. [2] Four-quarter changes in credit to the private sector deflated by the annual rate of inflation, in percentages. [3] June 1997 = 100. Graph III.7

Strong growth in Poland

Poland has been spared a major setback since the start of transition. GDP grew by 7% in 1997, the sixth successive year of significant growth. More recently, however, concerns have been voiced about the widening current account deficit, which has been fuelled primarily by strong imports, and the very rapid real growth of credit to the private sector (Graph III.7). To counter associated risks of overheating, monetary policy was tightened several times during 1997, by raising reserve requirements as well as official interest rates. In addition, the scope for real exchange rate appreciation was increased in February 1998 as the zloty's rate of monthly devaluation was cut and its fluctuation band widened.

Impact of Bulgaria's currency board

The implementation of a currency board in July last year quickly pushed down *Bulgaria's* monthly rate of inflation from a peak of 240% in February 1997 to about 2% a year later. Foreign exchange reserves recovered during 1997 as the current account surplus widened and privatisation attracted sizable capital inflows. However, the cost of adjustment was another year of severe economic contraction; GDP fell by 7½%, following a decline of 11% in 1996.

Russia

Growth turns positive

Driven by rising household consumption, growth turned slightly positive last year, for the first time since the beginning of transition. Official GDP figures may even understate the expansion as the large informal economy is thought to have grown vigorously. Inflation fell to 11% by the end of 1997, a rate that compares favourably with many Eastern European economies. The general practice followed since mid-1995 of gradually and frequently adjusting the rouble's exchange rate vis-à-vis the US dollar was replaced at the start of 1998 by a new regime. The central rate has been set at Rb 6.2 to the dollar for the next three years, but the exchange rate is allowed to move within a 15% fluctuation band on either side of the central rate. By mid-April 1998, the exchange rate stood at Rb 6.1 to the dollar. As the real effective exchange rate of the rouble has already appreciated by a factor of two over the last three years, containing inflation further would do much to bolster the viability of the new regime.

Exchange rate regime change

Fallout from the Asian crisis

In the wake of the Asian crisis, share prices dropped by nearly 50% and for the first time there were large-scale withdrawals of funds from the Treasury bill market by non-residents. International markets were virtually closed to Russian issues during October and November. In addition to intervention, the central bank reacted to the pressure by raising its indicative refinancing rate to a peak of 42% in early February 1998. To cushion against future shocks, reserve requirements were increased on foreign exchange deposits and limits were placed on foreign borrowing by domestic banks. With interest payments absorbing about half of tax revenues, higher interest rates tended to have an immediate and sharp impact on the budget. Attempts were therefore made to cut spending and so underpin the restrictive monetary policy. By March 1998, a major part of the contagion effect seemed to have been overcome: international reserves increased, interest rates were eased and international bank lending resumed.

Several serious policy challenges remain

Several weaknesses continue to cloud the transition process in Russia. First, public finances need to be put on a sounder footing. Although tax collection rates improved somewhat last year, the tax base has remained narrow, partly because of the pervasive informal economy. Last year the federal deficit reached 7% of GDP and the budget for 1998 envisages a shortfall of close to 5%. Secondly, a spreading culture of non-payment together with an inefficient payment mechanism (more than 40% of industrial sales occur via barter) continue to hamper business activity, while the associated demonetisation complicates the implementation of monetary policy. Thirdly, large financial-industrial groups (accounting for up to half of Russia's hard currency earnings) may attempt to slow the transition to a market-driven economy with a "level playing-field", given that they enjoy special privileges, including tax breaks. A particular concern is that such groups could use their influence to compromise the progress being made towards better standards of corporate governance and a sounder banking supervisory framework. Finally, the recent weakness of oil prices is a reminder that the continuing high share of oil exports in total exports makes the fiscal deficit and the economy hostage to large terms-of-trade shocks.

IV. Monetary policy in the advanced industrial countries

Highlights

Monetary policy-makers in the two largest economies continued to face sharply different cyclical conditions during the past year. In the United States, the main question was whether the Federal Reserve should tighten policy; given considerable uncertainty about the degree of excess demand and continuing low levels of inflation, however, it was decided not to do so. By contrast, in Japan short-term rates remained unchanged at exceptionally low levels under the influence of a sizable infusion of liquidity by the Bank of Japan. In the course of the fiscal year ending in March 1998 the Government announced new measures, including the commitment of public funds, to support the financial system.

Economic developments in the countries that will participate in European economic and monetary union (EMU) were also characterised by significant cyclical differences, but continued inflation and interest rate convergence (see also Chapter II). The fact that short-term interest rates must reach a common level by the time of the establishment of EMU in January 1999 is increasingly influencing actual interest rates. The convergence process has enabled the authorities in Italy, Spain and Portugal, where interest rates have been above the average level for the EMU area, to relax monetary policy. In Ireland, Finland and the Netherlands, which are at a more advanced stage of the cycle and where monetary conditions have been tightened, the convergence of short-term interest rates at low levels raises inflationary risks. In a number of countries with explicit inflation targets, interest rates also had to be raised to pre-empt a build-up of inflationary pressures.

The decline in inflation witnessed in many countries in the 1990s has been accompanied by a marked increase in the transparency of monetary policy. This development arises from the desire for increased accountability that has gone hand in hand with the greater independence of many central banks. It should also make monetary policy more effective by helping to build the central bank's reputation and by allowing financial markets to play an equilibrating role.

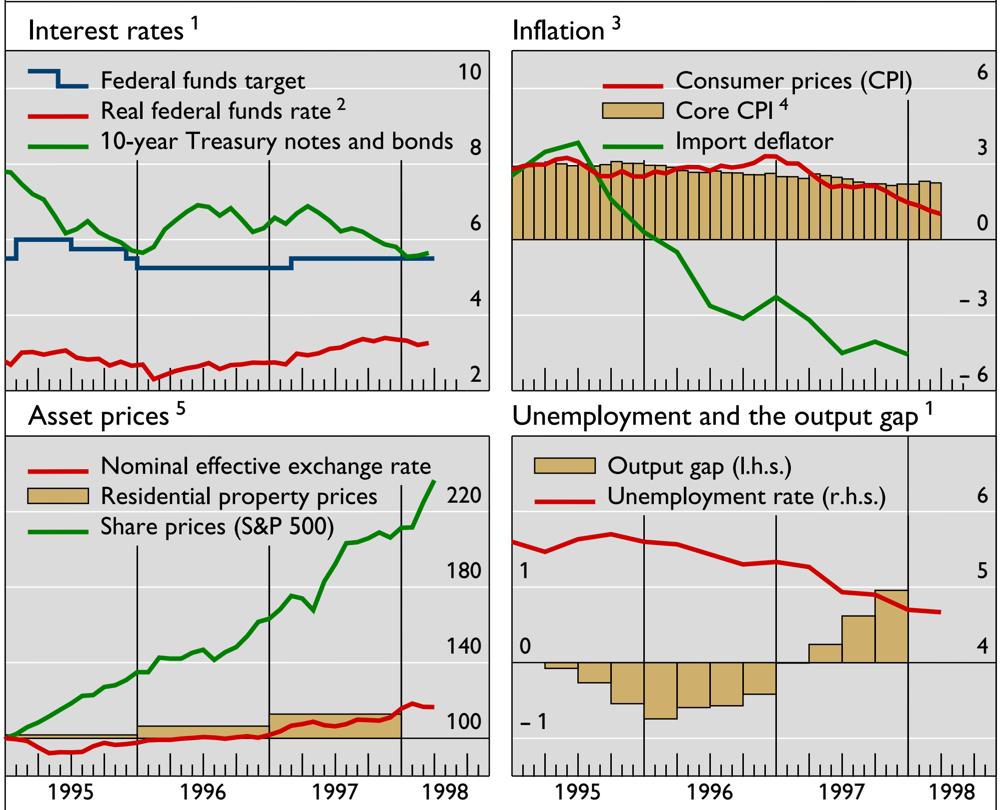
Monetary policy in the United States

The Federal Reserve has faced a dilemma in setting monetary policy in the past year. While several indicators pointed to a risk of rising inflation and a need for tighter policy, other factors suggested that the stance of policy did not need to be changed.

Falling unemployment …

The most important factor pointing to the need to tighten policy was the continued fall in the unemployment rate to a level below that which in the past had been associated with rising wage pressures. However, in addition to labour

Economic indicators for the United States



[1] In percentages. [2] Federal funds rate deflated by 12-month changes in core CPI. [3] Annual percentage changes. [4] CPI excluding food and energy. [5] End-1994 = 100.

Sources: OECD and national data. Graph IV.1

market conditions, the near-term prospects for inflation can also be influenced by such factors as energy and import prices, non-wage labour costs and changes in the degree of internal and external competitive pressures. Unemployment rates below the NAIRU (non-accelerating inflation rate of unemployment) may thus temporarily be compatible with stable inflation. Furthermore, it was considered possible that the NAIRU itself had shifted downwards in response to behavioural and other changes in labour markets. The Federal Open Market Committee therefore took the view that the tightness of labour markets did not necessarily signal an imminent rise in inflation.

… and rising equity prices suggested a need for tighter policy …

A second consideration suggesting a potential need for monetary restraint was the continued rise in equity prices, which risks leading to excessive growth in consumption. However, while rising asset prices increase wealth, consumer spending should in principle respond only to the extent that households perceive this increase as permanent. Since stock prices are volatile, equity price changes may be discounted by consumers, particularly in the short run. Residential property prices, which are much less variable in the short term and which may therefore influence permanent wealth perceptions more directly, rose only moderately last year. Thus, it could be argued that the rise in stock prices may overstate the likely effects of wealth changes on aggregate demand.

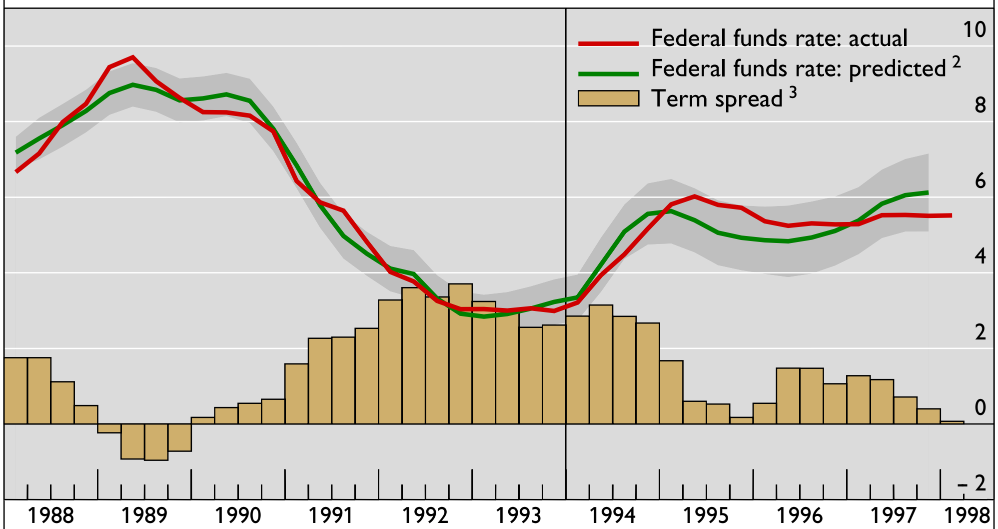
… while declining inflation and the Asian crisis suggested otherwise

While falling unemployment and rising stock prices might have pointed to a need for tighter monetary conditions, other factors suggested that the stance of policy remained appropriate. Chief among these was the fact that inflationary pressures, as measured by a range of indices, continued to ease: core inflation slowed from 2.5% in the first quarter of 1997 to 2.3% a year later and headline CPI inflation from 2.9% to 1.5% over the same period. To the extent that these declines were influenced by the appreciation of the dollar and the weakness of oil and other commodity prices, inflationary pressures could, however, increase in the medium term should these temporary forces abate or reverse. The economic turmoil in Asia will also exert a dampening effect on global inflation through lower import demand and commodity prices, which also suggested that a further tightening of policy would be unwarranted.

In the end, policy was left unchanged

Balancing the arguments for and against a tightening of monetary policy, and noting as well that real interest rates have risen as inflation rates have declined (Graph IV.1), the FOMC opted to leave the federal funds rate at the level set in March 1997. In assessing the stance of policy in the United States last year, it should also be borne in mind that both the nominal and the real federal funds rate rose sharply in 1994 when pre-emptive policy measures were taken to prevent inflation from accelerating. This tightening led to a period of monetary restraint, as evidenced by a flattening of the yield curve, and resulted in a slowdown in real growth in 1995 and in inflation in 1996–97. More interestingly, out-of-sample predictions from a simple reaction function estimated on data ending in 1993 indicate that, following the pre-emptive policy tightening, the federal funds rate in 1995 and 1996 was on average almost 60 basis points above the level predicted by the state of the economy and the FOMC's past behaviour (Graph IV.2). From late 1996 onwards, however, the predicted value of the federal funds rate rises rapidly in response to the buoyant economy. Despite the increase in interest rates in early 1997, the predicted values rise above the actual federal funds rate.

Dynamic forecasts of the federal funds rate [1]



[1] Out-of-sample forecasts using a reaction function fitted on data from 1988 Q1 to 1993 Q4; the vertical line indicates the end of the estimation period. [2] The shaded area marks the 80% confidence band. [3] Ten-year government bond yield less the federal funds rate (actual).

Sources: National data and BIS estimates. Graph IV.2

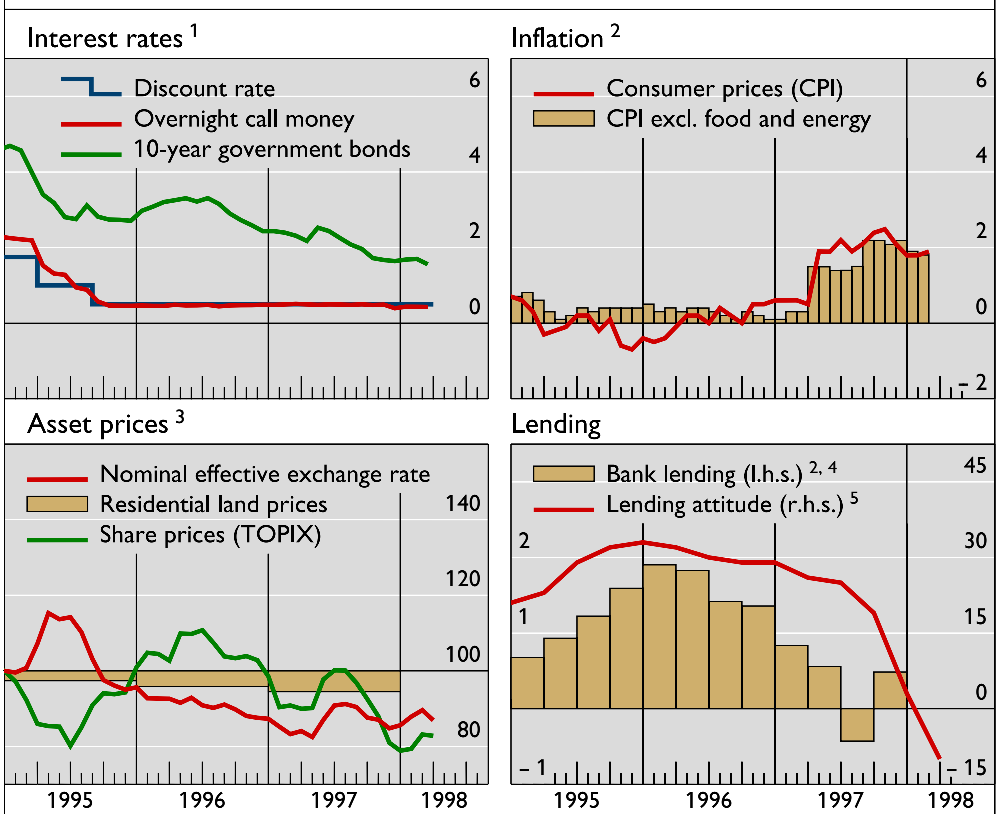
Monetary policy in Japan

Economic activity in Japan fell sharply in the second quarter of 1997 and stagnated thereafter, resulting in a contraction in GDP of 0.25% over the year to the fourth quarter. The main factors underlying the weakness in activity were the consumption tax increase in April 1997, reduced public spending and mounting uncertainty regarding the stability of the financial system. The sluggishness of the economy was also reflected in the low rate of CPI inflation, which, adjusted for the tax change, was essentially zero for the year, and bond yields fell to the lowest level ever recorded.

Concerns about credit risks ...

In November, following the failures of several financial institutions, serious concerns arose about credit risks in the interbank market. In response, the call-money rate rose sharply above the discount rate, the "Japan premium" – the spread between interest rates quoted by Japanese and non-Japanese banks in the euromarkets – increased, and the yield on Treasury bills, which are essentially free from credit risk, fell. To bring the call-money rate back to a level below the discount rate, which has been kept at 0.5% since 1995, the Bank of Japan provided ample liquidity. The counterparts on the liabilities side of the Bank of Japan's balance sheet have been a sharp increase in currency in circulation, and a highly unusual build-up of banks' excess reserves. This suggests that concerns regarding

Economic indicators for Japan



[1] In percentages. [2] Annual percentage changes. [3] End-1994 = 100. [4] To the non-financial private sector. [5] Of financial institutions; percentage balance of positive and negative answers.

Sources: Bank of Japan Short-term Economic Survey ("Tankan") and national data. Graph IV.3

the stability of the financial system and, possibly, the development of a Keynesian liquidity trap may have played a role.

With prices essentially flat, negative real short-term interest rates are not achievable. The Bank of Japan has therefore experienced difficulties in relaxing monetary conditions sufficiently to promote growth. These problems have been exacerbated by the strong headwinds stemming from widespread weaknesses in the financial sector and balance-sheet problems elsewhere in the economy, which have tended to limit the effectiveness of monetary policy.

… and credit rationing …

During the past year there have been growing indications of credit rationing becoming increasingly severe. This is evidenced by the "Tankan" survey (Graph IV.3), which shows that corporate borrowers perceived the lending attitude of financial institutions as becoming more restrictive despite the unprecedentedly low level of policy-controlled interest rates. At the same time, lending growth has declined noticeably.

Several factors have constrained the willingness and ability of Japanese banks to lend. The most important is the large stock of non-performing loans left over from the bubble period. Writing off such loans erodes capital ratios and reduces the capacity to lend. A second such factor has been the continued weakness of equity prices following the onset of the Asian crisis. Since banks have hitherto been able to count part of their unrealised gains on listed securities as capital, declining stock prices tighten capital constraints. In response, banks may have readjusted their asset portfolios away from corporate loans towards assets subject to lower capital requirements. A third factor which may have reduced the supply of loans is the "Big Bang" reforms to be implemented between 1998 and 2001. These reforms will heighten competitive pressures among banks and tighten regulatory standards. Since financially stronger banks will have a competitive advantage in the new environment, the reforms provide an incentive to all banks to apply more disciplined lending standards.

… led to measures to resolve financial sector problems

A number of measures have been announced to deal with the deep and persistent problems in the financial sector. The rules governing the valuation of banks' property assets – many of which were acquired well before the sharp rise in property prices in the 1980s – were changed to allow them to be valued at current market prices. Banks will also be permitted to value their equity holdings at either market or book value, which will exempt them from writing off any losses incurred on their holdings of securities. Moreover, public funds amounting to ¥30 trillion will be used to recapitalise the Deposit Insurance Corporation and banks. Finally, the policy of "prompt corrective action" became effective in April 1998 and will apply to all banks, except some banks operating domestically which will be exempted for one year. These measures, together with steps to increase transparency with respect to banks' loan losses and some indications of a greater willingness to close weak banks and non-banks, are to be welcomed in view of the need to reduce uncertainty regarding the stability of the financial system.

Monetary policy in the EMU area

Different cyclical positions

Cyclical positions in the countries that will participate in the establishment of EMU in January 1999 – Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain – still differ noticeably despite the considerable convergence that has been achieved with respect to inflation and bond yields. The narrowing of yield spreads has been influenced significantly by the interaction of fiscal consolidation and growing expectations that EMU would start with a broad membership.

Over the last year policy-determined short-term interest rates have also continued to converge, with rates tending towards those in Germany. This is desirable for Italy, Spain and Portugal. However, in the Netherlands, Ireland and Finland, such convergence is raising the risk that inflationary pressures might increase.

Germany, France, Belgium and Austria

Expansions strengthened

Economic conditions in Germany, France, Belgium and Austria remained broadly similar in 1997 (see also Chapter II). The expansion in Germany strengthened relative to 1996, although the momentum slackened in the course of the year. Real growth accelerated in France, Belgium and Austria. While this led to some closing of the output gaps in the four countries, they remained substantial, particularly in France.

While still subdued, inflation rates in the four countries tended to diverge. Inflation in Germany, as measured by the all-German CPI, rose modestly, owing largely to the weakness of the exchange rate and the associated increases in import prices, and to higher administered prices. By contrast, in France, Belgium and Austria headline inflation fell to a very low level. In response to the price pressures developing, the Bundesbank raised the repurchase rate in mid-October from 3.0%, an all-time low, to 3.3%. The tightening was followed by interest rate increases in Austria, Belgium and France, which were judged desirable given the upswing in economic activity in these countries and which also served to contain exchange rate pressures within the ERM.

Ireland, Finland and the Netherlands

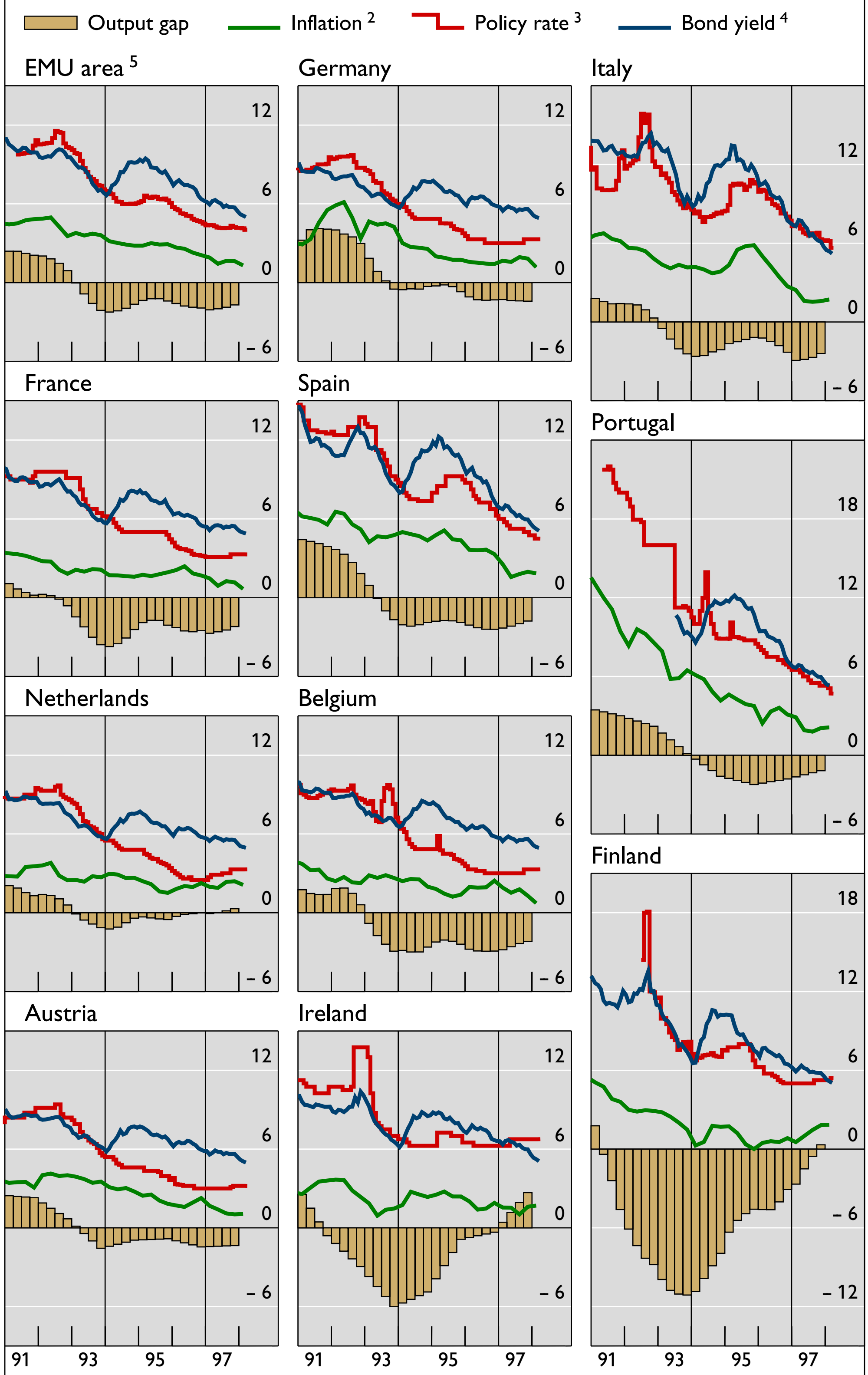
Strong growth and need for tighter policy

Economic developments in Ireland, Finland and the Netherlands, which are all at an advanced stage of the cycle, illustrate the kind of situation that could arise under EMU if asymmetric real developments were to occur. With real GDP growth in 1997 reaching 10.3% in Ireland, 5.9% in Finland and 3.0% in the Netherlands, and concerns that headline inflation would rise, policy-makers in all three countries faced the need for more restrictive policies than were appropriate in France and Germany.

Monetary policy was tightened in Ireland in May last year in the light of the rapid upswing in activity and rising asset prices. Then in March 1998 the central parity of the Irish pound was revalued by 3% within the ERM. In the Netherlands, where inflation rose during the summer and autumn of 1997 owing to increased price pressures from abroad, policy was tightened in March, July and October, the policy rate being raised from 2.7% to 3.3%. The Bank of Finland tightened policy in September 1997 and again in March 1998 as the risk of an acceleration of inflation increased given the depreciation of the markka in trade-weighted terms and the rapid closing of the output gap.

Output gaps, inflation and interest rates in the EMU countries[1]

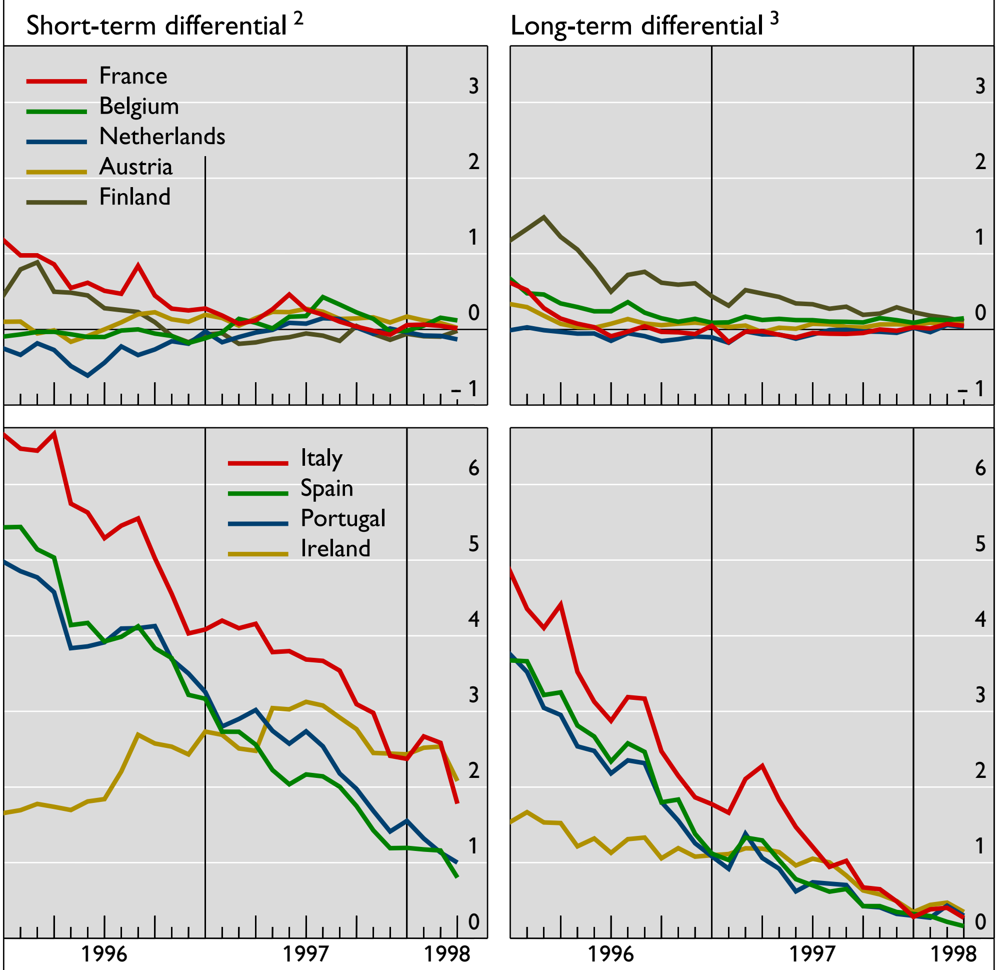
In percentages



[1] Excluding Luxembourg. [2] Four-quarter change in consumer prices (national definitions). [3] For Ireland, short-term facility rate; for Portugal, intervention rate; for Finland, liquidity credit rate; for the other countries, see Table IV.1. [4] Representative government bonds (usually ten-year). [5] Weighted average, based on 1990 GDP and PPP exchange rates.

Sources: OECD and national data. Graph IV.4

Convergence in the EMU countries [1]
In percentage points



[1] Excluding Luxembourg. [2] In three-month rates, vis-à-vis German rates. [3] In government bond yields, vis-à-vis German yields.
Source: National data.

Graph IV.5

Italy, Spain and Portugal

Declining interest rates and falling inflation

In contrast, the downward convergence of short-term interest rates was welcomed in Italy, Spain and Portugal, where interest rates had been maintained at high levels to facilitate the transition to EMU by reducing inflationary pressures and ensuring exchange rate stability, but where output gaps had remained significant. With CPI inflation falling sharply, and with long bond yields declining commensurately, short-term rates could be reduced considerably in all three countries. The gradual relaxation of monetary conditions that has taken place in the last few years has provided a significant boost to their economic growth. Thus in Italy year-on-year growth in the fourth quarter of 1997 reached 2.8%. The recovery was similarly strong in Portugal and Spain, where growth rates exceeded 3% in 1997. Output gaps, however, remained sizable.

Policy issues in the run-up to EMU

The decision taken in early May 1998 to proceed with the establishment of EMU raises several practical questions regarding the conduct of monetary policy. One issue stems from the fact that, while inflation rates are broadly similar among the prospective EMU members, output gaps and the stance of monetary policy still differ considerably between countries (Graph IV.4). Since short-term interest rates must converge to a common level in January 1999, much policy attention will be devoted to choosing the appropriate level for the European Central Bank's policy rate.

Another question relates to the choice of the monetary policy strategy to be pursued by the ECB. Given the possibility of transitional complications immediately after the formation of EMU, policy may initially need to be conducted in a rather eclectic manner. A final consideration concerns how transparent the ECB should be in conducting policy. These issues are discussed further below.

Setting monetary policy

Graph IV.5 shows that short-term interest rates have broadly converged in seven of the 11 EMU countries. However, in Ireland, Italy, Portugal and Spain, short-term rates are still between 100 and 200 basis points above those elsewhere in the EMU area.

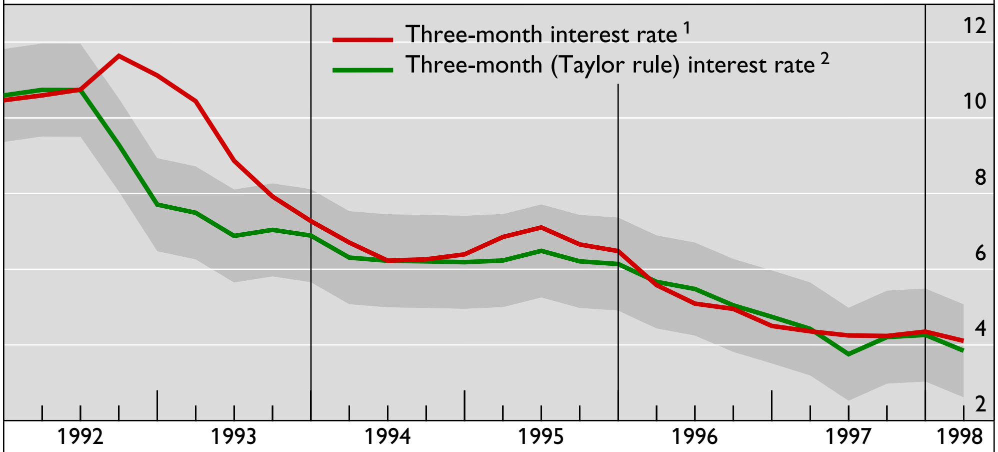
To illustrate the problem of setting a single EMU-wide short-term interest rate, Graph IV.6 shows a GDP-weighted average of three-month interest rates in the EMU area. At the end of 1997, this average stood about 0.7 percentage points above levels in the countries with the lowest interest rates. A hypothetical EMU-wide interest rate is also included. This interest rate is derived from a "Taylor rule", which assumes that monetary authorities raise interest rates whenever output is above potential and/or inflation is above their inflation objective. The interest rate is computed using the GDP-weighted output gap and CPI inflation for the EMU area shown in Graph IV.4, and assumes an estimated equilibrium real interest rate of 3.55% (see Graph IV.6, footnote 2) and an inflation objective of 2%. With the exception of the period around the ERM turmoil in 1992–93, the counterfactual and the actual GDP-weighted short-term rates are close, and stood at about 3.8% in the first quarter of 1998. This suggests that, given the average output gap and inflation rate in the EMU area, if the ECB's repurchase rate was set at the level in the countries with the lowest rates in the spring of 1998, it would be clearly below that suggested by the Taylor rule. There are, however, at least two reasons why this exercise may overestimate the appropriate level of short-term rates in the EMU area.

A "Taylor rule" …

… may overestimate the appropriate level of interest rates

First, although the relatively high interest rates in Italy, Spain and Portugal reflect the need to control inflationary pressures, they are also indicative of a desire to avoid unwelcome exchange market developments. Following the selection of the initial EMU members in May 1998, it is likely that interest rates can be reduced in those countries with little risk of exchange market volatility. The average EMU-wide interest rate in the graph may therefore underestimate the extent to which interest rates can approach those in the countries with the lowest rates.

Interest rates in the EMU area: actual rate and rate implied by the Taylor rule



[1] Weighted average of three-month interest rates in the EMU member countries (excluding Luxembourg). [2] The Taylor rule assumes that the inflation objective is 2% and that the equilibrium real interest rate is 3.55%, which was estimated by regressing realised three-month real interest rates against the average rate of exchange rate depreciation vis-à-vis the Deutsche mark, using data for 13 European countries for the period 1982-97. The equilibrium real interest rate equals the fitted value assuming no depreciation. The shaded area marks the 80% confidence band, computed using the standard error on the fitted value.

Sources: National data and BIS estimates. Graph IV.6

Secondly, in judging the appropriate level of short-term rates, it should be recognised that inflation rates have remained very low, and that the ECB may enjoy greater credibility than individual central banks may have done in the past. Since higher credibility reduces the importance the public attaches to current economic conditions when forming inflation expectations, and increases the weight it attaches to the central bank's long-term inflation objective, nominal interest rates may be able to fall without any danger of reigniting inflation. If so, it would be appropriate for short-term interest rates to converge at a lower level than would otherwise be the case.

In addition to these considerations, there are several other factors that have unclear implications for the appropriate convergence level for short-term rates. One of these factors is that the macroeconomic indicators used in setting policy are not always fully comparable between countries. If, as seems plausible, the sensitivity of inflation to the output gap varies between countries, these differences need to be taken into account. More generally, other links in the transmission mechanism of monetary policy may differ across the EMU area. For instance, the sensitivity of aggregate demand to short-term interest rates may well vary owing to the maturity structure of outstanding debt contracts, the prevalence of variable rate financing and sectoral balance-sheet positions. In principle, these differences should also be considered in setting the EMU-wide short-term interest rate. It is also important to recall that interest and inflation rates have in many countries fallen to levels not seen for decades. This raises the possibility that estimates of national channels of transmission using data from earlier periods with higher inflation and interest rates may not be fully relevant in the current context.

Finally, with a common currency throughout the EMU area, national policy-makers' ability to accommodate wage-price shocks through subsequent currency depreciation is eliminated. Excessive wage increases will therefore have more direct effects on unemployment. Recognition of these changed circumstances may alter, although most probably gradually, the wage-price formation process in the participating countries, which in turn would have an impact on the transmission mechanism.

The monetary policy framework

Monetary and inflation targeting

A second question to be decided concerns the ECB's choice of monetary policy framework. At the time of writing, it appears that the ECB will adopt a system combining elements of monetary targeting and explicit inflation targeting. While in principle these targeting strategies differ, in practice any differences are likely to be small.

First, it is intended that the ECB will publicly define what it understands by price stability. In the light of its mandate, this definition is likely to influence heavily the public's inflation expectations even if a monetary targeting framework is adopted. Secondly, monetary aggregates are frequently used as information variables also in countries with explicit inflation targets. Likewise, in the past, central banks that employ monetary targets have relied upon them to guide policy in the medium term while still allowing the near-term inflation outlook to play an important role in the setting of interest rates.

Eclectic conduct of policy likely

A further reason why the distinction between monetary and inflation targeting is likely to be small in practice, at least initially, is that the establishment of EMU may be associated with considerable structural changes in the participating economies, particularly in their financial sectors. This suggests that money demand relationships could be subject to potentially important shifts (see also Chapter VI). Since monetary targeting requires a firm understanding of the demand for money in order to set target ranges and to determine what policy measures are necessary to achieve the targets, it may be difficult to interpret and control the aggregates in the period immediately following the establishment of EMU. Similarly, inflation targeting requires the construction of an inflation forecast in order to determine the path for short-term interest rates that is required to reach the targets. If the inflation process changes in an unpredictable way after the introduction of the euro, it may temporarily be difficult to conduct monetary policy using inflation targeting. Irrespective of whether it adopts explicit inflation or monetary targeting, or a combination of the two, the ECB is therefore initially likely to conduct monetary policy in an eclectic manner using a wide range of indicators.

Countries with inflation targets

Institutional developments

A new policy framework in the United Kingdom …

Industrial countries with explicit inflation targets for monetary policy have continued to refine their policy framework over the past year. On 6th May 1997 the new British Government announced that it would give the Bank of England operational independence. Previously, the Bank's role in monetary policy had been advisory, while the final decision on official interest rates remained with the Chancellor of the Exchequer. Under the new arrangements, the Bank of England is given full responsibility for setting monetary policy to achieve an inflation target. The previous intention to keep inflation below 2.5% was replaced by a point target of 2.5%. Although the Government will reset this target in each annual budget, the expectation is that it will be kept stable.

Should inflation deviate from the target by more than 1 percentage point in either direction, the Bank's Governor will be required to send an open letter to the Chancellor explaining the deviation and indicating the monetary policy response. This exercise is to be repeated every three months as long as the deviation persists. This new arrangement makes explicit allowance for inevitable deviations from the point target due to the imperfect controllability of inflation, while making the central bank accountable for such deviations. At the same time, it keeps the focus (of the central bank and other economic agents) on the point target, which helps the convergence of inflation expectations.

Monetary policy decisions are now vested in a Monetary Policy Committee (MPC) which, at full strength, has nine members: the Governor, two Deputy Governors and two Executive Directors of the Bank of England, and four independent members appointed by the Chancellor. The MPC meets monthly and the minutes of its meetings are made public after a six-week interval. The Bank's Inflation Report now reflects the views of the MPC regarding the inflation outlook and sets out the rationale for monetary policy decisions.

… and smaller changes in Sweden, Canada and New Zealand

In Sweden, a Government bill which gives the force of law to the central bank's objective of safeguarding the value of money was presented to Parliament in November. In a move to make the message of the Inflation Reports more transparent, and following the practice in the United Kingdom and New Zealand, the inflation forecast is now presented as an expected path of inflation over the next two years including a margin of uncertainty. In Canada, the current 1–3% target range for inflation was extended in February 1998 to the end of the year 2001. This three-year extension will provide a longer period of time in which the economy can demonstrate more fully its ability to perform well under conditions of low inflation. The appropriate long-run target consistent with price stability will be chosen in the light of this experience. Finally, in New Zealand it was decided to move from semi-annual to quarterly Monetary Policy Statements in order to give more frequent formal guidance to market participants regarding the outlook for inflation.

Policy developments

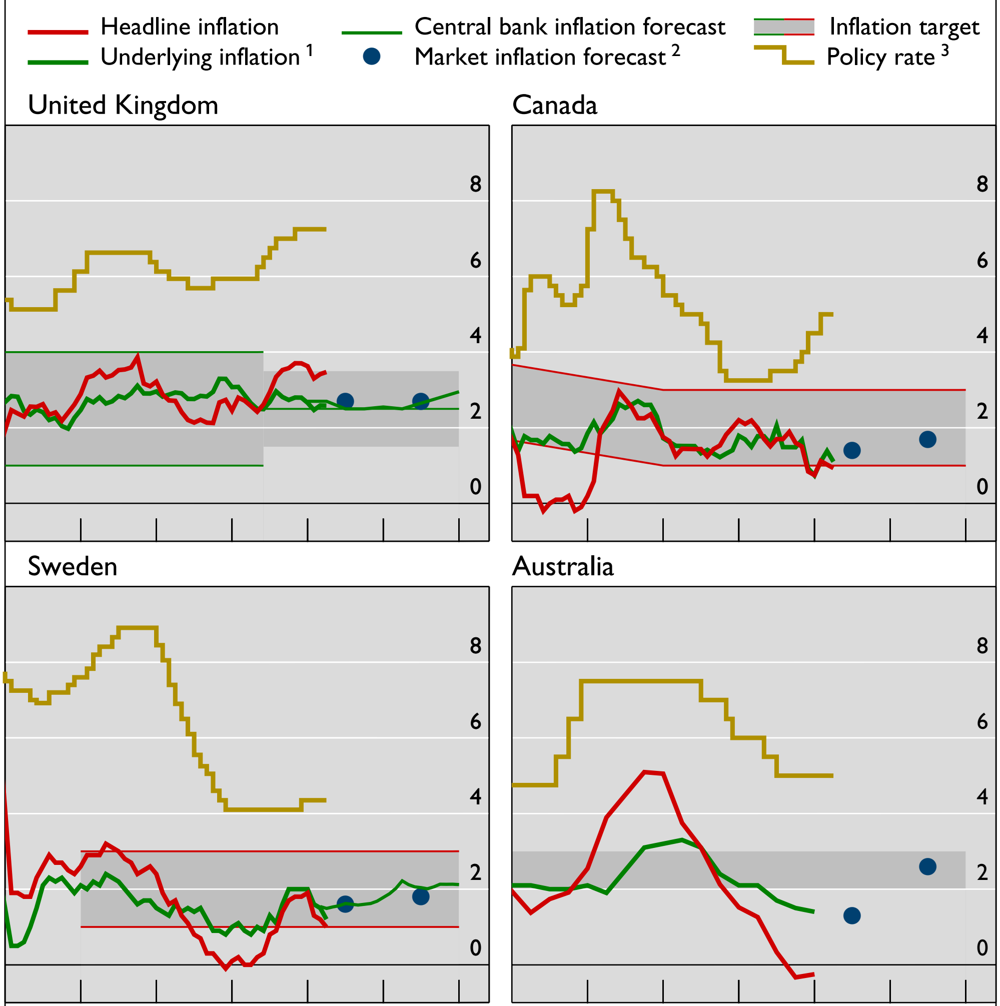
In most countries with inflation targets, the main challenge for monetary policy has been to promote monetary conditions that preserve the good inflation performance through the current economic upswing, thereby helping to make the economic expansion a long-lasting one. To that end, initially low policy rates needed to be raised, although the timing of the policy tightening differed across countries depending on the initial conditions and the effects of the Asian crisis.

Initial rise in UK policy rates …

In the United Kingdom, output grew in 1997 at a rate above 2% for the fifth year in succession. As a result the output gap is estimated to have closed

Inflation and policy rates in selected countries

In percentages



Note: Inflation rates are measured as the 12-month change in consumer price indices (CPI).
[1] For the United Kingdom, retail price index excluding mortgage interest payments; for Canada, CPI excluding food and energy prices and indirect taxes; for Sweden, CPI excluding indirect taxes and subsidies, interest costs and, after the move to a flexible exchange rate, the effects of depreciation; for Australia, CPI excluding seasonal food, petrol, mortgage interest payments, public sector charges and other volatile prices. [2] Of average annual headline inflation; surveys conducted in March 1998. [3] For a definition of the rates used, see Table IV.1.

Sources: © Consensus Economics, London, and national data. Graph IV.7

completely during the year. Consequently, after the May elections and the granting of operational independence to the Bank of England, the MPC raised interest rates in four steps of 25 basis points to 7%. Combined with the substantial appreciation of the pound sterling, this resulted in a considerable tightening of monetary policy.

… followed by a pause as signals conflict

Following this initial adjustment, monetary policy was increasingly faced with a dilemma owing to the different signals given by buoyant domestic demand, fuelled by rapid growth of wealth, money and credit, and strong downward pressures on prices in the tradable goods sector as a result of the substantial appreciation of sterling and, to a lesser extent, the effects of the Asian crisis. In late summer, the MPC decided to cease tightening further in order to assess the direction in which the risks were likely to materialise. However, as both inflation and growth turned out stronger than forecast in the third quarter, an additional 25 basis point rise was decided upon in November 1997. The dilemma did not disappear during the first quarter of 1998, leading the MPC to cast a split vote for the first time in its short history. While the most likely inflation forecast two years out was above the target and the risks were skewed towards the upside, a significant degree of uncertainty about the magnitude and the timing of the expected slowdown in the economy tipped the balance towards not raising interest rates further.

Another reason for maintaining the status quo was the concern that, in the face of such uncertainty, an immediate rise in interest rates might shortly have to be reversed. There is some evidence that a dislike of reversals of this sort is not uncommon in the industrial countries. Central banks generally move interest rates several times in the same direction before reversing policy. Moreover, the interval between policy adjustments is typically considerably longer when the direction is changed (Table IV.1). As the size of the steps at turning-points is not systematically larger than at other times, this pattern of adjustment risks being interpreted as a tendency to move "too little, too late". One possible rationalisation for such behaviour is uncertainty about the evolution of the economy and the speed and strength of the transmission of policy impulses. Such uncertainty is likely to be greatest at the turning-points of the interest rate

Dislike of interest rate reversals is not uncommon

Policy rate adjustments

	Sequence of adjustment											
	Number of changes				Average duration[1]				Average change[2]			
	+ +	+ –	– +	– –	+ +	+ –	– +	– –	+ +	+ –	– +	– –
United States	6	1	2	22	41	108	321	39	0.46	0.25	0.25	0.28
Germany	65	31	31	107	22	24	34	14	0.25	0.19	0.12	0.15
France	8	5	6	86	47	72	77	31	0.51	0.40	0.83	0.21
Italy	9	6	6	24	122	182	121	83	1.31	0.88	0.96	0.73
United Kingdom	28	17	18	84	36	69	49	23	0.94	0.50	0.77	0.37
Canada	10	1	2	21	22	57	103	21	0.43	0.25	0.25	0.25
Spain	4	5	4	33	56	72	67	35	0.42	0.24	0.35	0.38
Australia	2	1	1	17	43	413	264	67	1.00	0.50	0.75	0.79
Netherlands	55	27	28	108	16	15	32	15	0.42	0.53	0.40	0.21
Belgium	9	7	8	82	17	10	82	10	0.45	0.24	0.34	0.14
Sweden	14	1	2	24	16	132	146	10	0.12	0.25	0.27	0.18
Austria	15	1	1	48	70	42	150	34	0.38	0.50	0.25	0.16

Note: + + = two successive increases (tightenings); + – = increase followed by decrease; – + = decrease followed by increase; – – = two successive decreases (easings).

Policy rates and starting dates of the sample periods: Australia, official target rate, 23rd January 1990; Austria, GOMEX, 6th May 1985; Belgium, central rate, 29th January 1991; Canada, operating band, 15th April 1994; France, tender rate, 4th January 1982; Germany, repurchase rate, 19th June 1979; Italy, discount rate, 1st January 1978; Netherlands, special advances rate, 1st January 1978; Spain, repurchase rate, 14th May 1990; Sweden, repurchase rate, 1st June 1994; United Kingdom, Band 1 bank bills, 1st January 1978; United States, federal funds target rate, 10th August 1989. End of sample periods, 31st March 1998.

[1] In days. [2] In percentage points.

Table IV.1

cycle. A further reason for wishing to avoid frequent interest rate reversals is the desire to provide clear guidance to markets, both to strengthen the pass-through along the yield curve and to avoid destabilising markets. A concern of particular importance in the recent policy decisions at the Bank of England was that a sudden reversal might be attributed to a lack of consistency and poor judgement and therefore affect the credibility of the new monetary policy process.

While actual inflation in 1997 remained above the target in the United Kingdom, it was below the midpoint of the target band in Australia, Canada and Sweden. In Canada, some moderation in the degree of monetary stimulus was nevertheless considered necessary, as the Bank of Canada estimated that strong growth in 1997 and 1998 would eliminate the output gap by the end of 1998. The timing of the rise in policy rates was, however, largely dictated by developments in the foreign exchange market. In late June, when persistent weakness in the exchange rate caused a further easing in monetary conditions, the Bank of Canada raised its bank rate by 25 basis points. This was followed by a further 25 basis point increase in the policy rate in October, since rapid growth in narrow money, rising consumer confidence and strong business investment increasingly suggested that the economic expansion was becoming more self-sustaining.

Policy rates rise in response to exchange rate depreciation in Canada …

As the Asian crisis widened towards the end of last year, the Bank of Canada was confronted with a difficult choice. On the one hand, there was a perceived need to stabilise a falling exchange rate by raising policy rates further. On the other hand, there was a concern that higher rates could exacerbate the negative effects of the downward revision in the expected growth of world demand and the fall in commodity prices. In the end, the Bank of Canada raised interest rates in three steps to 5% in February this year as further pressure on the exchange rate threatened to affect the central bank's credibility. Similarly, in New Zealand interest rates responded strongly to the sharp decline of the New Zealand dollar in the summer of 1997 and again in October. However, in this case interest rates rose against a background of a gradual easing of overall monetary conditions in the light of reduced inflationary pressures.

… and New Zealand …

… but not in Australia

In contrast, but consistent with previous episodes, the Reserve Bank of Australia did not respond directly to the large depreciation of the Australian dollar in the same period. The willingness to accept such a sharp easing of monetary conditions probably reflects a combination of greater Australian sensitivity to commodity prices (see Chapter VI) and a larger trade exposure to Asia than is the case for Canada or New Zealand. In spite of the different policy responses, long-term interest rates in all three countries declined in line with the fall in world interest rates.

Sweden

Finally, in Sweden the repurchase rate was increased by 25 basis points in December 1997, with inflation in 1999 forecast to rise above the midpoint of the target range. More recently, the forecast remained slightly above the midpoint even after the impact of the deepening of the Asian crisis was taken into account (Graph IV.7). Nevertheless, the central bank decided to refrain from further increases given the considerable uncertainties surrounding the implications of the Asian crisis.

Monetary policy transparency

One of the most important features of recently established inflation targeting regimes is the enhanced transparency of the monetary policy framework. However, the movement towards greater policy transparency has extended beyond the countries with explicit inflation targets and must be seen against the background of the need for increased accountability that accompanies the greater independence of many central banks, and the rapid development and internationalisation of financial markets. The latter process has heightened the role of interest rates, exchange rates and other asset prices in the propagation of policy impulses. Since asset prices are also highly sensitive to expectational factors, the vulnerability of financial markets to unexpected policy movements may also have increased. This puts a premium on policy transparency.

Increased transparency concerning the central bank's objectives …

When discussing the advantages of improved transparency, it is useful to distinguish between whether the transparency pertains to the central bank's objectives, its strategy for achieving these objectives or its operational framework (i.e. the instruments and procedures employed in setting policy). Generally speaking, there appears to be little disagreement on the merits of making the central bank's objectives transparent. The move towards greater clarity concerning the objective of price stability is most obvious in countries with explicit inflation targets, but can be observed in other countries as well. For example, the new Bank of Japan Law clearly lays down the pursuit of price stability as the main objective. Similarly, at the European Monetary Institute it has been agreed that, whatever the final decision taken by the ECB Governing Council concerning the appropriate strategy, the ECB will provide a public

Monetary policy transparency

	G-3			Countries with inflation targets				
	US	JP[1]	DE	NZ	CA	GB	SE	AU
Objectives								
Price stability overriding objective	N	N/Y	Y	Y	Y	Y	Y	Y
Quantified objective	N	N/N	Y[2]	Y	Y	Y	Y	Y
Strategy								
Inflation reports	N	N/Y	Y	Y	Y	Y	Y	Y
Regular parliamentary hearings	Y	Y/Y	N	Y[3]	Y	Y[3]	Y	Y
Intermediate targets[4]	N	N/N	Y	Y	N	Y	Y	N
Operational procedures								
Announcement of policy decisions	Y	N/Y	Y[5]	Y[6]	Y	Y	Y[5]	Y
Announcement of desired future path	N	N/N	N	Y	N	N	N	N
Publication of minutes[7]	Y	N/Y	N	N	N	Y	N	N

US = United States; JP = Japan; DE = Germany; NZ = New Zealand; CA = Canada; GB = United Kingdom; SE = Sweden; AU = Australia. N = no, Y = yes.

[1] The second entry refers to the new Bank of Japan Law, which took effect in April 1998. [2] The medium-term inflation assumption used in calculating the monetary growth target is currently 1.5%. [3] The central bank Governor is accountable to the Government if inflation moves out of the target range. [4] M3 growth target in Germany; published inflation forecasts in New Zealand, Sweden and the United Kingdom. [5] Currently fixed rate tenders are used to convey clear signals about policy changes. [6] Monetary policy is implemented mainly through public statements, the most important being the Monetary Policy Statement. [7] The publication lag in the United States and in the United Kingdom is about six weeks, and is still to be determined in Japan.

Table IV.2

definition of its final objective of price stability. One notable exception remains the United States, where various congressional proposals to clarify the Federal Reserve's mandate have failed to be translated into new legislation.

… and policy strategy

However, in view of the lags in the transmission process, transparency about the price stability objective is unlikely to be effective in guiding market expectations without greater openness about the central bank's strategy for achieving this objective. Many central banks have therefore enhanced their efforts to make their views of the state of the economy and the policy transmission process more widely known through the publication of inflation reports, regular parliamentary hearings and speeches by senior officials. One way of facilitating communication concerning the central bank's strategy and policy decisions is the use of intermediate targets. However, the use of traditional targets for monetary growth rates or exchange rates has often been problematic owing to instabilities in the relationship with the ultimate objective, or a lack of controllability. Thus an increasing number of central banks have started to publish their inflation forecasts as an alternative form of intermediate target (Table IV.2).

Advantages: promotes well-informed public debate …

Increased openness has a number of advantages. First, it requires the central bank to articulate its views on monetary policy more fully than it otherwise would have needed to do. Secondly, it promotes a well-informed and active public debate on the technical merits of alternative monetary policy decisions. Both developments are likely to be conducive to better policy-making. A third benefit is that transparency about both the objectives and the strategy increases the effectiveness of monetary policy in two important ways.

… helps to condition inflation expectations …

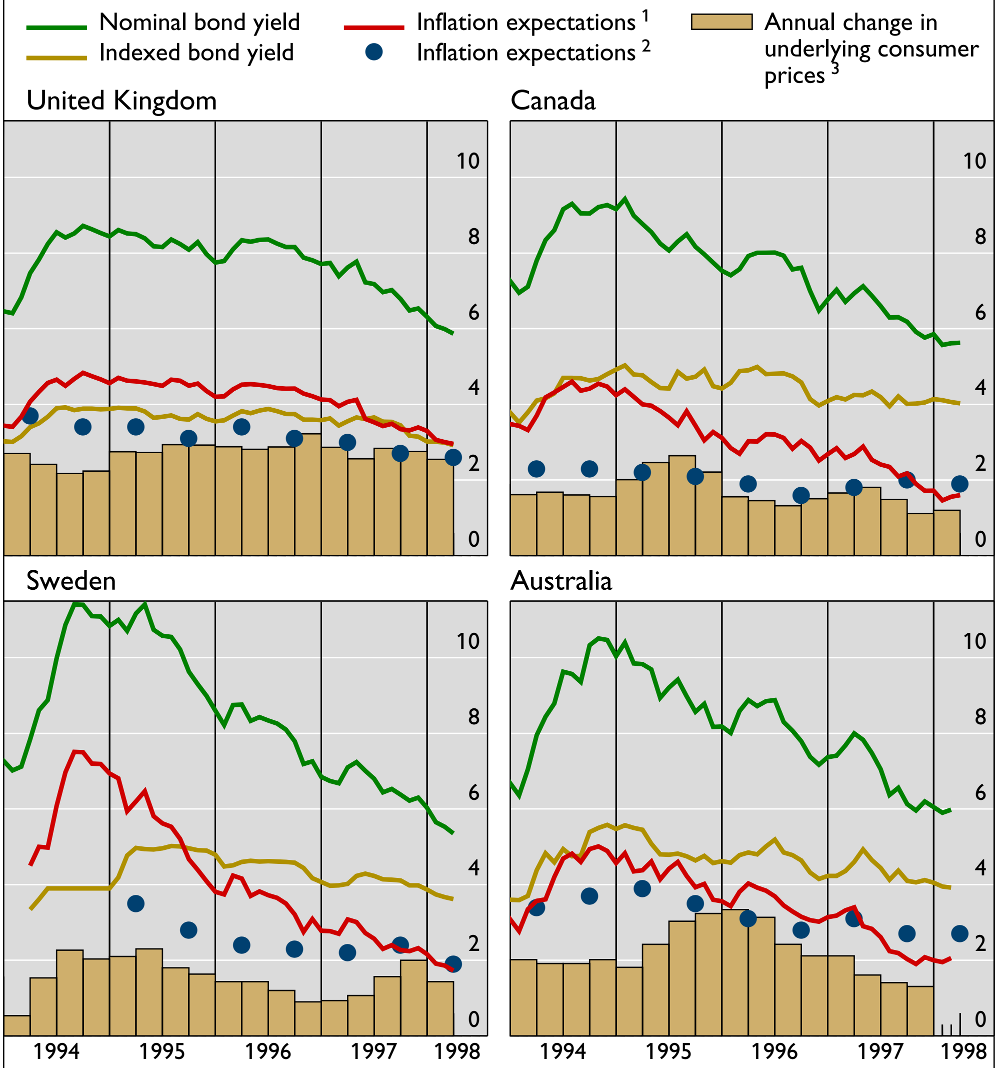
The first of these is that transparency may help to condition inflation expectations so as to bring down inflation and/or to contain it in the face of demand or supply shocks. This will occur largely through inflation expectations feeding through into wage and price behaviour. Graph IV.8 shows the development of different measures of long-term inflation expectations in a number of countries since the adoption of inflation targets. While it is obvious that the credibility of the inflation targets was not immediate, it is equally clear that long-term inflation expectations had by the end of 1997 generally converged to the midpoint of the target bands. Moreover, research based on survey expectations has found that the variance of the forecast errors decreased following the introduction of targets, although this may be related to the more stable behaviour of inflation itself. Finally, there is evidence that, as inflation expectations become more "anchored" to the inflation target, the inflation process itself becomes more sticky. Indeed, this could perhaps explain why inflation in Canada did not decline below the lower end of the target range in the 1995–97 period, in spite of a sizable output gap.

… and allows financial markets to play an equilibrating role

Secondly, if financial markets have a better understanding of the central bank's strategy, they may facilitate the central bank's task by playing an equilibrating role in the face of shocks. For example, news about a positive demand shock which threatens to raise inflationary pressures might lead to an immediate reaction in foreign exchange and bond markets as market participants realise that this shock raises the expected path of future interest rates. The resulting appreciation of the currency and increase in long-term interest rates would tend to offset automatically some of the incipient inflationary pressures in

Long-term inflation expectations, inflation and bond yields

In percentages



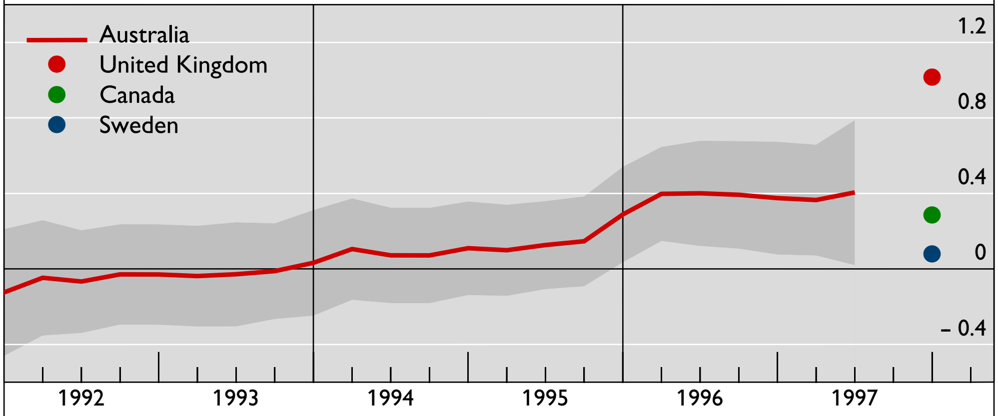
[1] Nominal less indexed bond yield. [2] Forecast of average inflation over the next ten years from semi-annual surveys. [3] For a definition of the indices used, see Graph IV.7.

Sources: © Consensus Economics, London, and national data. Graph IV.8

the economy. Graph IV.9 presents some evidence that is consistent with this hypothesis. It illustrates how, since the establishment in 1993 of a more transparent inflation targeting regime in Australia, positive inflation surprises have on average led to an appreciation of the exchange rate, whereas they had no significant effect before the new regime. A similar response of the exchange rate can also be identified under the Canadian and UK inflation targeting regimes. An interpretation of the Australian experience is that, when the policy reaction function is not transparent, a positive inflation surprise may have opposite effects on the exchange rate depending on whether it is expected to be accommodated or resisted. In the former case it will lead to a nominal depreciation, whereas in the latter case it will result in a real appreciation.

As suggested by the bottom part of Table IV.2, there is less consensus on transparency about operational procedures and internal policy deliberations.

Sensitivity of exchange rates to inflation surprises



Note: $\Delta x = \beta . \Delta \pi^{u} + \varepsilon_{t}$, where β denotes the sensitivity of the dollar (for Sweden, the Deutsche mark) exchange rate (Δx) to an inflation surprise ($\Delta \pi^{u}$), $\Delta \pi^{u}$ is measured as the difference between actual and expected monthly changes in consumer prices, and Δx is the exchange rate change following the release of consumer price data; a positive value indicates an appreciation. For Australia, a five-year rolling window regression (quarterly data); the shaded area marks the 90% confidence band (see de Brouwer and Ellis, Reserve Bank of Australia Research Discussion Paper No. 9803, 1998). For the other countries, a point estimate over the period 1993-97 (monthly data); the significance levels are 0.02, 0.13 and 0.77 respectively.

Sources: MMS International, national data and BIS estimates. Graph IV.9

Also greater transparency about the current policy stance …

However, there has been a gradual shift towards greater transparency about the current policy stance. Since the early 1990s, central banks in most of the English-speaking countries have started to announce changes in their operating targets. For example, the Reserve Bank of Australia has since January 1990 immediately announced any changes in the target level of the cash rate. Similarly, in the United States changes in the federal funds target rate have since February 1994 been announced on the day of the FOMC meeting.

This strategy has done much to eliminate ambiguity about the current stance of policy. Markets can no longer misinterpret an operation as indicating a shift in policy when one has not occurred. Moreover, the discipline of having to explain to the public the reasons for policy changes may have some of the advantages mentioned above. It may lead to greater rigour in the central bank's internal policy debates, a clearer focus on the objective of the policy change and a greater public acceptance and understanding of monetary policy decisions. Finally, it may also contribute to a more rapid transmission of policy changes into the interest rates that matter.

One concern was that announcing policy changes would reduce flexibility, in particular that it could lead to greater reticence in implementing policy changes and thereby increase response lags. One strategy that has been used to mitigate this problem in Germany and Sweden, where the repurchase rate is currently the main policy rate, is to change the tender procedure from fixed to variable rate tenders. In the latter case, it is less clear whether the outcome reflects the acceptance of minor fluctuations around a desired level or the beginning of the implementation of a policy change.

… but less so about future policy moves

While there is increased transparency about the current policy stance, central banks remain generally reluctant to be precise about future policy moves.

The only exception to this is the Reserve Bank of New Zealand which, starting with its June 1997 Monetary Policy Statement, has been publishing projections showing an endogenous path for monetary conditions consistent with achieving the inflation target. There is, however, an increasing tendency to forewarn markets about possible future policy moves through speeches and other publications. For example, Chairman Greenspan of the Federal Reserve signalled the 1994 interest rate tightening in his Humphrey-Hawkins testimony in the autumn of 1993. Similarly, the Bank of Canada emphasised the need for a future moderation in the degree of monetary stimulus in its Monetary Policy Report of November last year.

The disadvantages of transparency about future policy moves arise from the fact that there is often a good deal of uncertainty about the appropriate course of action to take to achieve a given price stability objective. In such circumstances it may be better to allow for some degree of ambiguity concerning the future path of policy. First, this might give an incentive to the markets to set market rates in accordance with their own assessment of the monetary policy outlook, which may be useful information for the central bank. Secondly, it may avoid unnecessary and costly market volatility, as market participants first attempt to protect themselves against projected policy moves only to find that such moves do not occur. Thirdly, when markets rely too much on central bank guidance, the central bank may be forced to comment or take action more frequently, even if the differences between data outturns and forecasts are only small. Some of these potential problems may, however, be reduced if financial markets become aware of the uncertainty surrounding such projections and of the need to reassess the policy response on a continuing basis as new information comes in. This is one of the reasons why central banks increasingly emphasise the complete probability distribution around their forecasts. Moreover, moving policy rates without explicit forewarning may equally create market volatility.

Few central banks publish minutes

Only a few central banks publish the minutes of the discussions in the policy-making body, and in all cases only with a considerable time-lag (Table IV.2). Such publication may be the most direct way of revealing the information and the arguments used by the policy-makers in setting the policy instruments. However, in some cases it is impractical to do so as the policy-making committee meets daily. A second reason for not revealing the content of the discussions is to promote a frank exchange of views and to avoid policy-makers speaking for the record. Finally, a frequently voiced fear is that the revelation of disagreements in the policy-making body may reflect badly on its reputation and might therefore upset financial markets. Against this it can be argued that disagreements among policy-makers are natural when policy is finely balanced and conclusions may differ depending on which risks are thought most material. In such a case, the revelation of such disagreements may be useful in that markets become aware of the uncertainty and the risks that surround the most likely forecast.

In sum, while the debate continues about the appropriate degree of transparency concerning the tactical aspects of policy-making, it is commonly agreed that transparency at the strategic level (the central bank's objectives and its strategy for attaining these objectives) is desirable. In order to establish its

Implications for the ECB

reputation and legitimacy quickly, the European Central Bank's policies will need to be transparent and accountable. The above-mentioned decision to publicly define the price stability objective is an important step in that direction. The requirements laid down in the Maastricht Treaty to publish quarterly reports and to present an annual report to the European Parliament are equally significant. The need for transparency is made all the greater by two further considerations. First, as discussed above, great uncertainty about the transmission of monetary policy in the EMU area and the relationships between various indicators and the price stability objective will, at least initially, put a premium on a discretionary policy approach, which inherently complicates communication with the public and the markets. Secondly, a monetary policy stance that is appropriate from an EMU-wide perspective may be more difficult to explain to national audiences.

V. Asset prices and the asset management industry

Highlights

Equity prices in industrial countries continued to rise strongly last year and reached new heights by April 1998. The only notable exceptions to this trend were Japan and, to a lesser extent, Australia. The rally went hand in hand with periodic surges in uncertainty. In the autumn of 1997, stocks fell sharply, if only temporarily, in response to the unfolding crisis in South-East Asia. Bond prices also gathered momentum for most of the year, with part of the gains likely to have been due to a safe-haven effect, as the investment community became more apprehensive about the risks of propagation from Asian markets to the world financial system. The picture for real estate markets was more mixed, with marked differences in performance across countries.

The events of the period under review brought to the fore the role of institutional investors and their impact on financial stability. Their growth has affected all aspects of the financial landscape and has run in a parallel and mutually reinforcing way to the rapid development of financial markets and instruments. The second part of this chapter focuses first on the factors that have fostered the rapid institutionalisation of savings, and describes salient features of the industry that have a bearing on the allocation of these savings. It then proceeds to examine the behaviour of selected market players during the series of currency crises that affected the economies in South-East Asia and the October 1997 episode of stock market turbulence. A comparison is made with previous episodes, and lessons for policy-makers are derived in the final section.

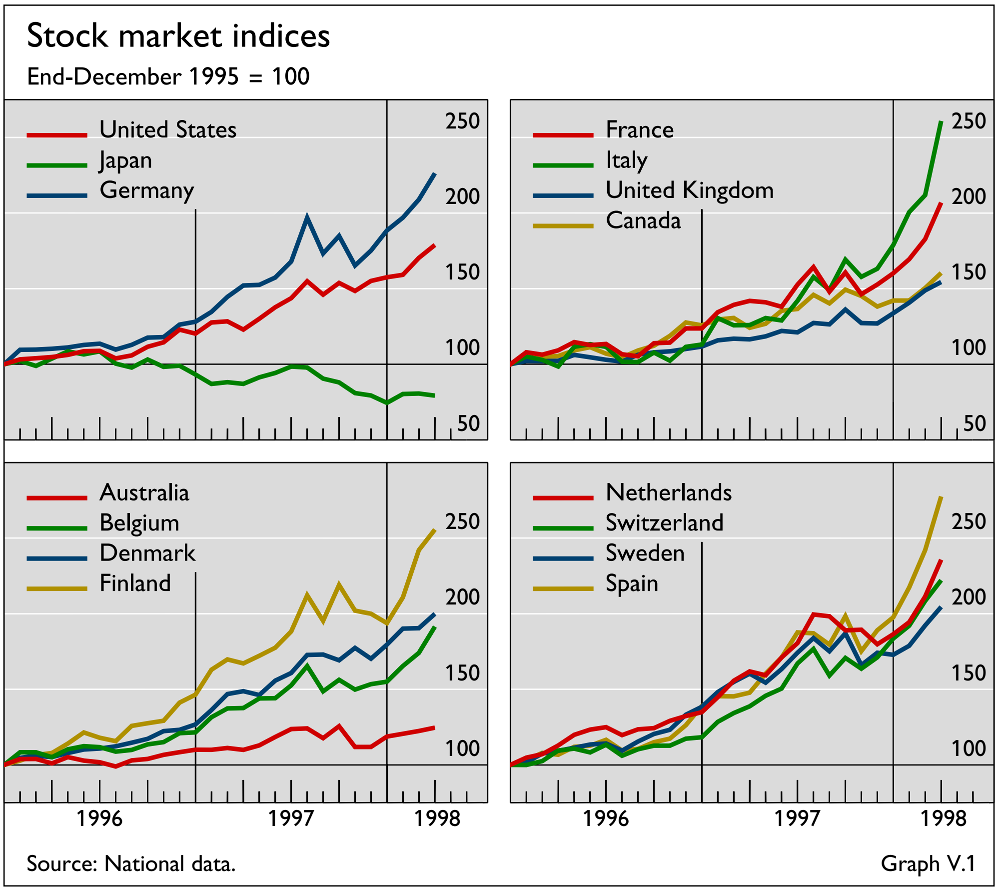
Asset prices

In the United States and Europe, the strength and breadth of last year's bull markets are what most distinguished them from earlier episodes. One feature is that asset price gains occurred almost everywhere, despite divergences in cyclical positions and projections for growth. Another aspect is that equity and bond prices rose together even though other indicators pointed to increased uncertainties about future market trends. Given that conventional valuation indicators in equity markets are generally considered in relation to prevailing interest rates, rather than in isolation, the current low interest rate environment makes stocks look less overvalued. However, should bond prices themselves be subject to some reversal, then stock prices too would have to be reassessed.

Equity markets

Stock prices made substantial gains in North America and Europe in the period under review (Graph V.1). Despite broad similarities in terms of movements and

The general rise in equity prices ...



timing, there were certain noteworthy differences across countries. Following a year of subdued performance, Italy recorded the largest increases. The gains were also very strong in Spain and Switzerland, where stock indices rose to double their levels of only two years earlier. In the United States, as in most other countries, equity prices recovered sharply after the autumn 1997 downturn. In contrast, equity prices fell further in Japan, reflecting concerns about the state of the domestic economy and the overall financial situation. In Australia, the relatively weak performance of stocks can be attributed in part to declines in commodity prices which squeezed actual and prospective profits.

… was temporarily reversed in the second half of the year

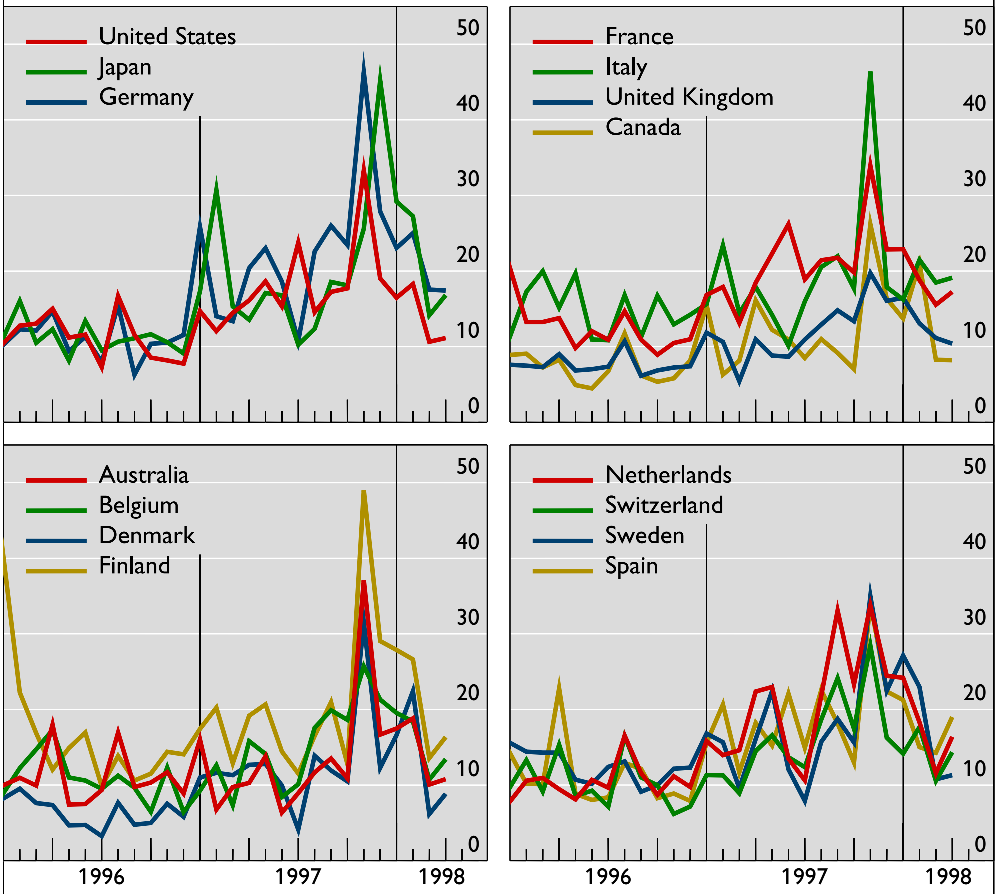
The turmoil generated by the fall in South-East Asian markets triggered a swing in market sentiment. The adjustment from July onwards took the form of a chain of price declines rippling through all industrial countries. In addition, there was a sharp increase in volatility through to the peak in October (Graph V.2), with daily fluctuations of over 5% being observed in several markets. The extent and timing of retrenchment starting in July varied between countries. Markets in which downward pressure was felt relatively early, as in Germany, France and the Netherlands, tended to experience larger drops between peaks and troughs. By comparison, markets in the United States, Italy and the United Kingdom, where prices did not falter before October, proved to be more resilient, with rather moderate declines confined to a single month. In most countries, stock prices started regaining lost ground in November or shortly thereafter.

Possible explanatory factors:

The surge in equity markets over the past few years raises questions about the grounds on which it was justified. The forces for the buoyant trend can be

Volatility in the stock market *

In percentages



* Measured as the annualised standard deviation of daily percentage changes in stock market indices during calendar months.

Sources: National data and BIS calculations. Graph V.2

linked either directly to expectations of corporate earnings growth, or indirectly to changes in investors' attitudes towards risk.

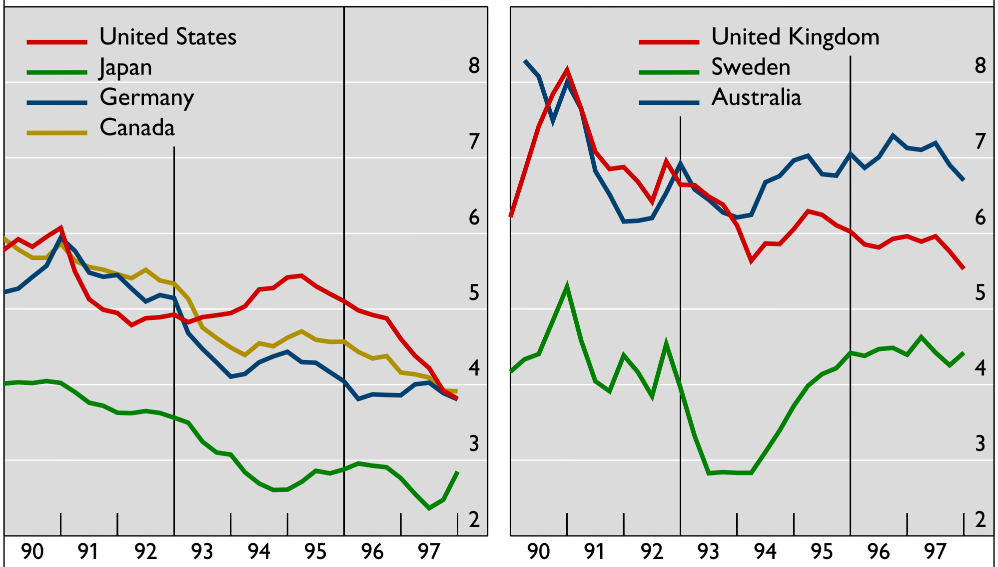
real earnings growth …

Real earnings per share rose in the Group of Seven countries over the last three years. The business sector began to reap the benefits of lower debt service charges, more moderate wage growth and improved labour productivity. The advent of new technologies has also been touted as an important factor behind the current boom. The process of financial deregulation should, in principle, have brought further efficiency gains. However, the significance of these factors in affecting future earnings growth is not easy to quantify. At the present juncture, explicit earnings projections do not suggest an order of magnitude that would warrant the designation of a "new era".

… and attitudes towards risk

Financial changes may also have played a role in altering investors' attitudes towards the stock market, causing them to be content with a lower compensation for risk. In order to assess the relevance of this effect, Graph V.3 depicts the path of estimated required returns on equity holdings for selected countries in the 1990s. These required returns can be roughly estimated as the sum of the actual dividend/price ratio and the growth of potential output, where the latter is a proxy for the expected growth of real dividends. Some support

Required rates of return on equity *
In percentages



* Defined as the sum of the dividend yield and potential output growth.
Sources: OECD, national data and BIS calculations. Graph V.3

for the hypothesis of a higher risk tolerance can be found in the trend decline of required returns in most countries. The evidence, however, is less compelling when judged against the concomitant changes in real long-term interest rates. For example, the decline in inflation-adjusted interest rates shown in Graph IV.8 has tended to outpace that of required returns in the last few years, actually leading to an increase in equity premia since the mid-1990s. In this light, the current high valuations could be viewed as having more to do with declining returns on substitute assets, such as bonds, rather than with changes in attitudes towards risk.

The bearish implications of valuation ratios ...

From an empirical standpoint, traditional valuation measures seem to convey a rather bearish outlook for stock markets (Table V.1). In most countries dividend/price ratios reached an absolute low during the period under review. In comparison price/earnings ratios look less unusual, although the Standard & Poor's composite indicator had overtaken its previous peak by the end of March 1998. In the past, the correction of valuation ratios towards more conventional levels has been accomplished through slower price gains rather than through an acceleration of earnings or dividends. Nevertheless, a few caveats can be adduced to qualify what might seem to be the obvious implications of these ratios.

... call for some qualification

First, even if valuation ratios tend empirically to revert to their historical averages, the rate of mean reversion is itself variable. Secondly, the benchmark of valuation ratios needs to be adjusted to take account of cyclical positions. However, equity price gains were recorded not only in countries that were in their early recovery stages, but also in those that were more advanced in their cycle, even with a level of economic activity at or above potential. Finally, changes in the economic structure may be conducive to breaks in historical relationships, which could go some way towards explaining the ranges in which dividend yields

Indicators of valuation of share prices

	Price/earnings ratios					Dividend yields				
	Sample from	Peak level	Peak date	Average	March 1998	Sample from	Trough level	Trough date	Average	March 1998
United States	1957	27	1998	16	27	1947	1.5	1998	4.0	1.5
Japan	1981	100	1996	51	43[1]	1953	0.4	1989	3.0	1.1[1]
Germany	1973	25	1993	13	21	1973	1.3	1998	2.8	1.3
France	1973	30	1973	12	20	1964	1.7	1998	4.5	1.7
Italy	1986	29	1994	17	26	1981	0.8	1981	2.3	1.1
United Kingdom	1970	23	1994	13	22	1963	2.8	1998	4.7	2.8
Canada	1956	255[2]	1994	20	32	1956	1.4	1998	3.4	1.4
Belgium	1961	29	1967	16	25	1961	1.6	1998	4.3	1.8
Netherlands	1973	26	1997	10	24	1973	1.8	1998	4.8	1.8
Switzerland	1973	29	1998	13	29	1973	1.0	1995	2.9	2.4

[1] February. [2] Exceptionally high owing to very low earnings due to write-offs.
Sources: Datastream and national data. Table V.1

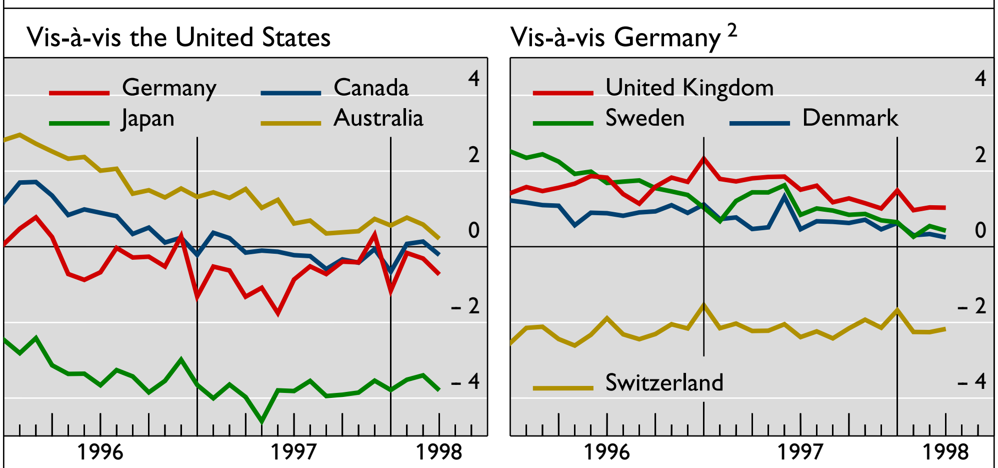
are currently hovering. The steady decline in inflation during the 1990s and the associated gains in terms of monetary policy credibility have generally led to a lower variability of inflation and short-term interest rates. Furthermore, lower inflation rates can mitigate the distortive effects that existing tax rules have on the net returns to financial assets. A permanent reduction of inflation could thus have set the stage for an era of higher asset values.

Bond markets

Since the peaks of October 1994, bond yields have continued to drift downwards and by late 1997 had reached levels near historical lows. In continental Europe and Japan, these were generally the lowest levels for 30 years while in the United States they were within range of the trough reached in the autumn of 1993.

Bond yield differentials [1]

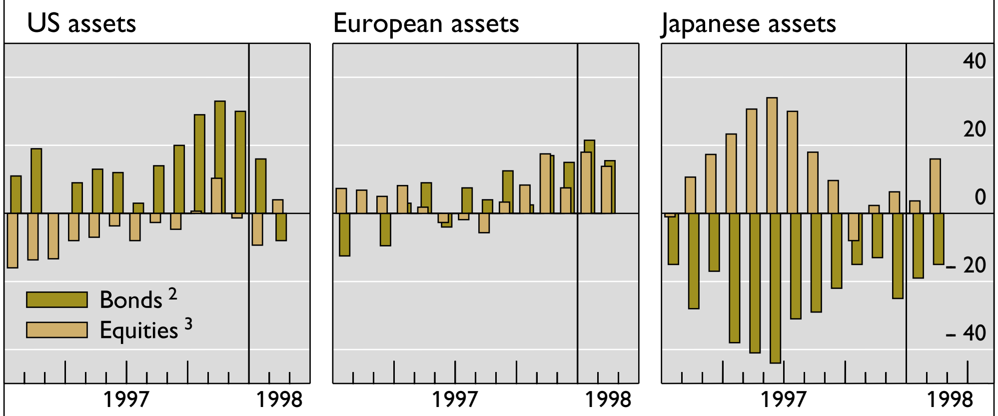
In percentage points



[1] On ten-year government bonds. [2] For the EMU countries, see Graph IV.5.
Source: National data. Graph V.4

Fund managers' planned exposure by asset class [1]

In percentage points



[1] Balance of fund managers planning to increase or decrease their exposure in a given asset class; for example, a positive value indicates that the percentage of fund managers planning to buy assets in one class exceeds that of those planning to sell. [2] Held by resident fund managers of the country/region indicated. [3] Held by fund managers outside Japan.

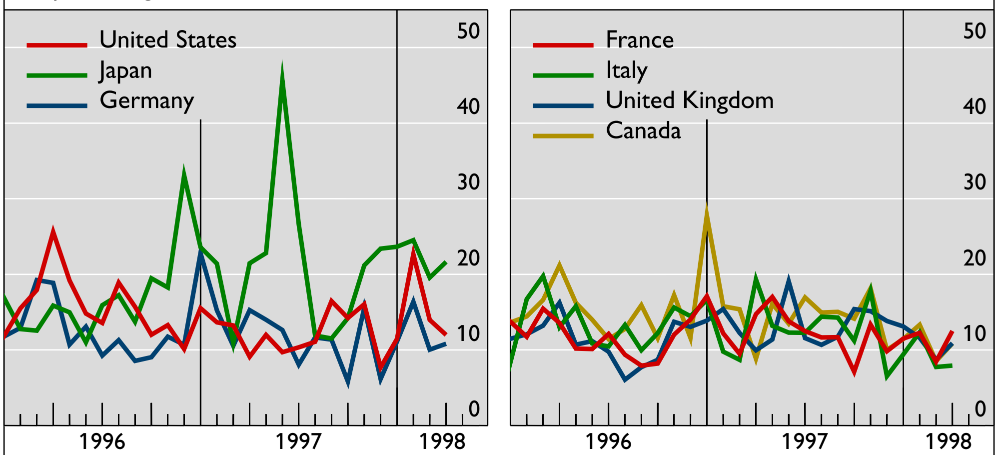
Source: Merrill Lynch Global Gallup Survey. Graph V.5

Strong bond yield convergence …

The global scope of the bull market in bonds concealed some divergent patterns. In Europe, the marked yield convergence spurred in 1996 by narrowing inflation spreads and extensive fiscal consolidation strengthened further (Graph V.4). In the United States, the market-place shrugged off declines in unemployment to levels that were formerly seen as heralding accelerating inflation. Even the rise in official rates in March 1997, widely anticipated amid signs of continuing economic strength, did not prevent bonds from rallying, as monetary policy was expected to be effective in counteracting domestic inflationary pressures. The explanation for continuing low rates is quite different for Japan, where cyclical prospects were fading and financial problems were highlighted by the failure of some major banks and securities firms.

Bond yield volatility *

In percentages



* Measured as the annualised standard deviation of daily percentage changes in the yield on ten-year government bonds during calendar months.

Sources: National data and BIS calculations. Graph V.6

Nominal and inflation-adjusted real estate prices

	Nominal prices				Inflation-adjusted prices			
	1994	1995	1996	1997	1994	1995	1996	1997
	indices, 1993 = 100							
	Residential property prices							
United States	102	104	109	116	100	99	100	104
Japan[1]	98	96	94	93	98	95	94	91
Germany[2]	102	101	101	96	99	97	95	89
France	98	98	100	100	97	95	94	94
United Kingdom	103	103	107	117	100	98	99	104
Canada	103	98	98	101	103	96	94	95
Spain	101	104	106	108	96	95	94	93
Netherlands	109	113	124	136	106	108	116	125
Australia	108	110	114	127	106	103	104	116
Switzerland	100	98	88	86	99	95	85	83
Belgium	108	113	118	122	105	108	111	113
Sweden	105	105	106	114	102	100	100	107
Denmark	112	121	134	147	110	116	126	136
Norway	113	122	132	143	111	117	125	133
Finland	106	102	108	126	105	100	105	122
Ireland	104	112	125	145	102	106	117	134
	Commercial property prices: major cities							
New York	109	109	119	137	107	104	109	123
Tokyo[1]	84	69	60	55	83	69	60	54
Frankfurt	87	85	85	81	85	81	80	75
Paris	94	84	79	83	93	81	74	77
Milan	85	85	78	75	82	78	69	65
London	125	134	141	161	122	126	129	144
Toronto[3]	88	81	78	90	88	79	75	85
Madrid	98	97	116	125	93	89	102	108
Amsterdam	110	120	129	140	107	114	121	129
Sydney	121	123	128	137	119	116	117	125
Zurich	97	94	88	87	96	92	85	83
Brussels	94	94	100	103	92	90	94	95
Stockholm	131	170	179	214	128	162	170	202
Copenhagen	97	103	103	115	95	99	97	106
Oslo	108	117	125	142	107	112	119	131
Helsinki	112	118	119	124	111	115	116	119
Dublin	114	128	153	193	112	122	143	179

[1] Land prices. [2] Four major cities. [3] Price index for offices in Ontario.

Sources: Frank Russell Canada Limited, Jones Lang Wootton, Ministère de l'Équipement, du Logement, des Transports et du Tourisme, National Association of REALTORS, OPAK (Oslo), Sadolin & Albæk (Copenhagen), Sherry FitzGerald (Dublin), Wüest & Partner (Zurich), various private real estate associations and national data. Table V.2

… reinforced by conjunctural circumstances …

Several factors lent support to these international bond developments. Broadly put, long-term interest rates have been much influenced by the anticipation of higher growth at low inflation rates. In addition, a traditional "flight to safety" effect was felt as the turbulence in South-East Asian countries prompted investors to reassess their exposures and repatriate funds away from stock markets. Survey evidence suggests that, during this period, a majority of fund managers outside Japan were planning to reduce their equity exposure in the United States and Europe, while exposure to domestic bond markets was increased (Graph V.5). Finally, the need to manage sizable financial risks in a period of high volatility contributed to raising the demand for government bonds as hedging instruments, at a time when the trimming of fiscal deficits tended to restrict the available supply.

… but some market nervousness remains

Data relating to bond yield volatility (Graph V.6) indicate that, by early 1998, tensions generated by the Asian crisis had abated. However, uncertainty could return quickly. The investment community's recent experiences with currency crises may have left it susceptible to fears that such turbulence could be repeated. In such circumstances, associated shifts into traditional safe-haven currencies would tend to stimulate international bond markets. However, there would be a possibility of large sales of US securities in the event of liquidity crunches elsewhere, and this could have the opposite effect.

Real estate markets

Mixed performance in real estate markets

After several years of poor performance, due in large part to previous excesses, real estate prices rose in many countries at a rate well above prevailing inflation rates in 1997, with or without the corresponding support of private credit. Japan and a few countries in continental Europe remained largely untouched by the rebound, although in places there were signs of a slight improvement.

Residential property values were comparatively buoyant in Benelux, Nordic and most English-speaking countries (Table V.2). They were generally weak in Canada and continental Europe, offering at best partial compensation for inflation. In Japan, the substantial fall in residential land prices further constrained the liquidation of collateral by Japanese banks holding non-performing loans.

The commercial property segment presented the same broad geographical pattern with somewhat sharper distinctions. The increases in prices from the previous year exceeded 26% in Dublin, and 19% in Stockholm for prime-quality office property. At the other end of the spectrum, commercial land in central Tokyo has lost two-thirds of its nominal value since its peak in 1990. In between, signs of a possible recovery were emerging in some major European cities, as office rental values tended to firm and the proportion of doubtful property loans appeared to be approaching a turning-point.

Institutional investors and financial markets

The events of 1997 have once more focused attention on institutional investors and their impact on financial market stability. Questions were raised regarding the part played by these collective investment vehicles in the wave of currency crises that affected the South-East Asian economies. Moreover, their contribution in supporting the upward trend in equity prices in industrial countries, as well as their behaviour during the market correction of late October, invites assessment.

Assets exceed GDP but considerable scope for growth remains

The growth of the professional asset management industry is a key feature of the structural changes in the international financial system. It represents a development that has implications for many different aspects of the financial landscape: market turnover, securities issuance, international capital flows,

Institutional investors in a global perspective, 1995

	Pension funds	Insurance companies			Investment companies			Aggregate	
		Total	Life insurance	Non-life insurance	Total	Open-end	Closed-end		
	Financial assets as a percentage of the global sector total								US$ bn
United States	62	35	33	44	57[1]	63	57	50	10,501
Japan[2]	9	24	27	16	8[3]	–	–	14	3,035
Germany	1	8	7	12	6	7	–	5	1,113
France	0	7	7	8	9	11	–	6	1,159
Italy	1	1	1	2	1	1	–	1	223
United Kingdom	11	10	11	6	4	3	29	9	1,790
Canada	3	2	2	2	2	2	–	2	493
Spain	0.2[4]	1[3]	–	–	2	2	1	1	215
Australia[5]	1	2	1	2	1	1	2	1	255
Netherlands	5	3	3	1	1[3]	–	–	3	626
Switzerland	3	2	2	3	1	1	–	2	452
Belgium	0.1	1	1	1	1[6]	1[6]	–	1	156
Sweden	1[7]	2	1	2	1	1	10	1	267
Austria	0	1	1	0.2	1	1	–	0.4	82
Denmark	0.5	1	1	1	0.1[3]	–	–	1	116
Finland	1[8]	0.2	0.1	0.5	0	0	–	0.3	63
Portugal	0.1	0.1[3]	–	–	0.3	0.3	0.1	0.2	35
Luxembourg	0	0.1	0.1	0.1	6	7	–	2	369
Total	100	100	100	100	100	100	100	100	
North America	66	37	35	45	59	65	57	52	10,994
Europe	24	37	36	37	33	34	41	32	6,666
Total, in US$ bn	*6,710*	*8,088*	*6,276*	*1,702*	*6,152*	*5,340*	*238*		*20,949*
Total, in %	*32*	*39*	*30*	*8*	*29*	*25*	*1*	*100*	

[1] Including assets of bank personal trusts and estates ($740 billion) and Real Estate Investment Trusts ($26 billion). [2] Not including trust accounts of trust banks ($916 billion). [3] Distinction between categories not possible. [4] Total assets of non-autonomous pension funds. [5] Not including specialist institutions, which invest on behalf of government or groups of financial institutions and behave as institutional investors ($9 billion). [6] Including saving pension funds, which have the legal structure of investment companies ($5 billion). [7] Including pension funds within the social security sector ($88 billion). [8] Occupational pension schemes.

Sources: OECD, national data and BIS estimates. Table V.3

market stability, industrial organisation and corporate governance. The importance of institutional investment for the global financial system is readily apparent from the volume of financial assets under management (Table V.3), which exceeds that of aggregate GDP for the industrial countries concerned. At the same time, the uneven distribution of these assets across countries is indicative of the considerable scope for further growth, particularly in continental Europe.

The following sections highlight the principal structural characteristics of the professional asset management industry and discuss how this framework may affect asset allocation decisions. After a review of the responses of various players to recent events, as well as past episodes of market turbulence, the implications of the growing institutionalisation of savings for financial stability are considered and possible policy lessons are drawn.

The players: description and growth

At the core of an asset management relationship lies a pool of assets, the returns on which are shared by two types of actor: the principal owners of the assets and the professionals who manage the portfolio on the owners' behalf. Different classes of institutional investor can be characterised in terms of the contractual relationship between the two actors, that is, the rules that determine the distribution of risks and returns.

Institutional investors distinct from proprietary desks

The accepted definition of institutional investors comprises collective investment institutions, insurance companies and pension funds. From the viewpoint of their impact on short-term financial market dynamics, a distinction between these institutions and the proprietary trading desks of financial and non-financial companies is arguably arbitrary. Nevertheless, asset allocation decisions by institutional investors are likely to have a greater bearing on longer-term asset price cycles by virtue of the larger size of their portfolios and a historically greater propensity to follow buy-and-hold strategies, compared with the (shorter-term) speculative nature of proprietary desk activities. Furthermore, the incentive structure that characterises the delegated portfolio management framework can itself give rise to distinct patterns of investment behaviour that impact on market stability.

Collective investment institutions (mutual funds and hedge funds) offer products with an enhanced risk/return profile and greater liquidity by exploiting the synergies created from pooling the assets of many investors and economising on transaction and management costs. The investor is the residual claimant and bears all associated risks. In the case of mutual funds, the portfolio manager's

Growth of investment companies[1]

	Total net assets									
	1987	1990	1993	1996	by type of fund, in 1996, as a % of assets				*in 1996 as a % of*	
	in billions of US dollars				Money market	Bond	Equity	Balanced	*GDP*	*market capitalisation[2]*
United States	770	1,069	2,075	3,539	25	22	49	3	*46*	*15*
Japan	305	336	455	420	29	45	24	2	*9*	*4*
Germany	42	72	79	134	16	56	25	3	*6*	*4*
France	204	379	484	529	45	29	11	14	*34*	*18*
Italy	51	42	65	129	36	39	17	7	*11*	*5*
United Kingdom	68	89	131	188	0	5	88	6	*16*	*8*
Canada	16	21	86	155	15	9	52	14	*26*	*14*
Spain	4	12	72	136	51	41	3	6	*23*	*14*
Netherlands	16	24	46	67	10	30	54	6	*17*	*8*
Luxembourg	74[3]	85	248	352	25	52	18	5	*1,840*	*337*

[1] Open-end funds invested in transferable securities and money market instruments. [2] Excluding money market funds. [3] 1989.

Sources: Fédération Européenne des Fonds et Sociétés d'Investissement, Investment Company Institute, Investment Funds Institute of Canada, International Finance Corporation and Salomon Brothers. Table V.4

remuneration is typically based on the volume of assets under management, while in the case of hedge funds it is invariably also a function of performance.

Mutual funds appeal to the retail investor

Mutual funds are becoming the primary vehicle for individuals' investment in marketable securities. Low minimum investment requirements and a well-defined regulatory framework enhance their appeal to the retail investor. However, a sizable portion of mutual fund shares is also held by other institutional investors seeking inexpensive access to expert portfolio management in a particular asset class. The sector has experienced very strong growth globally, but the cash inflow has benefited different fund specialities unevenly in different countries (Table V.4). In North America, the combination of low bank deposit rates and an improved capacity to offer products with chequing facilities boosted inflows into money market mutual funds during the latter part of the 1980s, while the continuing bull market has since contributed to the swelling of equity fund portfolios. In France, as in many continental European countries, inflows have favoured funds with a fixed income or balanced orientation over pure equity funds. The United Kingdom and Japan have experienced a decline in the share of total assets invested in equity funds over the last few years. For the UK investment trusts this may reflect a marginal adjustment towards global averages from an atypically high share of equity funds. In the case of Japan, however, the decline is more likely a consequence of the sluggish performance of the country's stock market in recent years.

Hedge funds

What sets hedge funds apart from mutual funds is their speculative nature. Their target clientele of high net worth individuals and institutions is characterised by a greater tolerance for risk, and it is not unusual for the manager of the fund to have personal capital invested with the fund as well. In addition, by operating as onshore investment partnerships or offshore investment funds, they are not subject to the same regulatory and disclosure requirements as mutual funds. Hedge funds represent a very small segment of the institutional investor market despite having experienced annual compound growth rates of the order of 40% since 1990. Assets under management reportedly totalled $90 billion by the end of 1997. The reputation of hedge funds as agile and aggressive investors stems from their ability to assume short positions and make unencumbered use of leverage in order to take full advantage of profitable opportunities.

Pension funds:

Funded occupational or individual pension schemes represent the private sector alternatives to the typically non-funded social security system. *Pension funds* collect contributions from the beneficiary and the sponsor (typically a large employer or a trade union) and invest for the purpose of providing for the retirement entitlements of the former. The management of the investments may be performed by the fund itself or, as is frequently the case, may be partially or totally delegated to outside professionals. Defined benefit and defined contribution schemes differ significantly in the distribution of investment risk between the sponsor and the beneficiary.

defined benefit …

In defined benefit schemes, which account for the majority of plans, pension entitlements are calculated on the basis of the employee's salary profile and formally represent a liability of the sponsor, who is required to cover any funding shortfall. The beneficiary's risk is limited to the event of a sponsor's bankruptcy. In contrast, under defined contribution

Growth of pension funds

	Total financial assets						
	1980	1985	1990	1993	1996[1]		
	in billions of US dollars					as a % of GDP	as a % of household wealth
United States	701	1,606	2,492	3,449	4,752	62	20
Japan	..	..	343[2]	460	442[3]	10[3]	4[3]
Germany	15	22	52	47	65	3	2
Italy	..	..	39	34	43	4	2
United Kingdom	116	224	537	682	897	77	25
Canada	42	75	165	187	241	40	20
Australia	..	45[4]	45	78	100	29	22
Netherlands	77	105	230	262	363	92	..
Switzerland	..	107[5]	138	148[6]	189	73	..
Sweden	..	..	79	71	93	40	38

[1] For Italy and Australia, 1995; for Switzerland, 1994. [2] 1991. [3] Estimated. [4] 1988. [5] 1987. [6] 1992.

Sources: OECD, national data and BIS estimates. Table V.5

… and defined contribution schemes

schemes the beneficiary has a choice of alternative investment vehicles (frequently in the form of mutual funds) among which to allocate regular salary deductions and the sponsor's contributions. The investment risk is borne entirely by the beneficiary, whose entitlement is determined by the cumulative performance of the selected portfolio mix by the time of retirement.

The aggregate growth of pension fund assets has exceeded that of GDP, but its international distribution has been skewed towards countries that have promoted funded pension systems in the past, such as the United States, the United Kingdom and Canada. Growth has been lowest in countries that have traditionally placed greater emphasis on pay-as-you-go social security plans, most notably continental European countries (with the exception of the Netherlands and Switzerland). Reduced sponsor risk and greater portability across employers have fuelled the rapid growth of defined contribution schemes in recent years. At the end of 1996 such schemes accounted for $577 billion of total US mutual fund assets, a share of 16% compared with 11% in 1992. Defined contribution schemes have also been favoured in many countries by recent legislation aimed at pension system reform, including Australia and Italy.

Insurance companies

Even if large portions of *insurance companies'* portfolios did not consist of tradable assets, it would be hard to distinguish them from other categories of institutional investor, especially pension funds, on the basis of the nature of their products and functional links. A prime example is life insurance companies, which represent the largest segment of the insurance industry, and which offer products such as annuities and guaranteed investment contracts tailored to the needs of individual and collective pension plans. In some countries (Japan, Switzerland, Sweden and Denmark) life insurance companies may actually offer portfolio management and administrative services to pension funds.

Partly because it was already more developed, the overall growth of the insurance industry over the last decade has been slower than that of investment

Growth of insurance companies

	Total financial assets									
	1985		1990		1993		1996[1]			
	Life	Non-life	Life	Non-life	Life	Non-life	Life	Non-life	Life	Non-life
	in billions of US dollars								as a % of GDP	
United States	796	299	1,367	533	1,780	642	2,272	780	30	10
Japan	271[2]	–	887	180	1,387	233	1,691	265	33	5
Germany	108	47	285	116	320	132	478	214	20	9
France	57	17	184	55	279	84	450	132	29	9
Italy	10[3]	14[3]	36	30	46	29	60	40	6	4
United Kingdom	160	30	384	70	592	75	697	95	63	9
Canada	55	13	111	27	122	27	142	33	24	5
Spain[2]	8	–	50	–	58	–	107	–	18	–
Netherlands	39	7	101	16	130	17	214	30	55	8
Switzerland	..	..	79	36	94	37	117	44	45	17
Sweden	34[4]	–	64	15	67	18	93	28	40	12

[1] For France, Italy, the United Kingdom and Sweden, 1995; for Switzerland, 1994. [2] No distinction is possible between life and non-life insurance companies. [3] 1986. [4] Insurance companies and autonomous pension funds.

Sources: OECD, national data and BIS estimates. Table V.6

companies. However, underscoring the complementarity of their respective product lines, the growth of the insurance sector has been particularly strong in countries that lag in terms of the development of occupational pension funds.

Several factors have fuelled growth

It is the combined influence of a number of factors that has underpinned the surge in the growth of institutional investors in the past few years. Chief among these is the global wave of deregulation which, by sweeping away long-standing barriers to competition, has given unprecedented impetus to market forces. Responding to the realities of the modern market-place, and motivated by the realisation that pay-as-you-go schemes will soon come under severe demographic pressure, governments in many countries have provided legal and fiscal incentives in order to promote the development of funded schemes. A further contributory factor has been the prolonged period of asset price growth which, brief periods of correction apart, has consistently delivered high portfolio returns over a period of 15 years and attracted new funds in search of continuing profits. Finally, mutual fund growth is an expression of a new equity culture that is spreading across the retail investor base even in countries that have traditionally lagged in the field of stock ownership by households.

Issues in asset allocation

Structural differences affect asset allocation

The allocation of savings, both at the strategic level of determining the broad portfolio configuration in terms of asset classes, and at the tactical level of specific securities selection, is not independent of the context within which decisions are taken. Increased institutionalisation of savings will have implications for asset allocation to the extent that differences in motivation, as well as in the perception of risk and reward, between individuals and institutions result in different investment behaviour. An illustration of this divergence can be found in the typical composition of defined benefit and defined contribution portfolios in the United

States. Defined benefit plans, where strategic asset allocation reflects the sponsors' greater risk tolerance, tend to have a higher proportion of equities and a smaller share of bonds and money market investments than comparable portfolios of defined contribution plans chosen directly by the beneficiaries.

Increased internationalisation …

The large increase in international capital flows over the last several years has also been reflected in the geographical composition of institutional investors' portfolios. A look at the available statistics points to a number of stylised facts. Generally, equity holdings tend to be more diversified internationally than holdings of fixed income securities, owing to the fact that, after adjustment for currency risk, foreign bonds do not offer the same long-run diversification benefits as equities. The share of foreign assets is highest in pension fund portfolios, while insurance companies tend to be the least geographically diversified group. While the share of emerging market investments has been increasing in recent years, international holdings by institutional investors from industrial countries tend to be concentrated on securities from the same group of countries.

… has little impact on home bias …

Despite their recent growth, international investments represent a much smaller share of institutional investor portfolios than one might have expected on the basis of the relative capitalisation of national markets. This bias towards domestic securities appears too strong to be explained by the obvious barriers to foreign investment: higher transaction and information costs, exchange rate risk, as well as legal, regulatory and tax considerations. Current diversification levels appear less puzzling, however, if one takes into account the structure of institutional investors' liabilities. The fixed income characteristics of insurance companies' liabilities limit considerably the potential benefits of international diversification, while the potential for gains is greatest in the case of mutual funds, which have a simpler liability structure.

International diversification of institutional portfolios, 1996

	Pension funds		Insurance companies[1]		Investment companies		Market capitalisation as a % of world[4]
	Total[2]	Equities[3]	Total[2]	Equities[3]	Total[2]	Equities[3]	
	as a percentage of asset class						
United States	11	16	7	4	7	10	45
Japan	23	35	13	10	–	–	16
Germany	4	21	–	–	–	–	4
France	–	–	1[5]	1[5]	–	–	3
Italy	–	–	15	40	16	34	1
United Kingdom	28	28	18	19	15	16	9
Canada	17	37	26[6]	30[6]	37	40	3
Australia	20	27	22	29	–	–	2
Netherlands	30	58	18	21	7	9	2
Sweden	6	27	16	36	20	23	1
Switzerland	16	33	–	–	49	51	2

[1] 1995. [2] Foreign equities and bonds as a percentage of total equities and bonds. [3] Foreign equities as a percentage of total equities. [4] Based on the IFC Investable index for emerging markets. [5] 1994. [6] 1991.

Sources: OECD, Fédération Européenne des Fonds et Sociétés d'Investissement, International Finance Corporation and Watson Wyatt. Table V.7

An aspect of the international diversification of institutional investor portfolios that is easily masked by these figures is the asymmetry between the investor and the recipient perspectives, especially in the case of emerging economies. The high concentration of institutional assets in some of the most financially developed countries contrasts with the relatively small size of many recipient markets. This asymmetry, coupled with the ebbs and flows that have historically characterised portfolio investment in emerging economies (see Chapter VII), highlights the potential for instability as a marginal portfolio adjustment by the investor can easily amount to a first-order event for the recipient. For example, a hypothetical shift of 1% of equity holdings by institutional investors in the G-7 countries away from domestic equities would represent slightly more than a 1% share of total market capitalisation in 1995. The same funds would be equivalent to a 27% share of market capitalisation in emerging Asian economies, and a share of over 66% of Latin American equity markets.

… and masks an imbalance in perspective

Investor diversity and positive feedback mechanisms

Participants' diversity promotes financial market stability

Much as in an ecosystem, stability in the financial system derives from the coexistence of participants with divergent objectives and mutually complementary behaviour. Financial market volatility and asset mispricing breed on an imbalance between the intensity of the sellers' need to liquidate and the buyers' desire to acquire assets of a particular class. The implications of the growing share of savings that is channelled through institutional investors for the diversity of behaviour among market participants are an open question. On one hand, both the motives and the attitude towards risk can vary substantially across different types of institutional investor. In this respect the continuing growth across the spectrum of investor types will tend to promote the diversity of financial market players. At the same time, however, there are prima facie reasons to believe that risk and reward structures embedded in a delegated portfolio management relationship could impair managers' ability or willingness to take contrarian positions, thus reinforcing a herd-like type of behaviour. Furthermore, the increased institutionalisation of savings is part and parcel of the incipient broadening and deepening of securities markets. Shifting market attitudes, from an unhindered search for high returns to defensive avoidance of risk, find expression in institutional investor allocation decisions. Such shifts may frequently be amplified by mechanisms that feed back from asset price movements to institutional asset demand, which in turn further reinforces the price trend.

While some trends encourage diversity …

Industry trends imply a shift in the responsibility for strategic allocation away from the professional manager of the asset pool and towards the owner of the assets who ultimately bears the investment risk. The growth of mutual fund investments at the expense of bank accounts, the development of funded pension schemes, and within those the increased emphasis on defined contribution plans, are all expressions of this shift. As a result, a greater variety of individual actor preferences and views can find direct expression in asset allocation decisions.

The trend is also supported by two parallel developments in the fund management industry: the emergence of identifiable investment styles and the role of investment consultants. Both mutual funds and independent asset managers of pension funds tend to concentrate on single asset class portfolios, frequently following a specific investment philosophy in choosing securities, usually referred to as an "investment style". Style classification becomes an effective device for communicating with investors, who allocate assets across different classes by dividing their funds between managers adopting different styles, and with investment consultants who monitor and evaluate managers' performance against appropriate style benchmarks. At the same time, as manager mandates become more narrowly defined, mutual fund depositors and pension fund sponsors bear more of the responsibility for large swings of funds between asset classes.

… others lead to herding …

One mechanism by which the dynamics of the delegated portfolio management relationship may discourage diversity derives from the frequent evaluation of money managers' investment performance against market benchmarks. The fear that underperformance, even if it could be attributed to purely random events, may lead to cash outflows and hence lower management fees creates the incentive to avoid positions that can result in large deviations from the benchmark. Managers' incentive to follow each other's trading strategies closely is further strengthened when the evaluation is performed against a peer universe. Underperformance together with the rest of the group will be less damaging to the individual than the risk of being singled out after a contrarian bet proves disappointing. Casual anecdotal evidence of market participants' inclination to follow the leadership of their most successful peers lends support to the theoretical arguments. Empirical verification of such behaviour is confronted with difficult identification problems and the possibility that herding is accentuated during periods of market stress. The limited body of existing research focuses mainly on short-horizon stock-picking by asset managers, and its findings suggest that while herding exists it is not a large-scale phenomenon.

… and momentum-building mechanisms

While herding refers specifically to professional asset managers' trading patterns, the framework of asset allocation by institutional investors can give rise to positive feedback mechanisms that tend to reinforce asset price momentum. One such mechanism is the combined result of asset managers' desire to conform to a specific investment style and investors' tendency to reward good performance with higher fund inflows. As managers are unlikely to deviate from their declared investment style, the new cash inflow will tend to be invested in the same asset class. Indeed, some commentators fear that record inflows to equity mutual funds on the heels of the strong first-quarter performance of stock markets in 1998 may reflect the unrealistic expectations of small investors.

A similar, albeit a more subtle, mechanism operates when the asset management objective is simply to replicate the returns of a benchmark index. Because many widely used indices are capitalisation-weighted averages, the weights vary in line with the proximate performance of the index components, influencing the allocation of new funds to the constituent markets. An example of this effect can be seen in the relative weights of Asia and Latin America in the IFC Investable index, which in the aftermath of the South-East Asian crisis were 24% and 41% respectively. This was an almost complete reversal from their January 1997 levels of 45% and 34%, and may have contributed to the sluggishness of portfolio flows back to the Asian economies.

Minimum standards regarding the creditworthiness of the securities they may hold can also compromise the ability of some types of institutional investor to assume contrarian positions. Such minimum standards in some cases reflect the regulatory framework, but often are self-imposed, for example by the trustees of pension funds. Following the downgrading of a certain class of borrower, investors may have no choice but to liquidate their holdings even if they believe that the situation may reverse itself in the near future.

Good performance by the pension fund's portfolio, which generates revenue in excess of actuarial funding requirements, frequently results in contribution holidays for the sponsor. It has been suggested that a multiplier mechanism then operates through higher corporate earnings that feed back into higher stock prices and more holidays. The implicit assumption is, of course, that any counterbalancing effect for stock price growth resulting from reduced sponsor contributions to the fund fails to neutralise this positive effect of higher earnings.

The response of institutional investors to the events of 1997

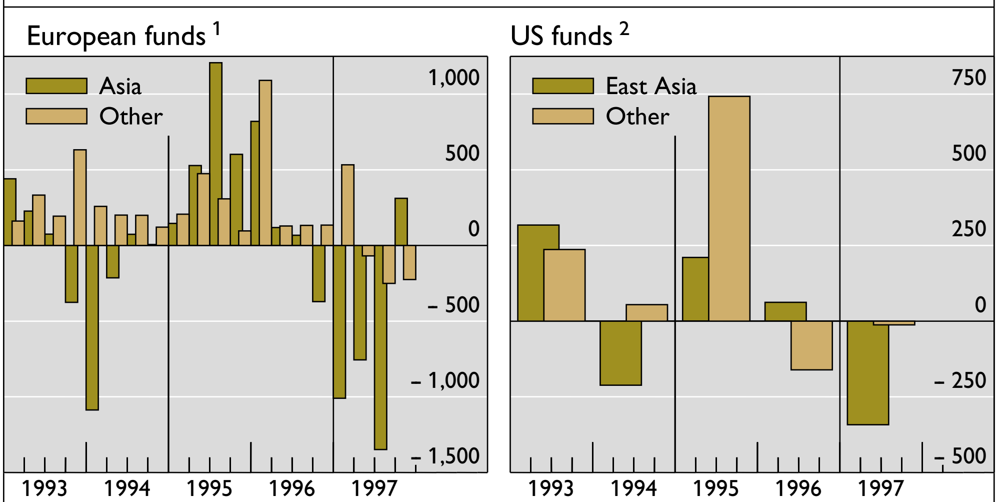
The contagious currency crises that affected the South-East Asian countries after July 1997, and the generalised equity market turbulence in October last year, offer an opportunity to examine the behaviour of institutional investors in periods of turmoil. It is also instructive to compare their responses with those of other financial market players, as well as with previous episodes of market stress, in order to evaluate their impact on financial market stability.

Pension funds withdrew from Asia early …

Portfolio allocation data for pension funds from the Netherlands, the United Kingdom and the United States show that these fund managers had embarked on a reduction of their exposure to Asia as early as the last quarter of 1996, possibly responding to the emerging signs of strain. While arguably the withdrawal may partly reflect a retreat from an originally overweight exposure, it is consistent with survey evidence of declining market enthusiasm for the region

Pension fund flows to emerging markets

In millions of US dollars



[1] Based on large samples of UK and Dutch funds. [2] Computed as valuation-adjusted changes of portfolio allocations by a sample of US funds.

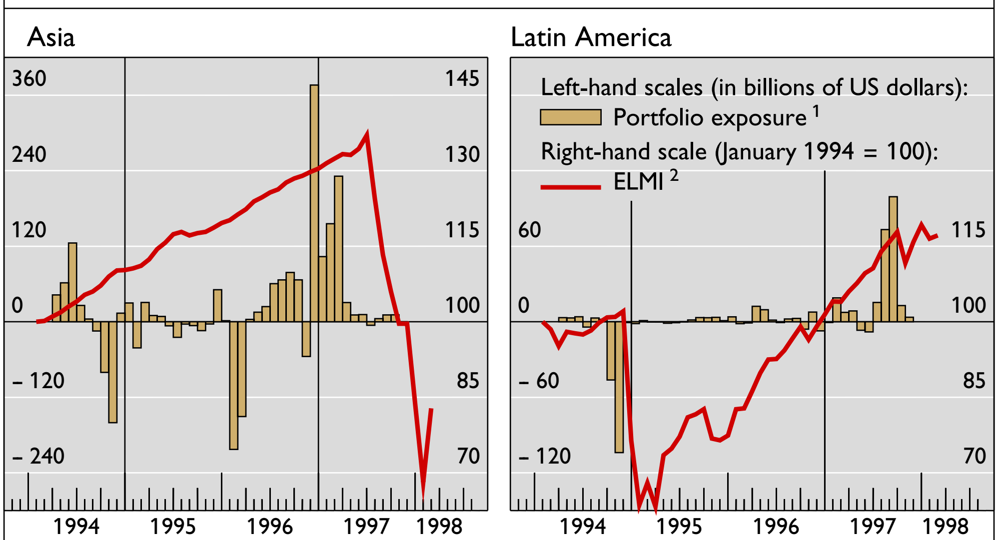
Sources: The WM Company, Frank Russell and BIS calculations. Graph V.7

for a number of months before the outbreak of the crisis in July. The behaviour of these managers contrasts sharply with that of banks, which apparently continued to increase their exposure to Asian borrowers until the second quarter of 1997 (see Graph VIII.5). Whether this is a demonstration of greater insight on the part of pension fund managers, or bankers' unwillingness to withdraw quickly for fear of damaging customer relationships, needs further investigation. What is also unclear is the extent to which banks' investment decisions were influenced by safety net guarantees for interbank counterparties, or the anticipation of intervention by the international financial community in the event of a crisis. The fact remains, however, that the two types of institution exhibited different behaviour.

… and so did hedge funds …

Hedge funds have acquired notoriety because of their aggressive investment practices and the relative secrecy of their activities. However, despite often-cited anecdotal reports, there is little concrete evidence that hedge funds as a group were heavily involved in triggering or even intensifying the series of South-East Asian currency depreciations. In the absence of publicly available figures on hedge fund positions, Graph V.8 presents statistical estimates of aggregate portfolio exposures for a group of funds specialising in global investments, including currencies, to Asia and Latin America during the period 1994–97. The exposures have been derived from the estimated sensitivity of the hedge funds' reported returns to the underlying markets and the funds' size. The graph shows that, while there was considerable exposure to Asia at the beginning of 1997, these long positions were substantially reduced a few months before the crisis. At the same time, positions were built up in Latin American countries. Moreover, on the basis of this analysis there appears to be no statistical evidence that these funds *as a group* had extensive short positions against Asian currencies at any time during or after the summer of 1997.

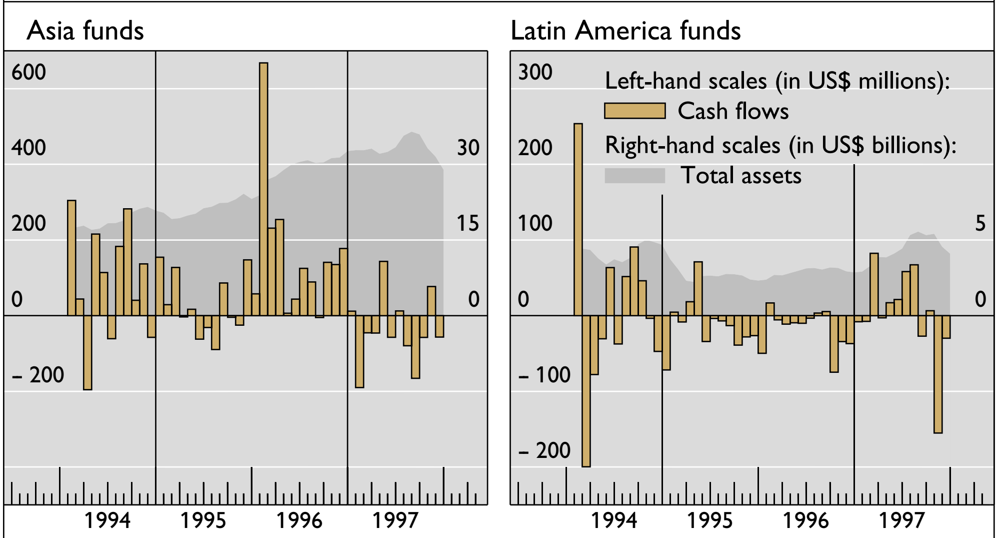
Estimated portfolio exposure of hedge funds to emerging markets



[1] Calculated as the product of the fund size and the sensitivity of reported portfolio returns to the market index. [2] J.P. Morgan Emerging Local Markets Index.

Sources: Managed Accounts Report Inc., J.P. Morgan Securities Inc. and BIS calculations. Graph V.8

Cash flows to US international equity mutual funds *



* Monthly averages.
Source: AMG Data Services.

Graph V.9

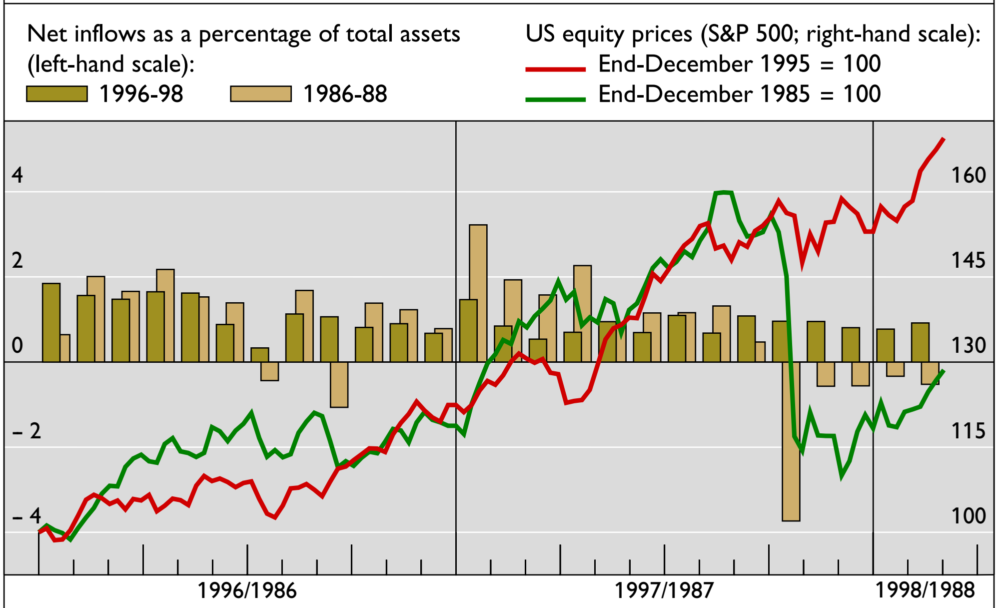
… while mutual fund investors withdrew from all emerging markets …

The behaviour of pension and hedge fund managers before, during and after the crisis in Asia contrasts with that of investors in US mutual funds specialising in emerging markets (Graph V.9). The investors' shift away from Asian and towards Latin American funds that started in early 1997 intensified during the summer months after the first episodes of depreciation. It then turned into a generalised retrenchment from both regions during the autumn, as the turbulence continued and its resonance was felt in industrial economies' equity markets. In contrast, at the outbreak of the Mexican crisis in December 1994, the flow towards Asian emerging market funds was only momentarily interrupted, suggesting that mutual fund investors' confidence in these economies was not affected by the events in Latin America.

… but not from the US stock market

The attention of many market players was focused on the reaction of the individual mutual fund investor during the days following the sharp fall in many equity markets in late October last year. The absence of heavy withdrawals was one of the factors that strengthened the market's belief that the episode was no more than a temporary correction. In fact, for the month of October, US equity funds registered a net cash inflow of the order of 0.8%, indicating the continuing confidence of retail investors in current market valuations. A comparison with previous episodes of sharp falls and heightened equity market volatility is instructive. In response to the October 1987 market break, withdrawals from equity mutual funds reached a record, with a net cash outflow of 3.7% of assets. Most of this amount was withdrawn during the three days after the stock market plunge, but net outflows continued for most of the next calendar year. In view of the relative size of the two equity price falls, and with the benefit of hindsight, it appears that the reaction of mutual fund investors in both cases was rather measured and their instincts were correct. Retail investor resilience helped restore liquidity in the market, thereby averting a protracted surge of asset price volatility like that during another episode in October 1989. Ex post analysis of

Cash flows to US equity mutual funds



Sources: Investment Company Institute and national data. Graph V.10

the events during that month has shown that, in the midst of generalised selling and investor nervousness, market-makers were unwilling to provide liquidity, thus further exacerbating the market's strains. In contrast the prompt recovery last October paved the way for a spectacular rise in equity prices in the first quarter of this year.

These various examples demonstrate that institutional investors' response is not necessarily uniform across different industries or in different situations. At the same time, however, independently of when different types of investor started reducing their exposure to South-East Asia, the region experienced a generalised withdrawal of funds by both bank and non-bank institutions during the second half of 1997. This illustrates how highly correlated strategies across different players may contribute to an aggravation of asset price movements. Given the size of institutional portfolios, even slight tendencies of this sort could potentially lead to large breaks in the price discovery mechanism.

Outlook

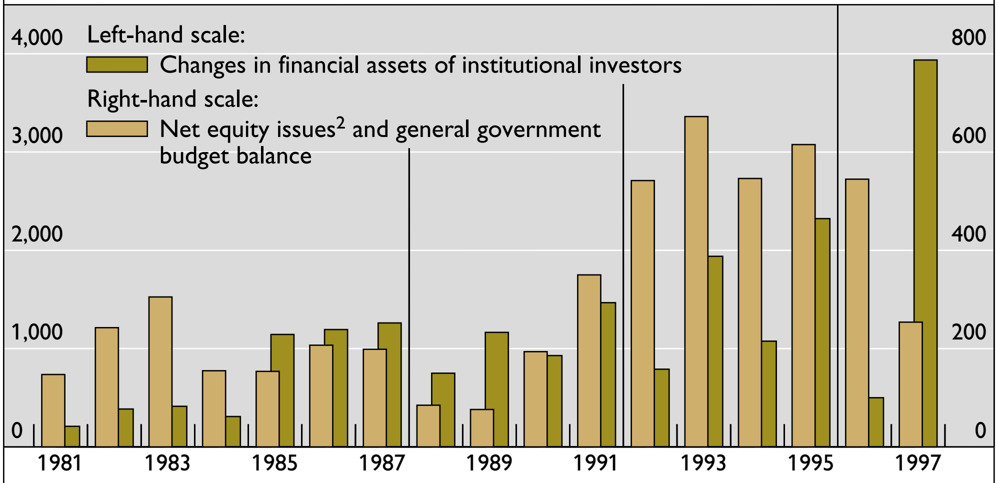
Institutional investors are a permanent feature of the financial landscape and their growth will continue at a similar, and perhaps even faster, pace. The factors that underpin their development are far from transitory and in many cases have only just started having an impact. The behavioural characteristics of institutional investors, therefore, will be an increasingly important determinant of domestic and international financial market conditions, and the implications for financial stability warrant serious consideration.

An imbalance between demand and supply of traditional instruments …

A growing appetite for liquid, transferable securities that offer diversification possibilities is a natural consequence of the rapid growth of institutional investment. However, there has been a marked downward trend in the supply of such staples of pension and mutual fund portfolios as industrial country

Trends in the supply of public equities and government debt[1]

In billions of US dollars



[1] Group of Seven countries excluding Italy. [2] For France, gross issues.

Sources: OECD, national data and BIS estimates. Graph V.11

government bonds and publicly listed equities. Net new equity issues have been in decline in the United States for over four years, under the influence of a wave of mergers and acquisitions, which unlike in the late 1980s has not been financed by bonds, and corporate share buybacks aimed at increasing shareholder return. In addition, efforts towards fiscal consolidation throughout the industrial world (see Chapter II) imply a decline in the supply of highly rated government paper. Recent rates of asset price growth and historically high valuation ratios, discussed in the first part of this chapter, may thus, at least in part, be the temporary result of a structural imbalance between supply and demand trends.

… will boost alternative investments

Another implication of the imbalance between the portfolio needs of institutional investors and the supply of equities and government bonds is that demand will have to be satisfied by other asset classes. This is likely to give impetus to the markets for securitised debt, private equity, emerging market securities and other alternative forms of investment. It is also likely to encourage the further development of synthetic securities that replicate the risk/return characteristics of government paper through the use of structured derivative products. In fact, survey evidence shows that, during the past few years, alternative investments such as leveraged buyout funds, international private equity and venture capital have already made considerable inroads into institutional investor portfolios, with commitments standing at about $70 billion for US and Canadian pension funds. In continental Europe, institutional investor growth in combination with the establishment of a single currency area is also likely to further boost the development of the corporate bond market, which is lagging behind that of the English-speaking countries.

The consolidation trend challenges current regulatory structures

The consolidation trend across the entire spectrum of the financial services sector has implications for the industrial organisation of the asset management sector and its relationship with other types of financial institution. Asset management conglomerates are constantly growing in size, either naturally or through acquisitions. Over the past few months, there have been several wellpublicised cases of consolidation in the insurance industry, some of them cross-border. Moreover, two major structural events, the further liberalisation of the Japanese financial services market and the creation of the single currency market in Europe, will provide significant impetus to cross-border deals in the near future. Banks are already substantially involved in the production, marketing and distribution of collective investment products and have already started to venture into the insurance field. The pending merger of two major Swiss banks will create the largest asset management company in the world. There has also been a trend towards mergers or strategic alliances between banks and asset management companies with the objective of enhancing the links between the production and distribution of financial products. Successful pension funds in some countries will be tempted to expand the menu of financial services they provide, either by forging alliances with suppliers (banks and insurance companies) or by venturing into the creation of those products themselves. These developments raise questions about whether current regulatory structures, which remain fragmented along industry and national lines, are adequately suited to an emerging financial landscape where these borders are becoming increasingly blurred.

Does the growth of institutional investors contribute to financial instability? The answer is probably not as the primary cause of market turbulence, but, by virtue of the size of their portfolios, they are usually the main channel through which the changing moods of investors are transmitted to financial markets. The forces discussed above that could potentially induce institutional investors to engage in behaviour that might at times amplify asset price dynamics require further study. There is a need for those responsible for safeguarding financial stability at both the national and international level to understand the way various types of investor behave and react to market conditions. In an increasingly liberalised financial market-place of global proportions, understanding and managing market dynamics and their associated risks is the best insurance against excessive volatility that leads to costly crises.

VI. Exchange rates and capital flows

Highlights

In 1997 and early 1998 current and prospective business cycle developments in the three largest economies continued to dominate interest rate expectations as well as the movements of the dollar against the yen and the Deutsche mark. The yen showed more variability than the mark as market participants revised their views regarding the momentum of the Japanese economy. As in 1996, the dollar's strength served to redistribute world demand in a stabilising manner, away from the full employment economy of the United States to economies that were still operating below potential. A question remains as to whether the US current account deficit, which is expected to widen substantially as a result of exchange rate changes and the Asian crisis, will prove sustainable given the continuing build-up of US external liabilities.

Under the influence of several forces, large currency depreciations spread across East Asia and beyond in 1997. Apart from similarities in domestic conditions, common factors were the strength of the dollar, competition in international trade, widespread shifts in speculative positions and foreign investors' withdrawal of funds from markets considered similar. The fall in output growth and wealth in Asia depressed commodity and gold prices, thereby putting downward pressure on the Canadian and Australian dollars.

Against the background of a strong US dollar, most European currencies proved stable or strengthened against the mark. As fiscal policies and inflation converged, forward exchange rates and currency option prices anticipated the euro over a year before the scheduled introduction of monetary union. Already in 1997, trading of marks against the other currencies of prospective monetary union members had slowed.

The US dollar, the Deutsche mark and the Japanese yen

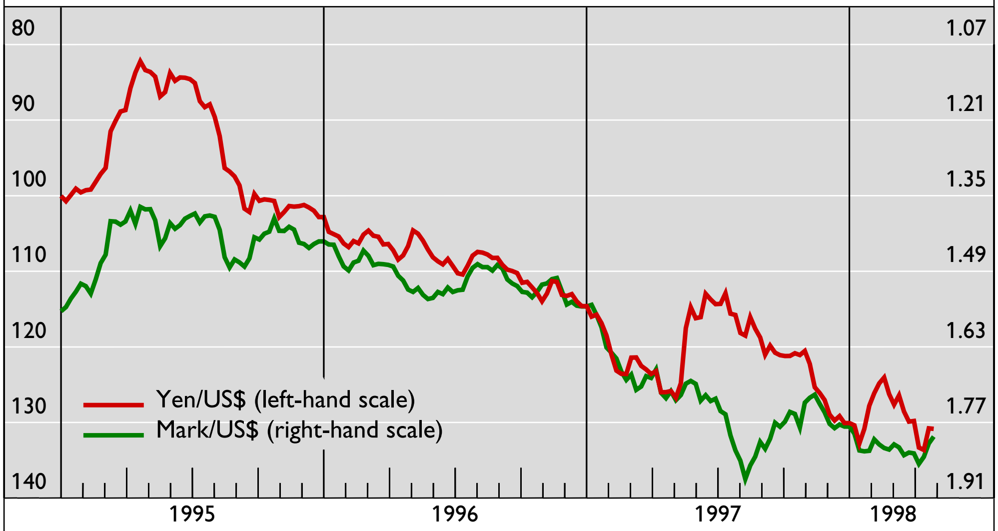
The dollar and business cycle developments

The dollar responds to changing views about growth

The dollar started 1997 on an appreciating trend against both the yen and the mark (Graph VI.1) as a result of market expectations of monetary tightening in the United States and no change in monetary policy in Germany and Japan (Graph VI.2). These expectations were founded on signs of accelerating US growth, coupled with rising unemployment in Germany and continuing weakness of the financial sector in Japan. Particularly large capital flows from Japan to the United States in April, which contributed to the substantial increase in cross-border transactions in bonds and equities (Table VI.1), accentuated the yen's depreciation (Graph VI.3).

The yen and the mark against the dollar

Weekly averages *



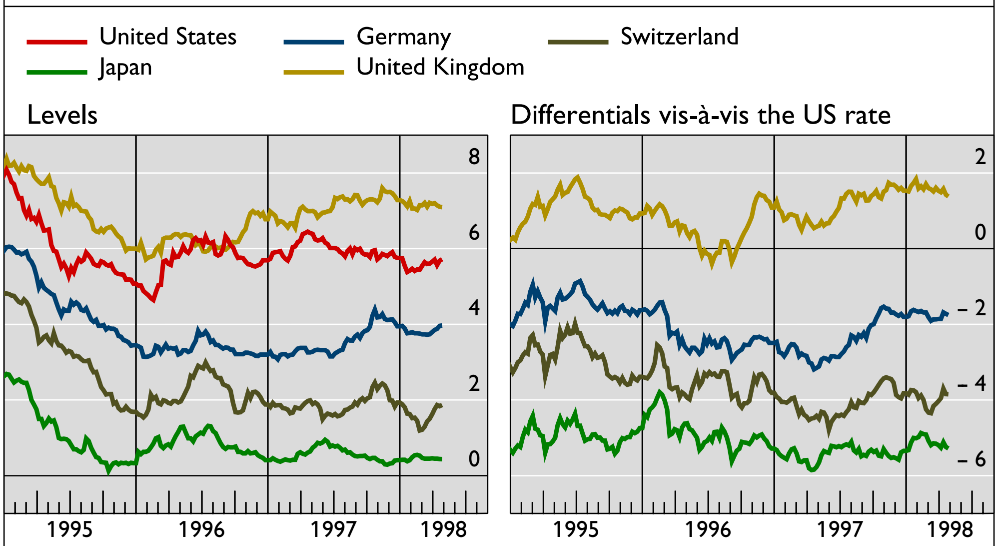
* Inverted scales. A decline indicates a dollar appreciation.

Graph VI.1

From May to July the dollar moved in scissor-like fashion against the yen and the mark. Against the mark, it appreciated towards DM 1.90, a level never before reached in the 1990s, in the context of an increasing consensus that the euro would arrive on schedule with a broad membership. At the same time it depreciated substantially against the yen in response to perceptions (in the event erroneous) of improving economic prospects in Japan. The yen also rose when market participants interpreted statements by Japanese and US policy-makers as suggesting the possibility of official purchases of yen against dollars. Japanese investors exploited the yen's strength during this period by continuing to purchase US bonds in large amounts.

Six-month forward interest rates *

Weekly averages, in percentages and percentage points



* Derived from 6 and 12-month LIBID.

Graph VI.2

Cross-border transactions in bonds and equities*

	1975	1980	1985	1989	1990	1991	1992	1993	1994	1995	1996	1997
	as a percentage of GDP											
United States	4	9	35	101	89	96	107	129	131	135	160	213
Japan	2	8	62	156	119	92	72	78	60	65	79	96
Germany	5	7	33	66	57	55	85	170	158	172	199	253
France		5	21	52	54	79	122	187	197	187	258	313
Italy	1	1	4	18	27	60	92	192	207	253	470	672
Canada	3	9	27	55	65	83	114	153	208	189	251	358

* Gross purchases and sales of securities between residents and non-residents.
Source: National balance-of-payments data. Table VI.1

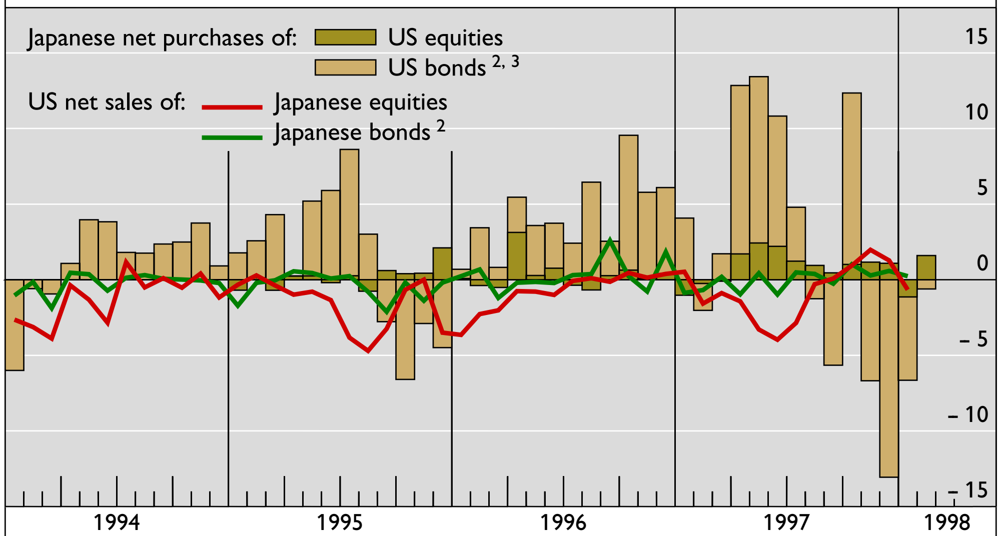
The scissor blades closed during the summer as the release of weak Japanese economic data dampened earlier optimism about an acceleration of growth. This reduced the likelihood of a rise in Japanese interest rates, while US interest rates were expected to remain unchanged. Concerns about the US trade deficit with Japan, however, may have moderated the dollar's appreciation against the yen. The mark's recovery against the dollar during this period reflected expectations of some monetary tightening in Germany, expectations which were fulfilled in early October.

Large Japanese sales of foreign bonds ...

From the end of October to year-end, the spreading of the crisis in Asia influenced exchange rate movements between the three major currencies. The market view that the impact would be greatest on the Japanese economy tended to amplify the weakening of the yen in response to growing pessimism about the outlook in Japan and concern about financial strains. Japanese investors sold unprecedentedly large amounts of foreign bonds during this period, reversing the

Portfolio flows from Japan to the United States [1]

In billions of US dollars



[1] A positive (negative) sign indicates a net flow from (to) Japan. [2] Data may include official transactions. [3] 1994 data include US equities.
Sources: Japanese Ministry of Finance and US Treasury. Graph VI.3

large outflows from Japan during the phase of relative yen strength (Graph VI.3). Banks reducing dollar assets in order to pay off dollar liabilities accounted for some of the flows. Some of these bond sales, however, led to purchases of yen against dollars, so the yen's weakness suggests other forces were at work. One such factor may have been the sizable short positions taken against the currency in both the spot and the option market by speculative operators outside Japan. Hedge funds and proprietary trading desks were seen buying long-dated dollar calls at the current exchange rate, consistent with the view that economic weakness and financial fragility would lead to further appreciation of the dollar against the yen. Given the large interest rate differential, these options were out of the money (and therefore cheap) and would yield a positive return if the dollar strengthened even marginally. One indication of this speculative positioning was the persistent premium on one-year dollar calls over equally out-of-the-money yen calls in late 1997 and early 1998 (a positive risk reversal in Graph VI.4).

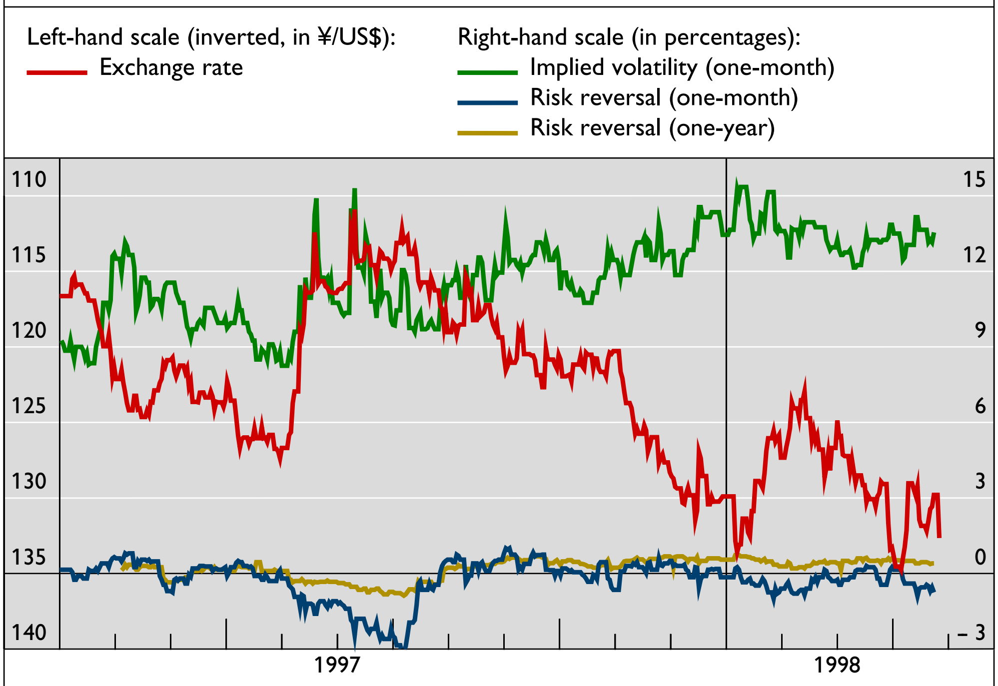
… outweighed by speculative positioning

In contrast to its strength against the yen, the dollar weakened against the mark from the end of October to mid-November, reflecting the market view that the Asian crisis would have a greater economic impact in the United States than in Europe. As in 1996, the dollar's steepest fall occurred on the day of the biggest decline in the US equity market (27th October). This decline, triggered by a plunge in the Hong Kong stock market, was accompanied by a rise in market uncertainty (an increase in the variance of the probability density function implied by option prices). Market participants also became willing to pay more for options that would pay off in the event of a much weaker dollar over the following months (a fattening of the left-hand tail of the distribution in Graph VI.5).

The dollar falls with US equities in October …

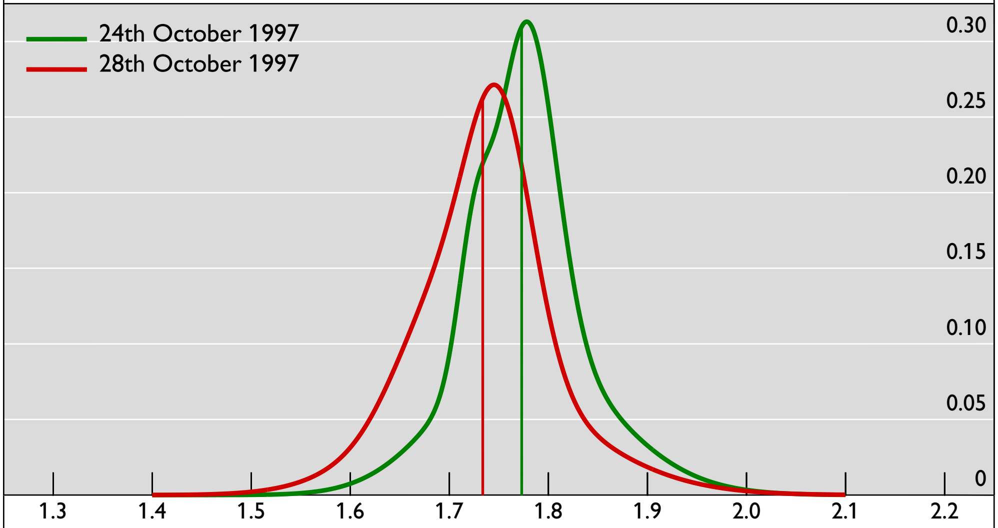
Other than on days of very sharp drops in the US equity market, the relationship between currency values and equity markets varies. With a large but

The exchange rate, implied volatility and risk reversals of the yen



Sources: National Westminster Bank, Swiss Bank Corporation and BIS. Graph VI.4

Probability distributions of the mark against the dollar



Note: The Dow Jones index fell by 554 points or 7.2% on 27th October 1997. The calculation assumes risk neutrality. The vertical lines indicate the forward rate from futures contracts (i.e. the mean of the distribution) for each date.

Source: W. Melick (Federal Reserve Board) using Chicago Mercantile Exchange data. Graph VI.5

… highlighting the relationship between exchange rates and equity markets

stable short-term interest rate differential between the dollar and yen over the past two years, the alternation of pessimism and optimism about the prospects for sustained growth in Japan has expressed itself in similar movements in both the yen's exchange rate and the Japanese equity market. (This relationship has been quite close, notwithstanding the fact that the generally positive response of Japanese corporate profits to a weaker yen would suggest the opposite relationship, as observed in continental Europe.) The US equity market and the dollar/mark exchange rate have shown a much looser relationship, notably in 1998 (Graph VI.6). To be sure, both reflect investors' shifting expectations with regard to sustained US growth and the associated hope of strong asset price performance, as indicated by a $66 billion net foreign purchase of US equities in 1997. At the same time, the looseness of the relationship reflects the importance of changing perceptions of the state of the business cycle in Europe as well as the United States. The singularity of the influence on the dollar/yen rate, compared with the complexity of the forces bearing on the dollar/mark rate, helps account for their scissor-like movement.

By mid-November market participants were coming to believe that Europe would be more exposed to fallout from the Asian crisis than previously thought. Together with official declarations about interest rate convergence in Europe, this perception led them to scale back expectations of further increases in German policy rates. As a result the mark gradually declined against the dollar up to the turn of the year.

The scissors opened again in mid-January 1998 as the dollar traded within a narrow band around DM 1.80 while the yen bounced back from nearly ¥134 to the dollar to around ¥125. The yen's rise was helped by expectations of a further fiscal stimulus package and deregulation measures in advance of the Group of Seven meeting on 20th February. Additional influences were a more

Exchange rates and stock markets

Sources: DRI, national data and BIS. Graph VI.6

positive outlook for the other East Asian economies and market concern about intervention by the Japanese monetary authorities. In early April, however, the yen fell back to around ¥135 to the dollar, its lowest level since September 1991, as the weak prospects for the Japanese economy reflected in the Tankan survey were mirrored by the decision of one credit-rating agency to change its outlook on Japan's sovereign credit rating from stable to negative. Dollar-selling intervention by the Bank of Japan prevented the yen from falling further against the dollar.

Perspectives on the dollar

The dollar's strength promotes cyclical balance …

From a cyclical perspective, the dollar's strength helped to strike a better balance of growth across industrial countries in 1997, as it had done in the previous two years. It tended to redistribute world demand from the strongly growing US economy to less robust economies. In a long-term perspective, however, the continuing strength of the dollar may eventually play less of an equilibrating role. To judge from the shortfall of goods and services it could command in Germany

Estimates of the US dollar's purchasing power parity and fundamental equilibrium value

	Market rate[1] against the dollar	Purchasing power parity (PPP)		PPP adjusted for productivity	Fundamental equilibrium exchange rate	
		OECD[2]	Penn[3]	Goldman Sachs[4]	IIE	SBC[4]
Deutsche mark	1.77	2.02	2.12	1.51	1.45–1.50	1.40
Japanese yen	132	169	188	124	100	95

[1] On 11th May 1998. [2] 1997 average. [3] 1992. [4] Early 1998.

Sources: OECD, Penn World Tables 5.6, Goldman Sachs, John Williamson's 1996 informal update of estimates in *Estimating equilibrium exchange rates*, Institute for International Economics (IIE), Washington, D.C. (September 1994) and Swiss Bank Corporation (SBC). Table VI.2

and Japan, as indicated by the gap between the market rate and estimates of purchasing power parity, the dollar is undervalued (Table VI.2). Yet the 1997 current account deficit of $166 billion looks set to widen further this year, given the dollar's strength and the drop in exports to Asia. The question arises therefore as to whether growing US current account deficits are sustainable in view of the build-up of US external liabilities.

… but raises long-term questions

One way to address this question is to look at estimates of fundamental equilibrium exchange rates, which try to identify the level of the dollar that would be compatible with a stable ratio of external debt to output in the long run. Such estimates, while necessarily imprecise, suggest that at May 1998 levels the dollar is noticeably overvalued against the mark and even more so against the yen.

Some comfort can be drawn from the readiness of private investors to finance last year's current account deficit in the United States. Most of the 1997 increase in US external liabilities seems to have been easily absorbed by the private sector, as official foreign exchange reserves in general, and those held in dollars in particular, rose only modestly after several years of very rapid growth (Table VI.3). The reversal of private flows to Asia led to a reserve drawdown in a number of emerging economies, but elsewhere reserves rose over the year, notably in China, Hong Kong, India, Poland and even Russia, despite its reserve losses in the fourth quarter. At the same time, industrial countries' reserves increased moderately (at constant exchange rates), with the growth of Japanese reserves levelling off in 1997. Nevertheless, the abundant private financing of the US deficit, including the strongest flows into US equities since the first half of 1987, leaves open the question of whether these inflows will continue.

Measured against US output, the build-up of external debt and the increase in its servicing burden do not appear to be of immediate concern. The net external liabilities resulting from the US current account deficits since the late 1980s do not exceed one-sixth of US domestic product. Moreover, US net investment income turned negative only in 1997, and amounts to only ⅕% of US output. In contrast, net investment income received by Japan on its positive net international investment of about one-quarter of domestic product amounts to slightly more than 1% of its output. This puzzling disparity between the substantial

Official foreign exchange reserves

	1994	1995	1996	1997	Amounts outstanding at end-1997
	in billions of US dollars				
	Changes, at current exchange rates				
Total	153.0	200.1	172.3	45.9	1,578.5
Industrial countries	60.9	79.3	69.6	–10.3	692.6
Asian NIEs[1]	31.7	22.7	17.5	– 4.1	272.2
Other countries	60.4	98.1	85.2	60.3	613.7
	Changes, at constant exchange rates[2]				
Total	112.2	182.1	200.6	105.3	1,578.5
Dollar reserves	90.7	143.8	161.8	54.5	1,103.5
held:					
In the United States[3]	38.3	106.0	128.0	20.6	738.7
With banks outside the US[4]	30.0	–15.4	19.2	– 4.0	122.2
Unallocated	22.4	53.2	14.6	37.9	242.6
Non-dollar reserves	21.5	38.3	38.8	50.8	475.0
of which held with banks[4]	*1.8*	*7.6*	*8.0*	*17.0*	*126.1*

[1] Hong Kong, Korea, Singapore and Taiwan. [2] Partly estimated; valued at end-of-year exchange rates. The residual has been allocated on the basis of known reserves. [3] Excludes foreign military sales prepayments and the current value of zero coupon bonds issued to the governments of Argentina, Mexico and Venezuela as collateral for their Brady bonds. [4] Deposits by official monetary institutions with banks reporting to the BIS.

Sources: IMF, national data and BIS. Table VI.3

negative US net international investment position and the very modest income payments reflects two factors. First, compared with foreign direct investment in the United States, the US stock of direct investment abroad is older and thus yields a higher return. Secondly, the United States issues relatively safe liabilities, such as Treasury paper and bank deposits, while its institutional investors (see Chapter V) buy riskier, higher-yielding assets abroad, such as emerging market fixed income assets. In sum, the burden of foreign debt service is only beginning to be felt, even though the US net international position has been deteriorating for most of the past two decades. The introduction of the euro could, however, bring this trend into sharper focus (see below).

Asian currency developments

To a considerable extent, the depreciation of Asian currencies in 1997 represented the international manifestation of domestic crises, whose roots are explored in Chapters III and VII. However, the cyclically strong US dollar can be seen as having helped to precipitate the declines in Asian currencies, which had been stable in effective terms in the early to mid-1990s. Although Asian countries' inflation rates at that time often exceeded those of their industrial country trading partners, close linkage to a declining dollar kept effective exchange rates from appreciating (see Graph III.2). In contrast, from the spring of 1995 the rise of the dollar by 56% against the yen and 27% against the mark induced a rise in effective exchange rates in Asia, subsequently reversed by the initial depreciations. It is also worth noting that, prior to 1997, the last depreciation of the baht (in 1984) had taken place late in a sustained period of dollar strength.

Option markets indicate the timing of exchange rate pressures

Once precipitated, currency depreciation seemed to spread from country to country. However, the timing of market pressure on exchange rates is not necessarily evident in the observed exchange rates themselves owing to differences in the tenacity of official defence through intervention and interest rate increases. Thus in May the Thai baht and the Czech koruna came under attack. However, the former was defended up to 2nd July – with some help from capital controls – while the latter fell below its band after a vigorous but brief defence. Option markets can provide a better indicator of the timing of currency attacks. The price of options, and thus the volatility of the exchange rate implied over an option contract's life, tend to rise in response to policy uncertainties or developments in neighbouring countries even when the authorities are successfully holding the spot exchange rate. Thus, already in February and again in May, the baht's implied volatility signalled heightened uncertainties (Graph VI.7).

Currency depreciations spread through …

At least three different mechanisms helped to spread currency strains across East Asia and beyond. A familiar mechanism works through competition in international trade. If a competitor's currency depreciates, an economy's competitiveness suffers from an effective currency appreciation that can slow economic activity and thus lead to pressure for a depreciation. A second, less familiar, mechanism is the demonstration effect of profits and losses on speculative positions. Finally, in the third mechanism foreign investors seek to withdraw their funds from markets and instruments deemed in some way to be similar.

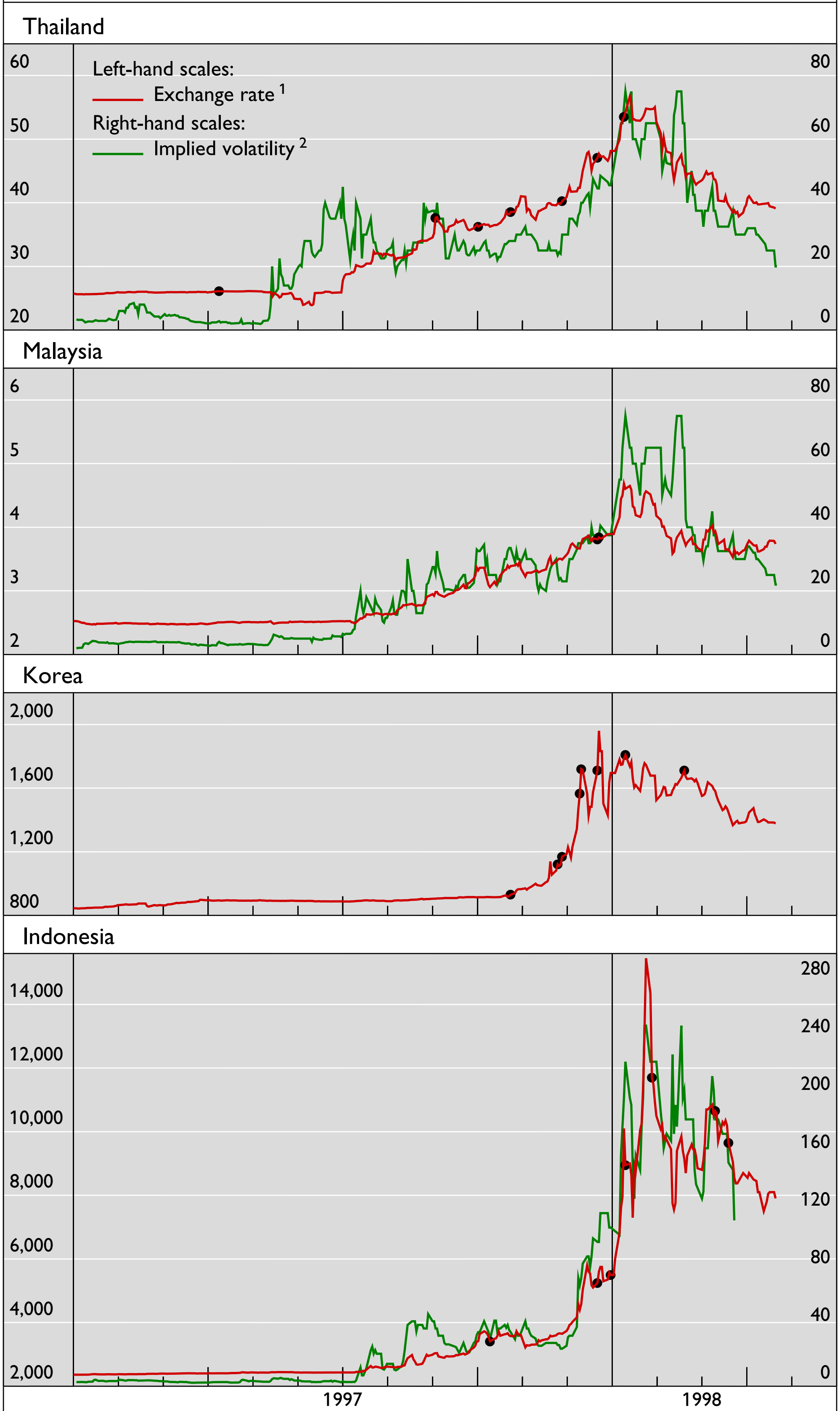
… competition in international trade …

Despite the differences across Asian economies in export composition – textiles and shoes in one country, electrical components and machine tools in another – each competes closely with at least two others. This is evident in correlations of the shares in exports of 11 commodity categories to each of three major destinations – the European Union, the United States and Japan (Graph VI.8). Broadly speaking, close competitors have shown similar depreciations against the dollar, and thus limited exchange rate movements against each other.

… the demonstration effect of speculators' profits and losses …

In the second mechanism, the realisation of profits and losses from a depreciation in one country can lead to shifts in speculative positions that make another depreciation more likely. Foreign speculators can invest their gains from one depreciation in trades that would profit from another. In addition, losses on essentially speculative positions in one country can induce those running similar positions in another country to close them out. Such behaviour is by no means confined to foreigners. Residents financing a local currency asset, such as real estate, with foreign currency borrowing effectively enter a speculative position. This was true in Asia even where such mismatches had produced profits for years. Witnessing those running similar risks in neighbouring countries incur losses, residents with such positions sought to reverse them by buying dollars. That this aggravating effect figured more prominently in Asia in the 1990s than in Latin America in the early 1980s is an ironic result of the much stronger fiscal balances of the Asian countries. The Latin American governments and state-owned firms liable for much foreign debt generally did not try to buy dollars

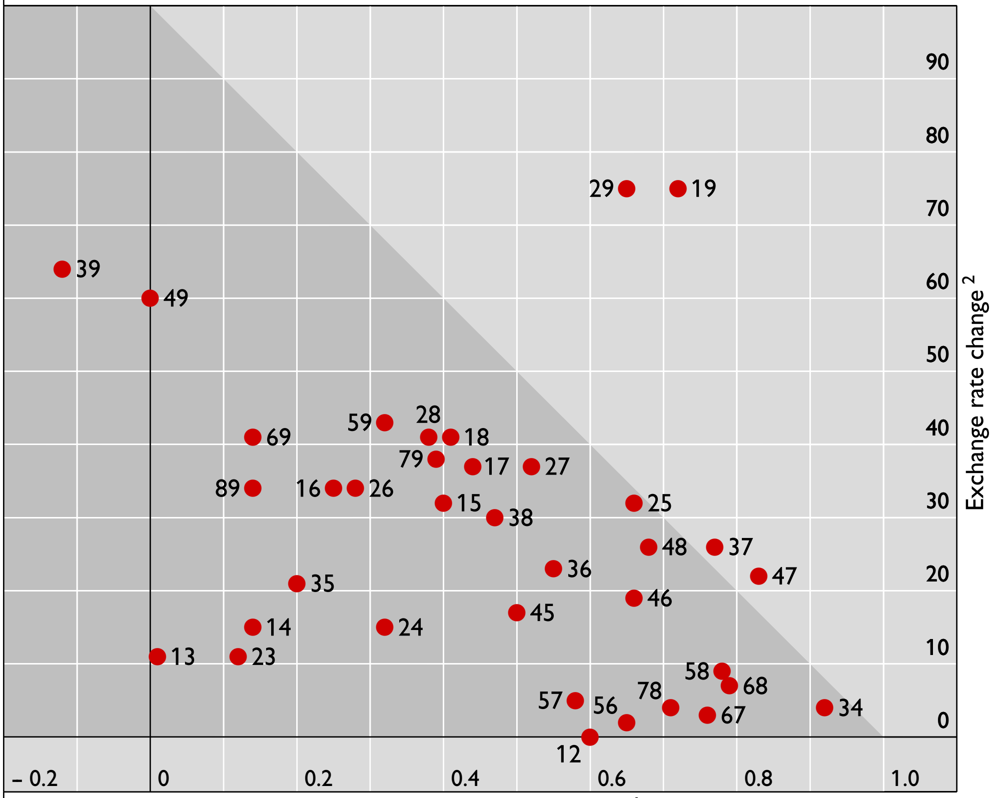
Exchange rates, implied volatility and rating changes in Asia



[1] In units of domestic currency per US dollar. The dots indicate sovereign bond rating changes as announced by Moody's and Standard & Poor's (see Table VII.3). [2] One-month, in percentages.

Sources: Deutsche Morgan Grenfell, Bankers Trust and Reuters. Graph VI.7

Export competition and exchange rates in Asia



Note: The dots represent pairs of exporters, where 1 = China, 2 = Hong Kong, 3 = Singapore, 4 = Taiwan, 5 = Philippines, 6 = Malaysia, 7 = Thailand, 8 = Korea and 9 = Indonesia. The shaded area indicates where the dots would fall if trade competition tightly constrained exchange rate changes.

[1] Correlations measured across shares in total exports of goods sent to the European Union, the United States and Japan in 11 merchandise trade categories (SITC 65, 75 - 78, 82 - 85 and 87 - 88). A high correlation indicates a similar merchandise mix and similar export destinations. [2] Absolute difference in the percentage changes in exchange rates (measured as US dollars per unit of domestic currency) over 12 months to end-March 1998.

Sources: W. Melick and BIS using OECD data, Bankers Trust and Reuters. Graph VI.8

when their currencies came under pressure. Asian businesses that had staked their net worth on exchange rate stability, by contrast, responded to prospective and realised losses in a manner that made the losses more likely and larger. Moreover, with such hedging proving both belated and partial, the consequent decline in corporate net worth left foreign banks anxious to cut their predominantly short-term credits, reinforcing the currency depreciation.

… and the withdrawal of funds from markets linked by …

In the third mechanism, foreign investors may withdraw their funds from a range of markets considered somehow similar. After the Mexican crisis, investors screened economies for wide current account deficits and rigid exchange rate regimes and put pressure on the Thai baht and the Hong Kong dollar. The linking of Thailand and the Czech Republic in 1997 makes sense in these terms, since both were maintaining stable exchange rates and running large current account deficits.

… historical returns …

A particular similarity in the earlier exchange rate policies of Thailand and the Czech Republic created a further but spurious resemblance. Relying on data from 1994 onwards, dollar-based investors had observed a quite high historical correlation between returns on money market instruments in korunas and baht of 0.32 (0.48 excluding two days in January 1995 when the baht, but not the koruna, was affected by the fall in the Mexican peso). Table VI.4 shows that this was the second-highest historical correlation among 45 pairs of money markets for which data had been assembled by the spring of 1997. This well-known relationship encouraged investors to sell korunas on signs of strains in the baht.

However, what was not appreciated so widely was that the high correlation derived from this long data set was in large part a by-product of the fact that the baht and the koruna were both tightly managed against baskets containing the dollar and the mark. Although the Thai authorities assigned a very small weight in their basket to currencies other than the dollar, and the Czech authorities assigned them a heavy weight, the tightness of the two exchange rate arrangements, given normal volatility in the dollar/mark rate, sufficed to create the high correlation. When in early 1996 the Czech authorities moved to a wider band (replacing a ½% band around a basket central rate with a 7½% band), a correlation measure calculated over a shorter period declined markedly (Graph VI.9), and by May 1997 the two returns showed only a modest correlation of about 0.2. When the baht came under pressure, portfolio managers may have hastened to sell korunas on the basis of the earlier correlation.

… proxy hedging …

Variations in liquidity over time and across markets can also lead to behaviour that spreads the withdrawal of foreign investment across a number of countries. Investors may sell in markets where available liquidity permits selling on a large scale. For instance, Brazil's dollar bonds were the most heavily traded emerging market instruments last year, and indeed they number among the most actively traded bonds in the world. In effect, market participants at times sell what they can sell rather than what they want to sell. (Similar so-called proxy hedging occurred during the European exchange rate crisis in 1992, when holders of relatively illiquid Swedish bonds sold UK gilt futures.) Demand for such approximate hedges arose in 1997 because currencies subject to depreciation also tended to lose liquidity. The bid/ask spreads on indicated prices for currency

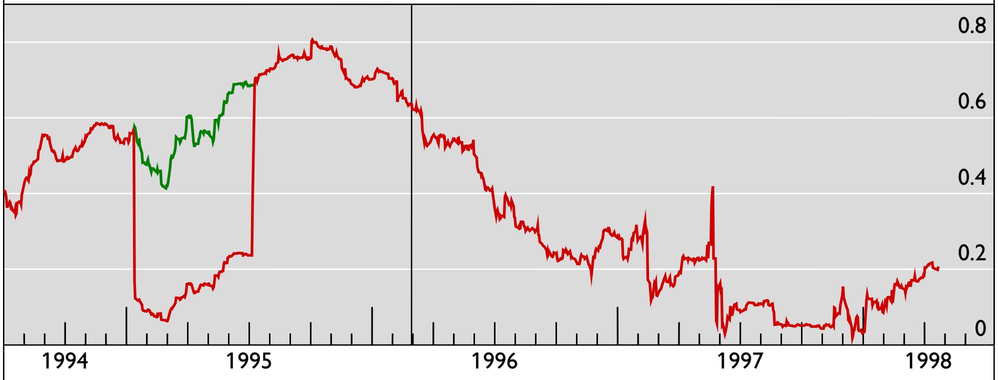
Correlations of dollar returns in emerging money markets

	AR	CZ	ID	MX	MY	PH	PL	TH	TR	ZA
Argentina	1.00									
Czech Republic	0.06	1.00								
Indonesia	0.01	0.02	1.00							
Mexico	0.02	0.07	0.03	1.00						
Malaysia	0.04	0.24	0.12	0.01	1.00					
Philippines	0.01	0.00	0.00	0.03	0.01	1.00				
Poland	0.06	0.65	0.02	0.06	0.20	0.03	1.00			
Thailand	0.04	0.32	0.06	0.08	0.20	0.05	0.31	1.00		
Turkey	0.03	0.11	0.03	0.02	0.04	0.04	0.13	0.07	1.00	
South Africa	0.07	0.22	0.02	0.03	0.13	0.02	0.15	0.10	0.00	1.00

Note: These correlations were computed using daily percentage changes of the individual country components of the emerging local markets index in US dollars (ELMI) over the period January 1994–April 1997.

Sources: J.P. Morgan Securities Inc. and BIS calculations. Table VI.4

Correlation of dollar returns in money markets in the Czech Republic and Thailand



Note: Each point shows the correlation over the current and previous 125 working days of returns on bank deposits in Czech korunas and forward purchases of Thai baht against the US dollar. The green line shows the correlation calculated excluding 12th and 13th January 1995, when dollar returns on Thai baht, but not Czech koruna, money market instruments were affected by the Mexican crisis. The vertical line is drawn at 28th February 1996, when the fluctuation band of the koruna was widened. The koruna and baht were floated on 26th May and 2nd July 1997 respectively.

Sources: J.P. Morgan Securities Inc. and BIS. Graph VI.9

options in Asia widened very substantially, suggesting that the availability of hedges diminished or disappeared just when local corporations realised they most needed to hedge. Measured in dollars, transaction volumes in the currencies that depreciated earliest, the Czech koruna and Thai baht, declined by one-third or more between April and October 1997 (Table VI.5). The Indonesian rupiah and Korean won also recorded lower dollar turnover than in April 1997. These declines occurred notwithstanding generally higher volatility, which is commonly associated with higher turnover (as in the case of the Italian lira; see below).

… or credit-rating changes

Events in the past year have led to much discussion about the role of the rating agencies in the dynamics of the Asian crisis. Many observers will remember the events of the days before Christmas, when Moody's announced a downgrading of Korean, Indonesian and Thai sovereign bonds to non-investment grade, citing the risks posed by short-term debt, including the possibility of a rescheduling of foreign currency bank deposits. One trading day later, the won had fallen by 9%, the rupiah by 3% and the baht by 2%. Standard & Poor's leapfrogged its rival the next day, downgrading Korea almost two notches from BBB– to B+, and the won fell a further 15% (see Graph VI.7 and Table VII.3). Since some investors are precluded from holding assets with lower credit ratings, these downgradings could help explain the negative currency response to the rating changes.

It is misleading, however, to consider rating changes in isolation. Standard & Poor's announcement highlighted the uncertainty about the willingness of foreign banks to roll over their maturing placements with Korean banks, and this uncertainty weighed on the won and other Asian currencies. Thus, it would be easy to overstate the independent impact of the rating agencies on the generalisation of foreign disinvestment. While rating changes may at times have led the exchange market, they mostly accompanied market developments.

Foreign exchange turnover and volatility in emerging currencies

Currencies	Turnover[1] in billions of US dollars per day				Volatility[2] in percentages			
	April 1995	April 1996	April 1997	October 1997	April 1995	April 1996	April 1997	October 1997
Asia	>13.6	19.0	22.1	20.5				
Indonesian rupiah	4.8[3,4]	7.8[3,4]	8.7[3,4]	8.5[3,4]	1.5	1.5	3.2	39.3
Korean won	3.1	3.2	4.0	3.6	2.5	1.5	1.6	9.3
Thai baht	2.6	4.0	4.6	2.5	2.3	1.6	1.9	15.6
New Taiwan dollar	1.5	1.6	1.7	2.3	8.7	0.9	1.2	18.2
Indian rupee	1.6	1.2	1.7	2.0	1.5	6.0	0.5	1.3
Malaysian ringgit	n.a.	1.1	1.2	1.5	5.3	3.4	2.7	31.5
Philippine peso	0.02	0.1	0.2	0.1	2.9	0.6	0.4	25.0
Latin America	10.1	12.9	17.5	23.7				
New Mexican peso	3.2[4]	4.2[4]	7.1[4]	9.5[4]	28.3	5.5	5.0	30.2
Brazilian real	4.3[4]	5.5[4]	6.7[4]	8.5[4]	13.9	3.8	6.2	1.6
Argentine peso	1.7	2.0	2.2	3.0	0.0	0.5	0.6	0.5
Chilean peso	0.8	1.0	1.1	2.2	6.2	3.0	2.3	8.5
Colombian peso	n.a.	0.1	0.2	0.3	4.6	2.2	3.8	8.2
New Peruvian sol	0.1	0.1	0.2	0.2	4.0	2.5	2.2	6.4
Eastern Europe	1.8	7.5	8.8	15.3				
Russian rouble	0.6	2.6	3.7	10.7	5.2	2.2	0.3	0.2
Czech koruna	0.6	2.5	3.2	2.1	6.1	2.1	14.6	8.6
Polish zloty	0.3[3]	1.6[3]	0.9[3]	1.7[3]	9.7	5.1	3.4	15.5
Hungarian forint	0.3	0.6	0.4	0.6	3.6	11.2	2.9	6.0
Slovak koruna	0.03	0.2	0.6	0.2	9.0	2.7	4.8	7.0
Other currencies	5.4	6.7	5.2	7.3				
South African rand	3.7	4.7	3.6	5.4	2.9	19.0	2.6	5.9
Saudi Arabian riyal	1.4	1.5	1.1	1.3	0.1	0.1	0.0	0.2
Israeli shekel	0.3	0.5	0.5	0.5	7.4	7.4	3.6	9.4
Turkish lira	0.01	0.02	0.04	0.1	7.8	3.9	5.1	5.5
Total	>30.9	46.1	53.6	66.8				

[1] Estimates as reported by the respective central banks, net of double-counting unless otherwise specified. For Thailand, 1995 second half and 1996 annual averages. For Indonesia and Argentina, 1995 and 1996 annual averages. The turnover of the Russian rouble and South African rand in April 1996 was well above the annual average. [2] Annualised standard deviation of percentage changes in the exchange rate against the US dollar. For the shekel, Turkish lira and Eastern European currencies other than the rouble, volatility is measured against a basket consisting of the US dollar and the Deutsche mark with equal weights. [3] On a gross basis. [4] Includes other currencies. Table VI.5

Commodity prices and exchange rates

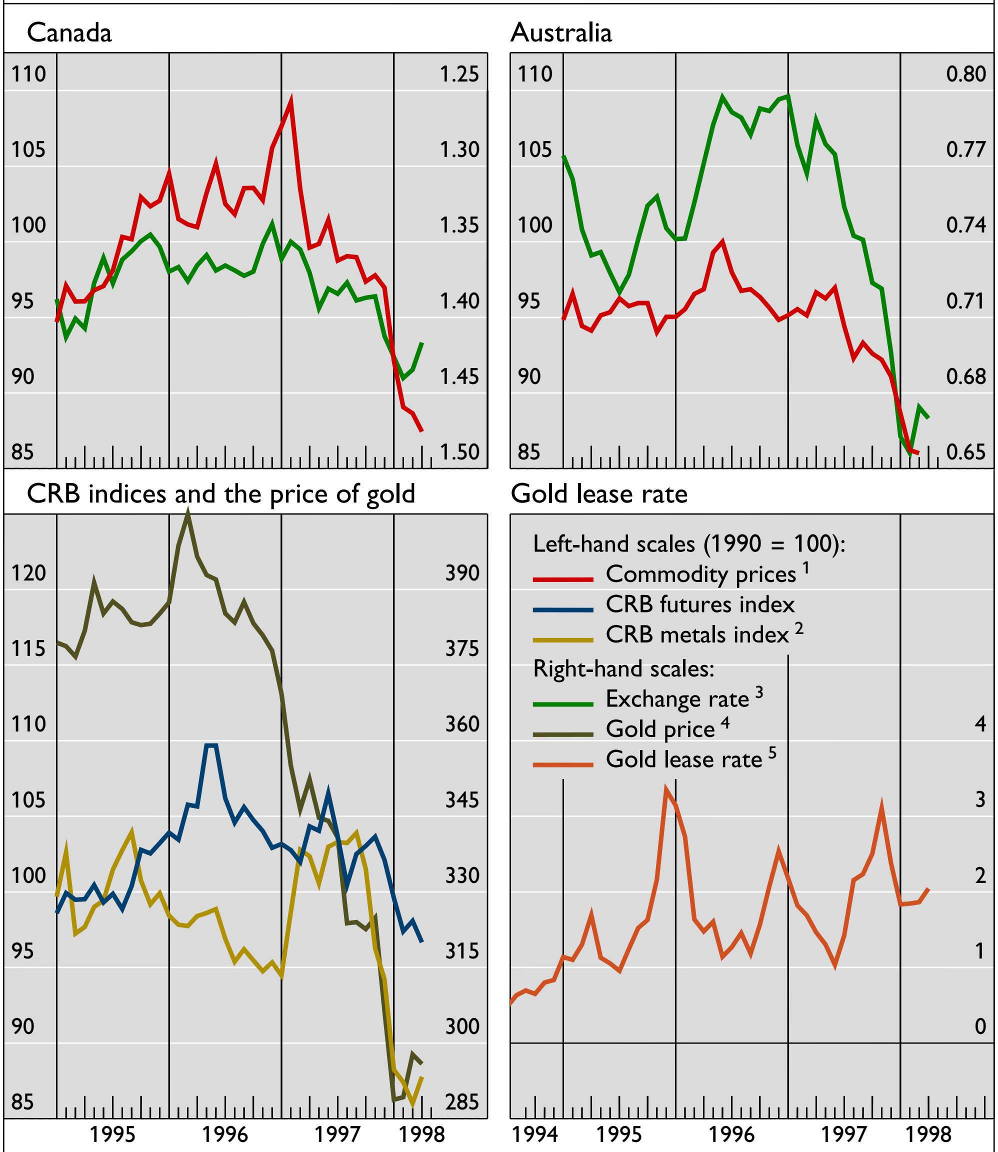
Slower activity and wealth losses in Asia …

Slower activity and the loss of international wealth in Asia put downward pressure on commodity and gold prices from mid-1997. Weak commodity prices weighed on the value of the Canadian and Australian dollars.

… depress commodity prices, certain exchange rates …

In recent years, Asia has accounted for a substantial part of world commodity demand growth, including that for gold. Just a year ago, market participants and official agencies alike reckoned on a continuation of this trend, but as these expectations were revised in the latter half of 1997, commodity prices fell. Lower commodity prices then affected the Canadian and Australian dollars to different extents. As can be seen from Graph VI.10, experience has

Commodity prices, exchange rates and the gold lease rate



[1] In US dollar terms; for Canada, raw materials prices; for Australia, Reserve Bank of Australia's all commodities index. [2] Includes copper, lead, steel, tin and zinc. [3] For Canada, C$/US$ (inverted scale); for Australia, US$/A$. [4] In US dollars per fine ounce. [5] On three-month gold deposits in London.

Sources: Commodity Research Bureau (CRB), Reuters, national data and BIS. Graph VI.10

shown that the Canadian dollar falls by considerably less than half of the percentage decline in Canada's commodity price index, while the Australian dollar falls by even more than the Australian commodity price index. The odd implication of this strong reaction is that commodity prices expressed in Australian dollars have actually risen over the past year.

… and the price of gold

The price of gold responded to Asian developments and declining world inflation. Observers also cited official gold sales, Germany's decision to lease official gold and a proposal to sell Swiss gold reserves in explaining gold's weakness. Abstracting from the earlier timing of the decline in the gold price, however, the price of gold performed no worse than the price of metals in general in the 12 months to April 1998.

European exchange rates and monetary union

Stable European exchange rates point to monetary union …

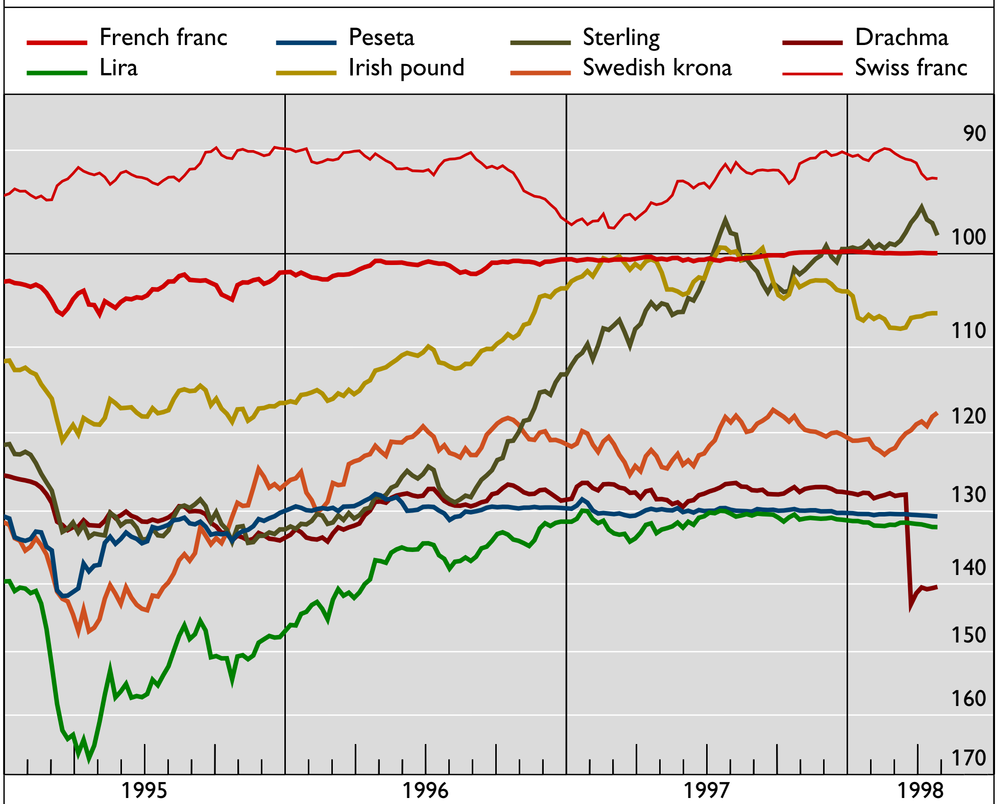
Against the background of dollar strength, European currency markets awaited the arrival of the euro calmly. As emphasised in Chapter V of last year's Annual Report, a strong dollar lends stability to major European exchange rates, and this association was again in evidence last year (Graph VI.11). Countries whose fiscal and inflation performance supported official intentions to join monetary union enjoyed stable exchange rates vis-à-vis the mark. Sterling, benefiting from a business cycle more synchronous with that of the United States than with that of continental Europe, rose against the mark. The Irish pound having shared part of sterling's rise, its central rate was revalued on 14th March 1998. At the same time, the drachma joined the exchange rate mechanism with a one-day depreciation of 10% against the mark; the Greek authorities announced that they would apply to join the euro area at some point before the end of 2001.

… with a broad membership …

Since last summer, forward exchange rates have mirrored the results of polls of market participants in identifying the range of likely candidates for monetary union (Graph VI.12). Market prices have expressed a consensus that monetary union would include a broad group of countries. Moreover, the fall in the implied volatility of French franc/mark, lira/mark and peseta/mark currency options indicates how confident market participants had become in their expectations.

European currencies against the mark

Weekly averages, ERM central rate in August 1992 = 100 *



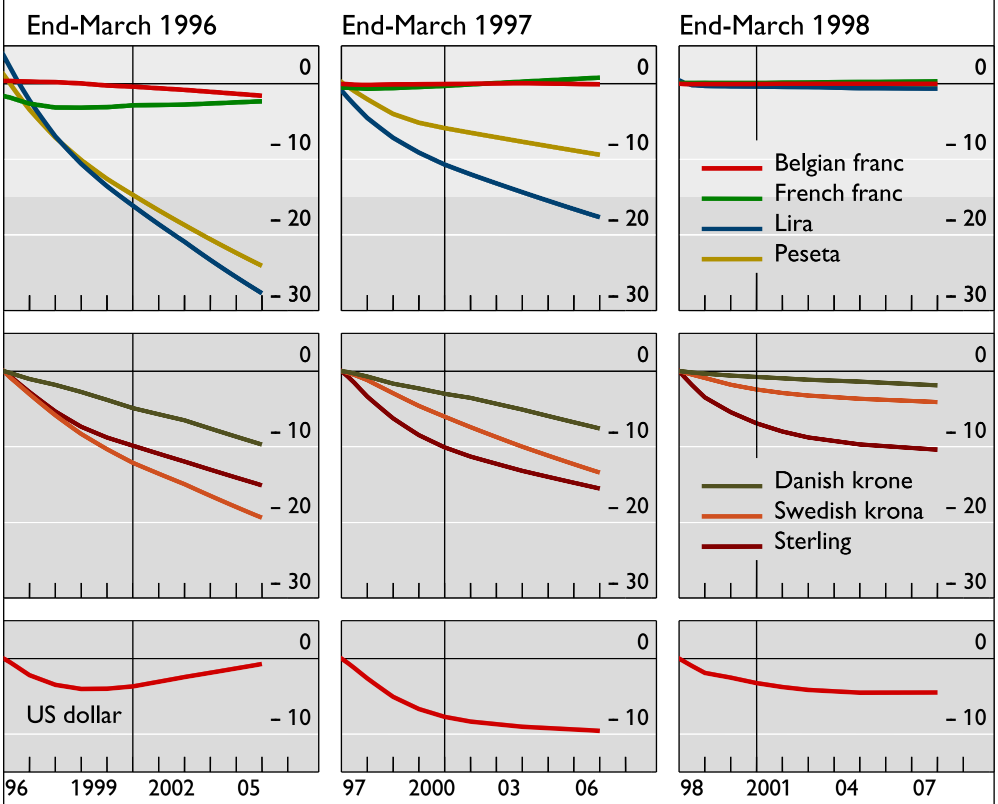
Note: A rise indicates an appreciation against the mark.

* Semi-logarithmic, inverted scale; for the krona, drachma and Swiss franc, August 1992 = 100.

Graph VI.11

Forward exchange rate changes against the mark

In percentages



Note: Forward exchange rates are derived from differentials on one-year eurodeposit interest rates and, for longer horizons, on interest rate swap (midpoint) yields in the respective currencies (for Belgium, France, Italy and Spain, relative to their respective central rates). The lira re-entered the ERM on 25th November 1996; the central rate then established is also used as the base for the lira at end-March 1996.

Sources: Reuters and BIS calculations. Graph VI.12

… introduced on schedule

The slowdown in activity in the European exchange market provides a clear indication that the euro was expected to be introduced on schedule. It can be estimated on the basis of the 1995 central bank survey that the euro could eliminate 8% of global foreign exchange turnover. Available evidence suggests that market trading in major European exchange rates has already been drying up. Data on spot currency trading through the Electronic Broking Service show peak levels of activity in French franc/mark trading in 1996 and in Italian lira/mark trading in early 1997 (Graph VI.13). In 1998 to date, activity in both exchanges has barely recovered from the seasonal low reached around Christmas and the New Year. This decline in trading paralleled declines in the implied volatility in options on these same exchange rates and, in the case of Italy, the decline in the spread between long-term interest rates on lire and marks. On this evidence, many European exchange rates will, to the satisfaction of European authorities, disappear quietly from traders' screens.

Portfolio shifts may present transitional challenges

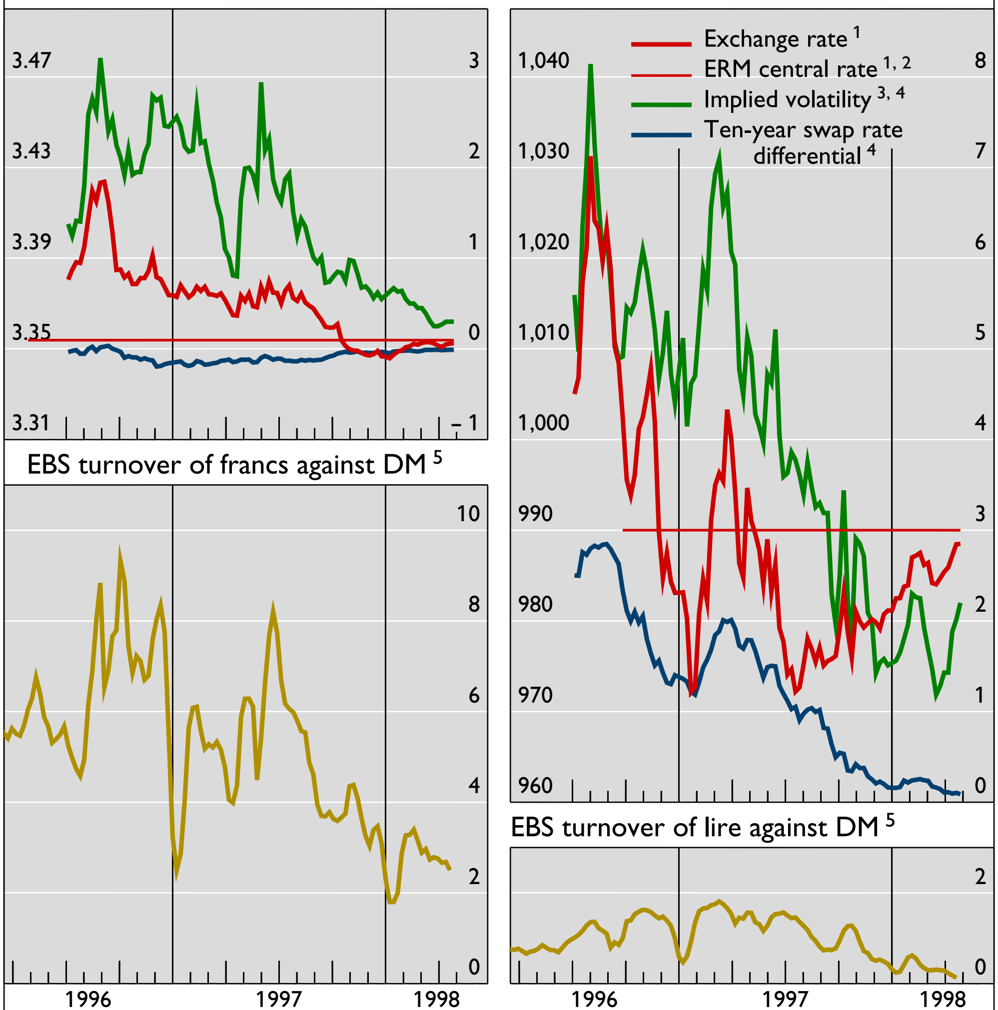
Despite the market's clearly supportive consensus, challenges remain. The response to currency union of international holders of bank deposits denominated in the participating currencies is not easy to predict (Table VI.6).

Viewed as the means to facilitate transactions, present holdings may prove unnecessarily large, since holdings of euros will settle payments in any participating country. (However, the current concentration of such deposits in the mark, which can be transformed at low cost into other European currencies, may signal that holders have already economised to a large extent.) A possible reduction of these holdings, like several possible portfolio shifts, would present a transitional challenge to the new central bank. This institution must distinguish the influence of one-off portfolio shifts from the impact of more important changes in expectations regarding prices and activity, especially if it targets a pan-European monetary aggregate in conducting monetary policy.

Sterling and the Swiss franc react to cyclical factors ...

The movements of European currencies at the edges of the prospective euro area reflected cyclical factors and monetary policies, and possibly uncertainties about the introduction of the euro. The Swiss franc's strengthening

Activity in two European exchange markets



[1] Left-hand scales, in, respectively, French francs and lire per DM. [2] The lira re-entered the ERM on 25th November 1996. [3] One-month option contracts. [4] Right-hand scale, in percentages. [5] Four-week moving averages of daily spot transactions, in billions of Deutsche marks.

Sources: National Westminster Bank, Reuters, Electronic Broking Service (EBS) and BIS. Graph VI.13

International holdings of bank deposits at end-1997

Currency	Residence of holder							
	European Union countries				Rest of the world		Total	
	Euro area		Other					
	in billions of US dollars and percentages							
Euro area currencies	200.9	*100.0*	93.1	*100.0*	165.5	*100.0*	459.5	*100.0*
Deutsche mark	109.4	*54.5*	37.3	*40.1*	72.4	*43.7*	219.1	*47.7*
French franc	21.7	*10.8*	9.8	*10.5*	28.4	*17.2*	59.9	*13.0*
Italian lira	20.1	*10.0*	19.6	*21.1*	14.3	*8.6*	54.0	*11.7*
Dutch guilder	18.2	*9.1*	5.6	*6.0*	15.6	*9.4*	39.4	*8.6*
Belgian/Luxembourg franc	11.3	*5.6*	9.9	*10.6*	17.3	*10.5*	38.5	*8.4*
Spanish peseta	6.9	*3.4*	5.2	*5.6*	5.7	*3.4*	17.8	*3.9*
ECU	11.4	*5.7*	3.1	*3.3*	9.9	*6.0*	24.4	*5.3*
Other[1]	1.9	*0.9*	2.6	*2.8*	1.9	*1.2*	6.4	*1.4*
Other EU currencies	30.0	*14.9*	8.1	*8.7*	88.4	*53.4*	126.5	*27.5*
Pound sterling	28.7	*14.3*	2.7	*2.9*	87.3	*52.7*	118.7	*25.8*
Other[2]	1.3	*0.6*	5.4	*5.8*	1.1	*0.7*	7.8	*1.7*
Total EU currencies	230.9	*114.9*	101.2	*108.7*	253.9	*153.4*	586.0	*127.5*
US dollar	158.1	*78.7*	122.3	*131.4*	470.9	*284.5*	751.3	*163.5*
Japanese yen	20.3	*10.1*	31.6	*33.9*	28.9	*17.5*	80.8	*17.6*
Swiss franc	23.1	*11.5*	5.5	*5.9*	32.7	*19.8*	61.3	*13.3*
Grand total	432.4	*215.2*	260.6	*279.9*	786.4	*475.2*	1,479.4	*321.9*

Note: Non-banks' holdings only; holdings abroad of a given currency by residents of the country of issue (for example, German residents' Deutsche mark holdings in Luxembourg) are excluded. Only the cross-border position in domestic currency is available for Austria, Denmark, Finland, Ireland, Spain and Sweden. Portugal and Greece do not report banking data to the BIS, but cross-border liabilities to non-banks resident in Portugal are included in euro area holdings, and those to non-banks resident in Greece are included in other EU holdings.

[1] Austrian schilling, Irish pound and Finnish markka. [2] Danish krone and Swedish krona. Table VI.6

… and uncertainty about the euro

during a period in which the mark was weak against the dollar, between May and July, was unusual. At work were not only the prospect of higher Swiss interest rates, but also shifts into the Swiss franc by investors uncertain about the euro. Sterling's co-movement with the dollar is in line with the closer correlation of US and UK business cycles in the 1990s. Sterling strengthened against the mark, and to a lesser degree against the dollar, in response to continuing signs of strong output growth and above-target inflation, which led market participants to expect the Bank of England to raise short-term rates in 1997.

VII. Financial intermediation and the Asian crisis

Highlights

Two weaknesses were common to the countries engulfed in the Asian crisis. The first was that excessive expansion of bank credit fuelled overinvestment, leading to the creation of unprofitable industrial capacity and asset price boom-and-bust cycles. The underlying fragility of financial systems in Asia was often overlooked because a high degree of monetary and exchange rate stability, allied with the rapid development of local banking systems, facilitated a long period of investment-led growth. Many years of virtually uninterrupted growth led banks and others to underestimate the risks that were emerging as a new, less regulated and more open environment took shape and as economies became more developed. Expectations that governments would support major financial institutions probably also contributed to this behaviour. Except in Hong Kong, the Philippines and Singapore, capital ratios were generally kept too low to provide an adequate cushion in the event of trouble. Finally, policy-makers failed to realise not only how vulnerable their banking systems were becoming to any appreciable slowdown in growth, but also how the defence of a dollar peg was becoming more demanding with more open capital markets and with the yen/dollar exchange rate moving widely.

The second, and in many ways related, weakness was a reliance on potentially volatile forms of external finance, notably short-term bank borrowing, which made domestic economies increasingly vulnerable to swings of sentiment in the international financial markets. Several countries had to cope with heavy capital inflows for much of the 1990s. Investors' confidence was not at first weakened by rising external indebtedness: risk spreads on Asian emerging market bonds narrowed significantly during 1996 and much of 1997 and there were few downgradings of credit ratings before the crisis. Official surveillance of countries' performance also failed to identify fully the dangers many Asian economies faced. Once the crisis broke, however, markets panicked: exchange rates and equity markets overshot; volatility rose dramatically, with liquidity in some markets drying up; and the credit-rating agencies downgraded the countries most affected.

Policy-makers confronting this crisis faced many difficult dilemmas. The question of how best to deal with sudden and disruptive reversals of private capital flows is a particularly thorny problem. As the scale of international official assistance set new records, the issue of how to hold private investors responsible for their decisions and ensure they bear a share of the costs of emergency assistance to countries in trouble received much attention. How to set monetary policy in the immediate aftermath of a collapse of confidence in the domestic currency was also a source of controversy as the crisis unfolded. A major restructuring of domestic banking systems has begun.

Domestic credit explosion and financial system fragility

A main cause of the crisis was the lack of prudence shown by banks in several countries in expanding credit at an extraordinarily rapid rate during the 1990s. This generally inflated asset prices, with excessive investment in real estate being the most obvious manifestation. Banks also financed (sometimes with official guidance) corporate investment plans that were focused on increasing market share with inadequate attention to the returns generated. The boom was also stimulated by heavy investment by Japanese-linked enterprises. The rising value of the yen in the late 1980s had led Japanese companies, supported by Japanese bank lending, to shift production to lower-wage Asian economies. When the boom came to an end, the underlying fragility of the domestic banking system – analysed in detail in last year's Annual Report – was starkly revealed.

Rapid expansion of bank credit

Bank credit grew by more than 10% a year in real terms during the 1990s in most of the Asian countries shown in Table VII.1; in several countries the expansion was almost 20% a year. In the 1980s, rates of credit expansion had been equally high in many countries but the initial bank credit/GDP ratios were then much lower; by the late 1990s, the ratio of bank credit to GDP in many countries had risen above levels generally seen in developed countries. Although comprehensive and reliable figures are difficult to obtain, the activities of finance companies and similar institutions probably added significantly to the riskiness of overall credit expansion. One important factor behind this expansion was the absence of well-developed local bond markets in many Asian countries, which forced corporations needing debt finance to borrow from banks.

Margins narrow as risks increase

This extraordinary expansion took place not primarily because of new and highly profitable opportunities, but because banks in the countries where credit expanded fastest accepted increasingly narrow interest margins even as riskier business was being undertaken (although margins in Indonesia do appear to have widened). The estimates given in the table show that banks' net interest margins were not much larger than their operating costs, suggesting that little provision was being made for risks. Yet risks were increasing as new areas of business were entered, as corporate sector leverage increased, and as the explosion of asset (especially property) prices exposed both borrowers and collateralised lenders to the risk of subsequent declines.

Liberalisation not supported by other reforms

Prior to liberalisation, intermediation through banks was typically kept profitable by limits on the allocation and volume of bank lending and by interest rate ceilings on deposits. Liberalisation not only gave banks greater latitude of action but often forced a search for new business as margins on traditional business were squeezed. In many cases – as in the industrial world – this profit squeeze did not lead to the restructuring that would take place in other industries. The less efficient banks were not forced to leave the industry or to merge with more efficient banks; instead, government guarantees, implicit or explicit, kept such banks afloat. A second generic problem was that banks that had developed under tight regulation failed to appreciate the extra precautions needed in the new liberalised environment where higher profits can normally be earned only by assuming greater risks and by pricing them accordingly. A herd mentality exacerbated this shortcoming as individual banks felt that they had to

Bank credit expansion and indicators of the banking industry

	Bank credit to the private sector[1]			Indicators of the banking industry			
	Annual rate of expansion[2]		As a percentage of GDP	Operating costs		Net interest margin	
	1981–89	1990–97[3]	1997[3]	1990–94	1995–96	1990–94	1995–96
				as a percentage of assets			
India	8	4	24	2.3	2.5	3.1	3.5
China[4]	12	13	97	1.0	1.4	1.7	2.2
Hong Kong	13	8	157	0.1[5]	0.4	0.2[5]	0.3
Taiwan	15	13	138	1.3	1.3	2.1	2.2
Indonesia	22	18	57	2.3	2.8	3.3	3.6
Korea	13	12	64	1.9[6]	2.1	2.2[6]	2.2
Malaysia	11	16	95	1.6[5]	1.4	4.7[5]	3.2
Philippines	– 5	18	52	4.0	3.5	5.3	4.8
Singapore	10	12	97	0.8	0.7	2.2	2.0
Thailand	15	18	105	1.9	1.8	3.6	3.6
Argentina	– 2	4	18	11.0	6.3	13.1	7.2
Brazil	7	2	24	10.1	6.7	15.5	6.7
Chile	8	11	53	3.1	3.2	6.3	5.7
Colombia	7	9	20	7.5	7.5	8.7	10.0
Mexico	– 2	7	14	4.0	3.0	5.4	4.4
Peru	–13	27	19	9.9	7.0	8.0	7.0
Venezuela	– 3	–9	9	5.9	7.3	9.5	17.2
Memorandum items:							
United States	*5*	*½*	*65*	*3.7*	*3.4*	*4.1*	*3.8*
Japan	*8*	*1½*	*111*	*1.0*	*1.1*	*1.2*	*1.5*
G-10 Europe[7]	*6*	*4*	*89*	*2.1*	*1.9*	*2.3*	*2.0*

[1] Annual average. [2] Deflated by consumer prices. [3] 1997 data are preliminary. [4] Credit other than to central government. [5] 1993–94. [6] 1991–94. [7] Weighted average based on 1990 GDP and PPP exchange rates.

Sources: Central banks, IBCA Ltd. and IMF International Financial Statistics. Table VII.1

match the growth of their competitors, believing, perhaps, that a government rescue would follow if they all got into trouble together.

Long period of growth …

This massive expansion of bank credit took place in the face of positive real interest rates: the average level of real short-term interest rates in Indonesia, Korea, the Philippines and Thailand was around or above 5% during the first half of the 1990s. The main explanation for this was the widely shared optimism about future growth prospects based on long experience without a single year of zero or even a low rate of growth. Before this crisis, the last year in which real GDP growth was significantly less than 5% in Indonesia was 1985; in Malaysia, 1986; in Korea, 1980; and in Thailand, 1972. This consistently good performance contributed to strong increases in asset prices and led firms and households, as well as banks, to underestimate the risks of overinvesting. Economic agents in developed countries going through less intense booms have commonly made the same mistake.

… and booming asset prices …

For several years rising asset prices and expanding bank credit reinforced each other. Banks in a number of countries either invested in equities or acquired equity in other types of financial institution that were less closely supervised and thus took risks not permitted to banks. Similarly, property-related loans rose sharply, fuelling an unprecedented property boom. Borrowers continued to borrow – even at high interest rates – to buy assets that were rapidly appreciating in value and banks continued to lend because the value of their collateral was rising. Lending for other purposes was also stimulated by the asset price boom as both equities and property appeared to offer banks good collateral while prices were rising. Highly profitable property and equity investment in the early stages of the boom in Asia led to renewed rises in asset prices and often induced banks and other financial institutions to compete strongly with each other, driving margins lower just as risks were rising. The point at which property prices exceeded the present value of future returns was all the more uncertain in rapidly developing countries where such returns are hard to gauge.

… lead to complacency about risk

Perhaps the most insidious consequence of this process was that it made borrowers and banks complacent about the risks they were running. Borrowers became too relaxed about the risks of rising interest rates because the rate of increase in asset prices typically exceeded interest rates by a wide margin. They failed to recognise that interest rate risk becomes more important after liberalisation as market-determined interest rates tend to be much more volatile. All too often long-term projects were financed by short-term or variable rate borrowing.

Banks, holding collateral claims on ever-more-valuable property, were led to neglect proper credit risk assessment. The lack of long-term local currency bond markets meant that those Asian banks whose deposit base was mainly short-term found it difficult to hedge any long-term lending. Banks could and did limit the apparent maturity risk on their own balance sheets by lending at floating rates to long-term borrowers. But the protection this gave banks was partly illusory: a sharp increase in interest rates could simply make long-term borrowers insolvent, transforming an interest rate risk into a credit risk.

Bank assets not well diversified …

A prudent diversification of banks' assets is also essential for a robust banking system. Yet in certain Asian markets the scope for diversification may have been quite limited because of a highly specialised economic structure (e.g. electronics, tourism). Moreover, some banks were overexposed to a single borrower, often linked to the lending bank. And, in several countries, the government persuaded banks to lend heavily to support pet projects, industries or companies.

… and capital too low

As the management of risk becomes more demanding in liberalised systems, a strong framework of prudential oversight assumes even greater importance. Banks operating in riskier or less well diversified environments also need higher capital or liquid asset ratios than banks in more stable environments. Yet ratios have been significantly higher than the minimum set by the Basle Capital Accord only in Hong Kong (18%), the Philippines (17%) and Singapore (19%). Moreover, banks' capital was frequently overstated as provisions were not made for loans that had in effect already become non-performing or were likely to do so. Insufficient allowance was made for the risks of adverse economic developments.

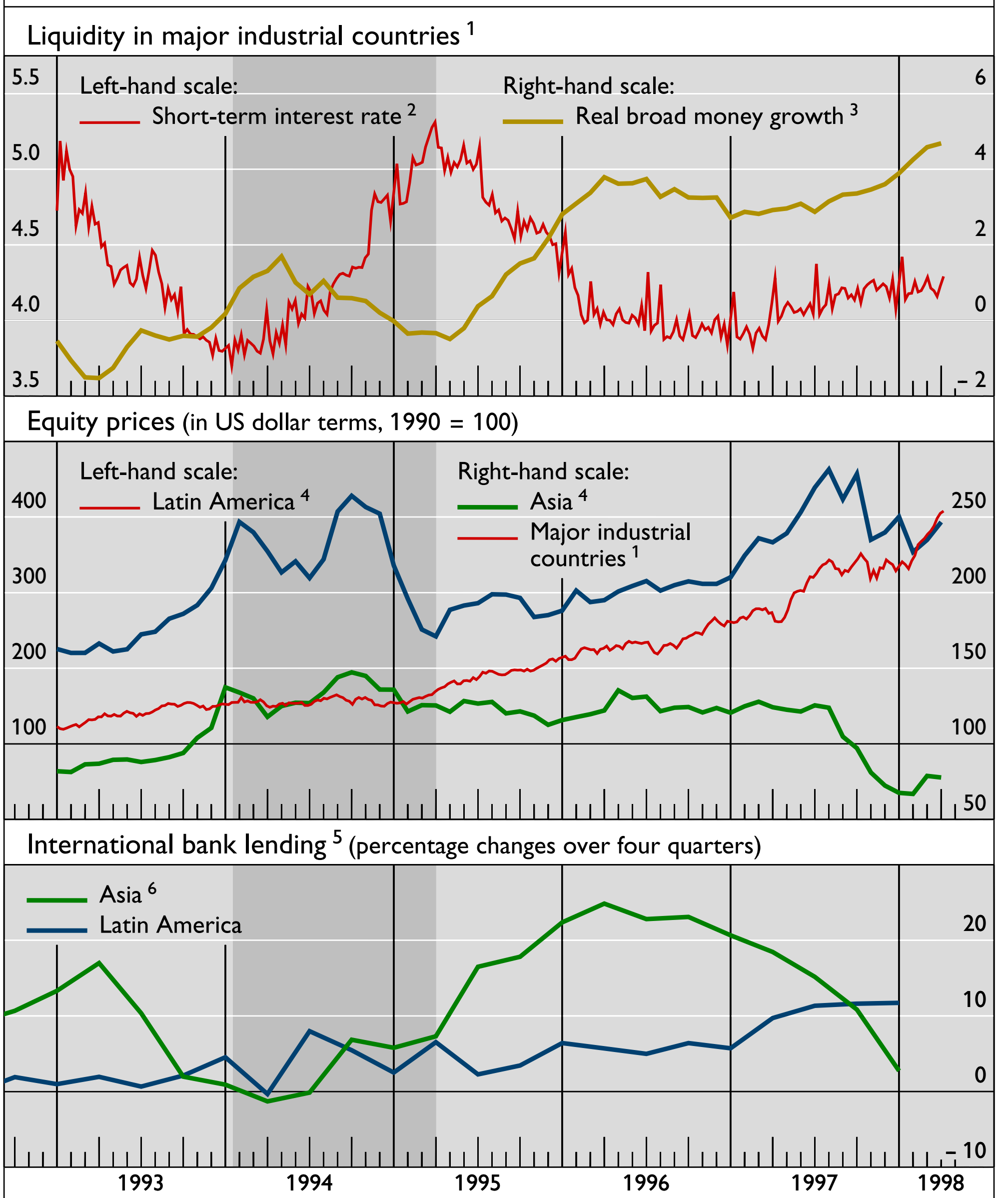
As the recent events have illustrated, a macroeconomic crisis can expose poor banking practices both because recession weakens creditworthiness and because interest rates must rise (or the exchange rate fall) in response to a loss of confidence.

Easy global liquidity

Easy global liquidity ...

The build-up of substantial global liquidity during the last few years contributed to the development of large financial exposures in Asia. The decade began with

Liquidity, equity prices and bank lending to the emerging markets



[1] Weighted average of the United States, Japan, Germany, France and the United Kingdom. [2] Overnight rate; the peak and the trough define the shaded area, which represents a period of monetary tightening. [3] Broad money growth deflated by 12-month changes in consumer prices. [4] IFC indices; for Asia, excluding Hong Kong, Japan and Singapore. [5] Exchange-rate-adjusted changes in BIS reporting banks' claims vis-à-vis non-banks in Asia and Latin America. [6] Excluding Japan.

Sources: International Finance Corporation (IFC), national data and BIS. Graph VII.1

a significant easing of monetary conditions in most major financial centres as short-term interest rates declined progressively. The interruption of this trend by the tightening of US monetary policy from early 1994 proved to be only temporary; the renewed reduction of US short-term interest rates from early 1995, combined with steady declines in other major countries, was associated with a rise in the rate of growth of broad money in the industrial world (Graph VII.1, top panel).

… and the overfinancing of deficits by short-term flows

In this environment, the widening current account deficits of several Asian countries were overfinanced by private capital inflows, and official reserves continued to accumulate. At the same time, the structure of external financing changed: reliance on international bank and bond finance increased and the relative importance of net equity inflows (direct investment and portfolio) declined (Table VII.2). Interbank lending was particularly important. Not only did this mean that countries were becoming more dependent on debt rather than equity, but it also meant that capital inflows were becoming more short-term and increasingly denominated in foreign currency. These features, which to some extent were paralleled by the increasing dollar-denomination of Mexican debt during 1994, were to make countries more vulnerable to foreign liquidity pressures. In contrast to the case of Mexico, however, the crisis struck even though global liquidity conditions remained very easy.

Equity markets give early signal of trouble …

Easy global liquidity apparently influenced different markets in different ways. In particular, stock markets in most Asian economies (with the exceptions of China and Hong Kong) remained relatively weak during the worldwide equity boom. Price/earnings ratios for equities in many Asian markets peaked towards the end of 1993, at levels well above the ratios then prevailing in US markets (Graph VII.2). The significant declines thereafter in most markets (at a time when price/earnings ratios in US markets were rising sharply) suggest that investors had already begun to expect lower profit growth from Asian companies. This was perhaps an indication of an early awareness of the vulnerabilities in Asia that were eventually to contribute to the crisis (see also Chapter V). Equities are of course much more responsive to changes in expectations about profitability than

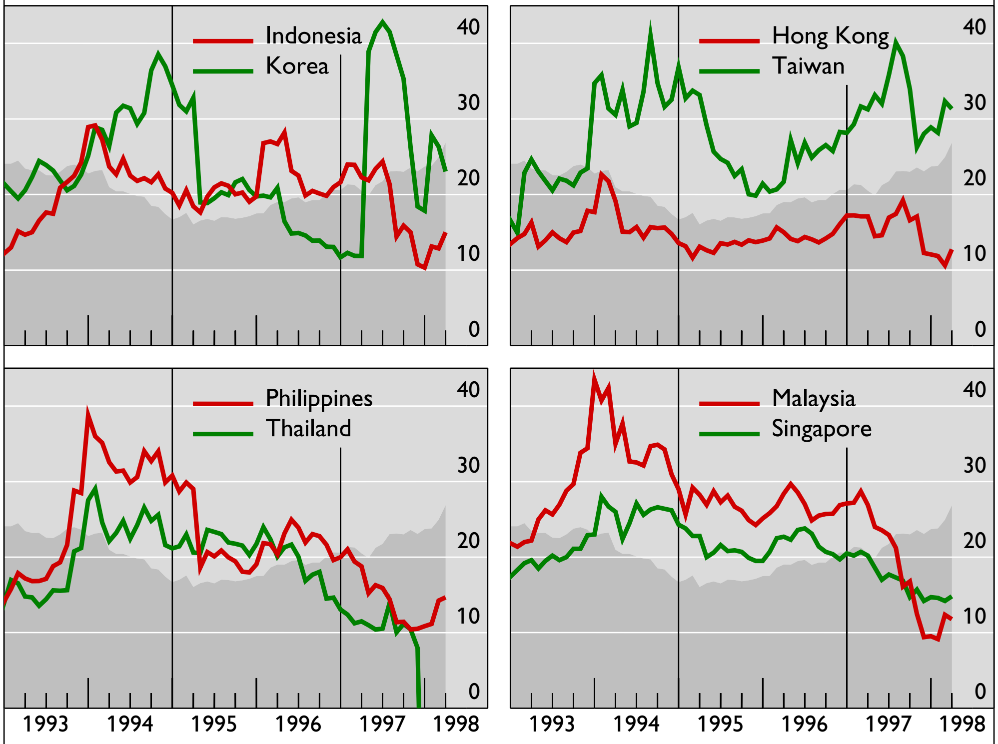
International bank and bond finance for five Asian countries[1]

	1990–94	1995 Q1–1996 Q3	1996 Q4–1997 Q3	1997 Q4
	at annual rates			at actual rates
	in billions of US dollars			
Net interbank lending	14	43	11	–31
Bank lending to non-banks	2	15	11	– 1
Net bond issuance	3	17	32	1
Total	19	75	54	–31
Memorandum item:	1990–94	1995–96	1997	
Net equity inflows[2]	11	17	2	

[1] Indonesia, Korea, Malaysia, the Philippines and Thailand. [2] IIF estimates of direct investment and portfolio equity flows.

Sources: Institute of International Finance (IIF) and BIS. Table VII.2

Price/earnings ratios in selected Asian markets



Note: The shaded area indicates the price/earnings ratio for the United States.
Sources: Datastream, IFC and national data. Graph VII.2

bonds or bank loans. And financial rescues rarely if ever make good the losses suffered by equity-holders when things go wrong.

… but bank lending increases …

The pattern of *international bank lending*, however, closely followed the timing of global liquidity developments. During 1995 and much of 1996, international bank lending to non-banks in Asia rose sharply (Graph VII.1), with flows to Indonesia, Korea, Malaysia, the Philippines and Thailand reaching an annual rate of \$15 billion (Table VII.2). In addition, BIS estimates suggest that international interbank borrowing by banks in the five Asian countries most affected by the crisis was running at an annual rate of about \$43 billion during the same period. About 40% of total lending was denominated in yen and the remainder mainly in dollars; two-thirds had a maturity of less than one year. European banks, whose involvement in the early stages of the boom had been relatively modest, accounted for more than half of lending to this group of countries between the beginning of 1995 and mid-1997. Banks in Asia onlent these funds to domestic borrowers, often to finance essentially local business. The country in which foreign currency denomination of local loans went furthest was Indonesia, where about one-third of domestic banks' balance sheets was denominated in foreign currency.

… sometimes encouraged by government guarantees

Government guarantees or encouragement doubtless played a part in this expansion. Some foreign banks may have believed that Asian banks enjoyed implicit guarantees for foreign borrowing from their governments (see also Chapter V). In addition, the foreign transactions of domestic banks – long regulated – were often liberalised before bank managers had acquired the proper skills for managing foreign exchange risks or before the supervisory framework had been strengthened to monitor risks effectively. Government policy was sometimes influenced by the wish to establish an offshore banking market. For instance, the creation in early 1993 of the Bangkok International Banking Facilities (BIBFs), aimed at promoting Bangkok as an international financial centre, allowed local banks to borrow in dollars (however, the authorities were eventually led to tighten progressively the rules governing BIBF onlending to the domestic market). Furthermore, foreign banks were led to believe that the scale of their BIBF operations would affect their chances of receiving a licence to operate in the domestic market.

Exchange rate pegs lead to misperception of exchange rate risk

Various other official policies and practices may have had the effect – albeit unintended – of encouraging Asian borrowers to bear excessive foreign currency and maturity risks. For instance, long-standing policies of fixed or quasi-fixed exchange rates probably nurtured a misperception of exchange rate risk. With a flexible exchange rate, and frequent movements in both directions, firms and households learn from their daily experience to take account of exchange rate risk. But when many years of nominal stability (or steady depreciation at a predictable rate) are followed by a large, discrete shift, the danger that private agents will be caught unprepared is much greater. In Asia, as elsewhere, the combination of a fixed exchange rate with relatively high domestic interest rates and inflation acted as an incentive to residents to borrow foreign currency to finance local currency business or assets. A type of "real interest rate illusion" (that is, dollar or yen interest rates deflated by local inflation rates) further encouraged overborrowing in foreign currency. In several cases, banks in Asia made the mistake of assuming that balancing foreign currency borrowing with foreign currency lending to residents (for domestic currency business) would be sufficient. Banks in Mexico and in certain European countries made the same mistake in the years when the exchange rate was fixed or kept within a band. In the event of a large depreciation, however, the creditworthiness of their customers deteriorates and the exchange rate risk presumed to have been avoided turns up as a credit risk.

Maturity mismatches in bank lending

A very high proportion of international bank lending was either of short-term maturity or, if long-term, carried floating rates. Lending banks naturally regard short-term lending as being safer than long-term lending because it mirrors the maturity of much of their funding and because their exposure can be more readily adjusted. This view is enshrined in supervisory and risk-weighting practice. An individual bank is indeed on safer ground when lending short-term to companies whose other sources of financing are long-term. However, this was often not the case in Asia. Although comprehensive statistics are not available, it appears that long-term investment in real domestic assets (e.g. property) was often financed almost entirely through short-term bank loans – a maturity mismatch that carries fundamental risks. When the crisis induced foreign banks to reassess the risks in lending to Asia, certain borrowers had difficulties in renewing their credits or had to pay much higher interest rates. Some borrowers defaulted.

Bond spreads narrow …

Movements in global liquidity also appear to have been reflected in spreads on emerging market *debt instruments*. Spreads, which had tended to rise during

1994 when monetary policy was tightening, generally narrowed significantly from early 1995 (Graph VII.3). This trend is most evident in the spread on Brady bonds, often used as a barometer of the cost of funding for emerging market economies: it declined steeply after the first quarter of 1995 (when the immediate after-effects of the Mexican crisis had been reflected in a sharp jump). Although secondary market spreads on emerging market eurobonds also narrowed, new issue spreads tended to widen – perhaps because borrowers with lower credit ratings became willing and able to tap the market. At the same time, the apparent maturities of bonds issued by emerging market countries tended to lengthen: as the perceived creditworthiness of emerging market countries improved, investors became prepared to lend at longer maturities.

… and issuance increases

These developments created a favourable environment for much-increased bond issuance by entities in Asian developing countries in the second half of 1996 and the first half of 1997 as the growth of international bank lending tapered off. On the face of it, the international financial markets served the useful function of permitting Asian borrowers to lengthen the maturity of their foreign debts and to lessen their relative dependence on international bank loans. However, some long-term international bonds contained provisions (e.g. becoming repayable at short notice if the country's credit rating was reduced below investment grade) that made them effectively short-term in a crisis. As other forms of loan contract contained similar clauses (e.g. medium-term loans with an option for the creditor to require repayment at specified points of time during the contract), the distinction between long-term and short-term finance became blurred.

Spreads widen after the crisis

It was only in the fourth quarter of 1997 – well after the onset of the crisis – that spreads on emerging market debt widened sharply. Expressed as a simple average, secondary market spreads on international bonds issued by major emerging market countries widened from almost 130 basis points on average during June 1997 to 375 basis points by January 1998 before falling back moderately in subsequent months. The spreads on Asian bonds rose above those on Latin American bonds, reversing the earlier pattern. The spreads on Indonesian bonds continued to widen during the first few months of 1998, reaching an average of 750 basis points in March. Accordingly, bond issuance dropped sharply (see Chapter VIII for further details).

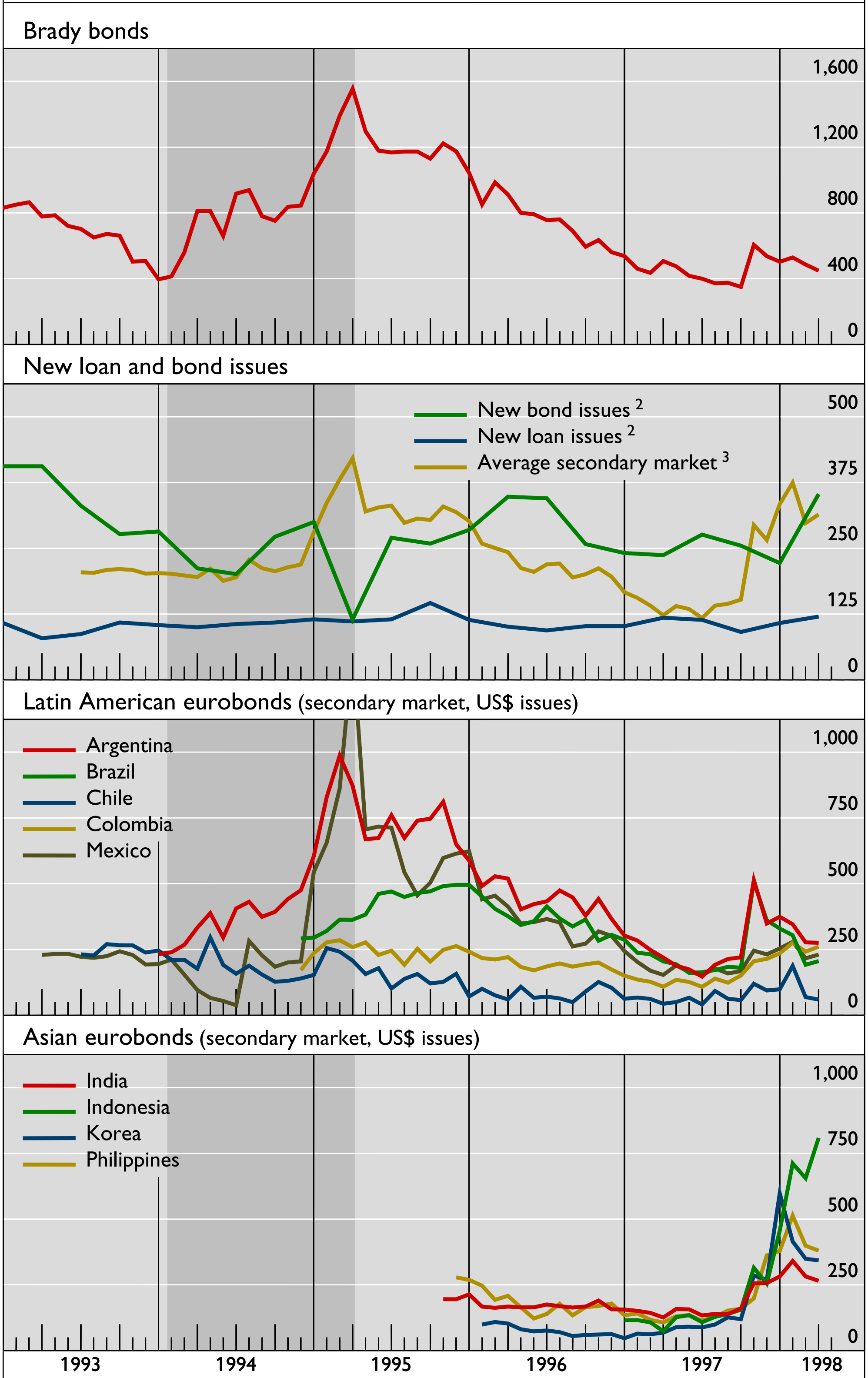
Such large movements in interest rate spreads demonstrate the difficulties financial markets had in pricing risk. Some have suggested that the narrowing of average spreads in 1995 and 1996 reflected a significant underpricing of risk. However, a BIS comparison of spreads for different categories of emerging market risk (reported in last year's Annual Report) did not find any evidence that the interest rate spread/credit-rating gradient flattened in the mid-1990s: the differential paid by higher-risk borrowers over that paid by better-risk borrowers had not narrowed.

Credit-rating agencies

Furthermore, the performance of the major credit-rating agencies before and during the crisis has illustrated all too well the great difficulties even expert observers had in assessing risk. There has been much comment to the effect that widely available knowledge about widening current account deficits and increasing short-term external indebtedness of several Asian countries from 1995

Spreads on emerging market debt instruments [1]

In basis points



Note: The shaded area represents a period of monetary tightening as defined in Graph VII.1.

[1] Over US Treasury bonds of appropriate maturity (for new loan issues, over LIBOR). [2] Based on a subset for which spreads were available. [3] Unweighted average of the countries shown in the lower two panels.

Sources: Datastream, Euromoney Bondware and Loanware and J.P. Morgan. Graph VII.3

did not lead the rating agencies to alter in any major way their assessment of the risks of long-term foreign currency debt. Indeed, certain pre-crisis rating decisions upgraded Indonesia (in April 1995), Korea (May 1995) and Thailand (December 1994). Nevertheless, Thailand was downgraded a notch in April 1997. It should also be recognised that a number of the rating changes in the mid-1990s did appear to be justified by subsequent events: for example, the Philippines, which weathered the crisis better than others, had been upgraded (by both major agencies) twice since May 1995.

Only several months after the crisis broke did assessments of Indonesia and Thailand radically change. When the crisis hit Korea, the credit-rating agencies reacted: during the last quarter of 1997 and the first quarter of 1998, Indonesia, Korea and Thailand were all subject to a series of downgrades which took their credit standing down to non-investment grade (Table VII.3). These sharp reassessments appear to have mainly reflected concerns that the extremely precarious international liquidity situation of these countries created greater risks of default or of payment delays. At all events, decisions were typically taken after a substantial tightening of macroeconomic policy under IMF programmes had probably improved their long-term ability to service their foreign debts. (Korea was upgraded in February 1998 after the conclusion of an arrangement lengthening the maturity of its bank debt.)

The Asian crisis and sovereign credit ratings*

	Moody's			S&P				Moody's			S&P		
			Date			Date				Date			Date
China	A3		18.5.88				Malaysia	Baa1		18.11.86			
	Baa1		8.11.89	BBB		20.2.92		A3	↑	12.3.90	A–		26.6.89
	A3	↑	10.9.93	BBB+	↑	14.5.97		A2	↑	11.3.93	A	↑	8.7.91
								A1	↑	15.3.95	A+	↑	29.12.94
Hong Kong	A2		9.11.88	A		9.2.90		A2		21.12.97	A		23.12.97
	A3		8.11.89	A+	↑	14.5.97							
							Philippines	*Ba3*		1.7.93	*BB–*		2.7.93
Indonesia	Baa3		14.3.94	BBB–		20.7.92		*Ba2*	↑	12.5.95	*BB*	↑	30.5.95
				BBB	↑	18.4.95		*Ba1*	↑	18.5.97	*BB+*	↑	21.2.97
				BBB–		10.10.97							
	Ba1		21.12.97	*BB+*		31.12.97	Singapore	Aa3		20.9.89	AA		24.5.89
	B2		9.1.98	*BB*		9.1.98		Aa2	↑	24.5.94	AA+	↑	6.9.91
				B		27.1.98		Aa1	↑	18.1.96	AAA	↑	6.3.95
	B3		20.3.98	*B–*		11.3.98							
							Taiwan	Aa3		24.3.94	AA		20.4.89
Korea	A2		18.11.86	A+		1.10.88					AA+	↑	2.8.91
	A1	↑	4.4.90	AA–	↑	3.5.95							
				A+		24.10.97	Thailand	A2		1.8.89	A–		26.6.89
	A3		27.11.97	A–		25.11.97					A	↑	29.12.94
	Baa2		10.12.97	BBB–		11.12.97		A3		8.4.97	A–		3.9.97
	Ba1		21.12.97	*B+*		22.12.97		Baa1		1.10.97	BBB		24.10.97
				BB+	↑	18.2.98		Baa3		27.11.97			
								Ba1		21.12.97	BBB–		8.1.98

* For long-term foreign currency debt. Other categories of debt had different grades.
↑ = upgrade; otherwise downgrade. A non-investment-grade rating is shown in italics. Table VII.3

External portfolio management

The crisis was exacerbated by two shortcomings in the management of external assets and liabilities: insufficient external liquidity and an inadequate diversification into foreign financial assets.

Illiquidity

Short-term external debt in several countries rose well above the level of foreign exchange reserves (Table VII.4). This debt had been incurred largely by the private sector, which would, in theory, bear the consequences of its own risk assessments. In practice, however, it worked out rather differently. Once it became apparent that the economies were extremely vulnerable to shocks, and sentiment about the sustainability of the exchange rate peg reversed, residents with uncovered short-term foreign liabilities sought to hedge their positions. Because neither interest rates nor the exchange rate were allowed to move sufficiently, they were often able to hedge at the expense of the central bank's foreign exchange reserves, both spot and forward. In Thailand, the central bank's short forward position in foreign currency reached an estimated $24 billion by mid-year (about $15 billion in offshore obligations). This amounted to about four-fifths of the foreign exchange reserves at that time. Cumulative intervention by Korea in the spot and forward markets exceeded $21 billion in the second half of 1997. Moreover, by the end of November 1997, almost $17 billion of the Bank of Korea's $24.4 billion of reserves had been placed on deposit at the overseas branches of Korean banks which had had difficulties meeting their foreign currency obligations. The authorities in Indonesia, with limited foreign exchange reserves, could do little. A massive overhang of private foreign currency debts (which the central bank estimated at $73 billion) contributed to a collapse in the exchange rate that had very dangerous inflationary and other consequences. Foreign currency obligations of Indonesian corporations falling due simply could not be honoured. Malaysia and the Philippines, by contrast, had maintained foreign exchange reserves well above the level of short-term external debt. Even before the outbreak of the crisis, the Malaysian currency was not rigidly fixed: under pressure, the authorities preferred to allow the exchange rate to drop and limited their foreign exchange market intervention.

Challenge of limiting imprudent foreign currency borrowing

A key issue is how to ensure that proper prudential safeguards apply to private sector borrowers in foreign currency. One approach is to use controls or taxes in borrowing countries in order to limit foreign currency borrowing or to lengthen its maturity. In the past, this has been done in several ways: by imposing quantitative restrictions, by allowing only those corporations and banks with high credit ratings to borrow abroad, or by requiring borrowers to maintain unremunerated accounts at the central bank equal to a certain percentage of

Short-term external debt as a percentage of foreign exchange reserves

	Indonesia	Korea	Malaysia	Philippines	Thailand	*Memo item: Mexico*	
End-1993	171	148	28	52	89	*End-1992*	*124*
Mid-1997	182	214	62	88	153	*Mid-1994*	*173*

Table VII.4

the borrowing. The authorities have sometimes designed such mechanisms to discriminate against short-term and potentially volatile inflows. A second approach is to put in place insurance mechanisms against liquidity risk. One example of this is the policy pursued by Argentina, where commercial banks are required to hold 20% of their liabilities (the peso is convertible one-to-one against the dollar) in liquid assets: at the end of 1997, half of these assets were being held in New York. They are also required to take steps to ensure that they have access to adequate foreign currency liquidity (e.g. through pre-negotiated credit lines) in the event of trouble. A third approach is to tighten regulatory constraints on creditors, particularly on creditor banks.

Exposure to sudden outflows

A more fundamental problem than excessive short-term external debt is that a country's exposure to sudden capital outflows increases whenever foreigners hold any domestic assets, short-term or otherwise. It also increases whenever residents build up large portfolios of domestic financial assets that, when the currency has become convertible for capital account purposes, can be exchanged for foreign currency. For instance, even financial instruments not considered short-term (e.g. equities) can be sold instantly. Moreover, even those holding assets that are difficult to dispose of quickly (e.g. direct investment) can hedge their local currency exposure at very short notice.

Lack of investment in foreign financial assets

Vulnerability to such shifts in sentiment may be all the more acute when domestic investors have not diversified their portfolios by acquiring foreign assets. Although high saving ratios in all the countries affected by the crisis led to rapid asset accumulation in the private sector, virtually all was invested at home. Household financial savings, in particular, were channelled mainly through banks, which in turn lent domestically. Property investment and investment in local equity markets were other outlets.

Nor apparently did non-bank financial institutions invest significantly abroad. The limited diversification by Asian institutions into foreign financial assets may in part have reflected market distortions. Financial institutions such as pension funds and insurance companies are often still subject to restrictions on investment in foreign assets – as they are in several industrial countries. However, the main explanation for their relatively low rates of investment in non-Asian financial assets may be that the long history of obtaining high returns from investing in the dynamic Asian economies blinded investors to the risks of non-diversification. Asian investors preferred to hold domestic assets, real as well as financial. This is hardly surprising as even a sophisticated appraisal of risks based on past volatilities would not have prepared investors for the scale of the 1997/98 shock. Latin American experience also suggests a marked preference for domestic assets: Chile found that local institutional investors did not choose to invest significantly in foreign financial assets once they were free to do so.

Whatever the reason, and data on international portfolio investment are never very complete and may be subject to deliberate under-reporting, it appears that in Asia (apart from Japan) only Singapore (where the public pension fund in effect invests in foreign securities as well as local housing mortgages) and Hong Kong (where pension funds invest heavily in foreign securities) had built up a large stock of foreign financial assets. Even though many of the other Asian economies had high and rising saving ratios, relatively little appears to have been

Cumulative external flows in Asia

	Indo-nesia	Korea	Malaysia	Philip-pines	Singa-pore	Taiwan	Thailand	Japan
	in billions of US dollars							
Current account[1]	–29	–48	–27	–19	58	62	–64	664
as a % of GNP	*19*	*12*	*41*	*30*	*86*	*29*	*50*	*16*
Portfolio investment[2]								
Assets	–	1	–	3	37	12	–	512
Liabilities	10	53	– 4	5	6	13	16	362

[1] 1990–96. [2] 1990–96 except for Indonesia, Malaysia and the Philippines (1990–95). Table VII.5

invested in non-Asian equities or bonds (Table VII.5). In many countries, the official foreign exchange reserves make up a high proportion of the country's total stock of foreign financial assets. Institutional investment (notably by pension funds) appears to have been concentrated at home or in other similar Asian economies. This concentration in local paper (or real estate) helped to inflate the asset price bubble and exposed investors to the risks inherent in concentrating assets at home. It may also have intensified capital flight during the crisis, when the perils of having invested so much at home became more obvious.

Local financial investors in Asia might have further diversified their portfolios if the exchange rate and other risks of investing so heavily at home had been properly perceived. The excessive domestic investment ratios noted in Chapter III would have been moderated. Not only would this have helped to attenuate the asset price boom, it would also have increased capital outflows to offset inflows. Net inflows and current account deficits would therefore have been smaller – which is more appropriate for high-saving economies – even in the context of heavy gross inflows. Economic growth would have been slower but more sustainable. One durable consequence of the crisis may be greater Asian investment in foreign financial assets in the medium term, implying perhaps significantly lower current account deficits in the future than seen in most of this decade. Any shift of household savings from banks to capital markets might reinforce such a trend.

The stages of the crisis

The exchange rate crisis came after a marked slowdown in activity had already set in and asset prices were under heavy downward pressure. The authorities' reluctance to raise interest rates in such circumstances was reinforced by a financial structure in which debt was predominantly short-term (or contracted at floating rates), implying that higher rates would immediately hit borrowers and threaten the viability of banks. Since foreign exchange market participants knew that the authorities were thus constrained, many central banks found it difficult to mount credible defences of their currency. In some instances, credibility was further undermined by uncertainties about political leadership, which created doubts about the government's ability to pursue any coherent economic policy.

Resort to administrative controls, moral suasion and so on to discourage capital outflows or to separate the offshore and onshore markets (in the hope of insulating domestic markets from substantial increases in interest rates in offshore

Chronology of the crisis

1997	
Early 1997	Pressure on the Thai baht met by heavy intervention in spot and forward markets.
15th May	Thailand introduces controls aimed at segmenting the onshore and offshore markets but strong pressure continues. Similar measures introduced in other countries at various stages in the crisis prove ineffective.
2nd July	Floating of the Thai baht. Pressure spreads to the Philippine peso, Malaysian ringgit and Indonesian rupiah.
11th July	Band of the Philippine peso widened to unspecified range.
11th July	Band of the Indonesian rupiah widened from 8% to 12%.
July	Malaysian ringgit falls by 4.8% by end-July.
August	Equity prices peak in Hong Kong on 7th August and in Taiwan on 26th August.
14th August	Floating of the Indonesian rupiah.
20th August	IMF standby credit for Thailand of $3.9 billion approved.
17th October	Authorities stop supporting the New Taiwan dollar, which falls by 6%. Pressure on Hong Kong dollar and equity markets intensifies.
20th–23rd October	Financial turbulence in Hong Kong. Hang Seng index falls by 23% in three days. Pressure on Korean won mounts.
27th October	7% decline in US equity prices. Sharp declines in Latin American equity markets.
28th October	23% decline in Russian equity prices.
31st October	After intense pressure on the real the Central Bank of Brazil doubles the central bank intervention rate to 43%.
5th November	IMF standby credit for Indonesia of $10.1 billion approved; $3 billion made available immediately.
10th November	Interest rates raised by 7 percentage points in Russia and authorities announce that the intervention band for the rouble will be widened from ±5% to ±15%.
20th November	Daily fluctuation band for the Korean won widened from ±2¼% to ±10%.
21st November	Korea applies for IMF standby credit.
4th December	IMF standby credit for Korea of a record $21 billion over three years approved; $5.6 billion disbursed immediately.
16th December	Floating of the Korean won.
1998	
27th January	Indonesian corporate debt "pause".
29th January	Agreement between Korea and its external creditors to exchange $24 billion of short-term debt for government-guaranteed loans at floating rates of 2¼–2¾ percentage points over six-month LIBOR.
9th–10th February	Indonesia's plan to create a currency board opposed by the IMF and several creditor governments, which threaten to withdraw financial assistance.
4th March	In a second review of Thailand's economic programme the IMF relaxes certain macroeconomic policy targets and approves disbursement of second tranche.

Table VII.6

markets) was far from successful and contributed to a further erosion of investor confidence.

A chronology of the key financial events during the crisis is presented in Table VII.6 and a fuller review of individual country experiences is given in Chapter III. There were three main waves. First, the floating of the Thai baht in early July triggered pressure on the Philippine peso, the Malaysian ringgit and the Indonesian rupiah. Secondly, the New Taiwan and Hong Kong dollars came under intense pressure during October (leading to renewed pressure on the South-East Asian currencies that had been first affected); Russian and Latin American markets were also hard hit, with the equity markets of Argentina, Brazil and Mexico falling by one-fifth or more. Finally, the Korean won came under attack and Indonesia's difficulties deepened.

Contagion …

It has been a complicated and in many ways unprecedented crisis. It is not yet over. The channels by which it spread were several and are more fully discussed in other chapters: the responses of institutional investors are examined in Chapter V; the foreign exchange market aspects in Chapter VI; and the international bank and bond market aspects in Chapter VIII. The initial contagion from Thailand to Indonesia, Malaysia and the Philippines appears to have reflected mainly the fact that foreign and other investors tended to group these countries together (only partly because of similarities in their underlying economic situations). Even before the crisis, weekly movements in equity markets in the other three countries tended to be correlated with movements in Thailand's stock market (Table VII.7). The activities of a large number of Asian non-bank financial institutions in other Asian markets may well have accentuated contagion. Several specific cases have been widely reported: for example a major Hong Kong securities company which failed was revealed to have been lending to an Indonesian company in dollars and then selling the high-yield loan participations to Korean banks.

… in three waves

Once the currencies of all four countries had fallen, concerns about the competitiveness of other Asian countries became more acute: this was probably a significant element of contagion in the second and third waves of the crisis. The revelation of major banking problems in the countries hit by exchange rate depreciation drew attention to banking sector fragility everywhere in Asia, and particularly Korea. Despite only a modest current account deficit in Korea, low inflation and an exchange rate that had been allowed to fall since 1995, the Korean won came under intense pressure. At the same time, the onset of the crisis increased the correlations in the movements of the different stock markets.

Correlation with weekly movements in equity prices in Thailand

Equity markets	Philippines	Singapore	Indonesia	Malaysia	Hong Kong	Taiwan	Korea
Pre-crisis*	0.38	0.38	0.35	0.34	0.26	0.06	–0.06
Post-crisis*	0.66	0.53	0.64	0.61	0.42	0.22	0.57

* The Thai baht was floated on 2nd July 1997. The pre-crisis period taken is January 1995–June 1997; the post-crisis period taken is July 1997–February 1998.

Table VII.7

This intensification of correlation, also observed in other episodes of market turbulence, presumably reflected the activities of investors managing portfolios of assets of several countries. This may account for the transmission of shocks to Latin America and Eastern Europe (see Chapter III).

Some tentative signs of stabilisation?

At the time of writing, the exchange rate of the Indonesian rupiah had not stabilised and the country's political difficulties had deepened. Although other financial markets remained very volatile, it appeared that the successive waves of contagion had lost some of their earlier force. Both China and Hong Kong had held their exchange rate; the Singapore and Taiwan dollars had fallen only moderately; and Brazil had withstood a major assault on the real.

The policy response

Sharp reversal in capital flows …

Economic policy in most Asian countries has had to address a difficult external financing environment in recent months. Between 1996 and the second half of 1997, capital movements to Asia swung from inflows at an annual rate of almost $100 billion to outflows of about the same size (Table VII.8).

… as bank lending contracts

International bank loans to non-banks in Asia (excluding Japan but including Hong Kong and Singapore) fell by more than $9 billion in the final quarter of 1997, the largest drop ever, and some countries experienced substantial difficulties even in obtaining trade finance. At the same time, deposits from Asian non-banks (other than those in Japan, Hong Kong and Singapore) with BIS reporting banks rose by almost $15 billion, reflecting the belated hedging of foreign currency liabilities and, perhaps, capital flight. In addition, net international interbank lending fell by $29 billion. Average spreads on emerging market international bonds in the secondary market rose sharply and have remained high.

The financial and monetary responses during the crisis can be considered under two main headings: short-term official liquidity assistance and the response of monetary policy, in particular the level of short-term interest rates. A major restructuring of domestic banking systems is under way.

Net private capital flows to Asia and Latin America

	1980–90	1991–93	1994	1995	1996	1997	
	Average					1st half[1]	2nd half[1]
	in billions of US dollars						
Total	13	83	75	79	166	138	– 13
China	2[2]	6	13	13	19	8	6
Other Asia[3]	5	32	24	38	77	62	–108
Brazil	4	7	8	32	34	26	27
Other Latin America[4]	2	38	30	–4	36	42	62

Note: Capital flows are calculated as the difference between the current account and the change in reserves; private flows are calculated as a residual from an estimate of official flows.

[1] At annual rates. [2] 1982–90. [3] India, Indonesia, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand. [4] Argentina, Chile, Colombia, Mexico, Peru and Venezuela.

Sources: IMF Balance of Payments Statistics and Institute of International Finance. Table VII.8

Official liquidity assistance

Liquidity assistance …

While the scale of official international liquidity assistance provided to the Asian countries set new records, the packages shared some common features with the earlier Mexican package. First, IMF standby credits were extremely large relative to the countries' IMF quotas (loans do not normally exceed three times quota) (Table VII.9). Secondly, IMF credits were complemented by substantial additional multilateral and bilateral assistance. A total of $117 billion was offered to Thailand, Indonesia and Korea with the size of commitments growing with each successive package. One reason for this was to ensure that the announced size of the package was such as to have a psychological impact on markets, and thus halt the erosion of foreign confidence. How large a package needs to be to do this is difficult to judge. International official support offered to the Asian countries was not large enough to cover all their short-term foreign obligations as had the Mexican package, a difference that did not pass unnoticed in the markets. In the Korean case, market disappointment at the size of its initial request for financial assistance forced Korea to ask for supplementary support.

… massive …

… but effective only when supported by other steps

However, the efficacy of liquidity assistance depends less on its size than on the credibility of the borrowing country's commitment to implementing effective policy adjustment. It is significant that exchange rates tended to weaken further (sometimes sharply) in the weeks following the announcements of the packages of large-scale financial assistance for all three countries. (However, the Indonesian rupiah did enjoy a short-lived rally when joint intervention by several Asian central banks supported the currency after the IMF programme had been announced.) As noted above, the rapid downgradings by the major credit-rating agencies occurred after the packages had been announced (see Graph VI.7). Confidence returned and exchange rates stabilised only after specific policy steps (including substantial increases in overnight interest rates, discussed below) combined with agreements with creditor banks had convinced markets about both the appropriateness of macroeconomic policies and the viability of external debt servicing.

The relative contributions of the official and the private sectors to international financial rescues have been a matter of much debate in the wake

…

Official financing commitments

	IMF	IBRD	ADB	Bilateral commit-ments	Total
	in billions of US dollars				
Thailand	3.9 (505% of quota)	1.9	2.2	12.1	20.1
Indonesia	10.1 (490% of quota)	4.5	3.5	22.0[1]	40.0
Korea	21 (1,939% of quota)	10.0	4.0	22.0	57.0
Total	35	16.4	9.7	56.1	117.1
Memo item:					
Mexico	*17.8 (689% of quota)*	*1.5*	*1.3*[2]	*21.0*[3]	*51.6*

[1] Including the use of a $5 billion Indonesian contingency reserve. [2] IADB. [3] In addition, there was a credit facility of up to $10 billion with G-10 central banks, which was never activated.

Table VII.9

Banks contributed to crisis support in the 1980s

of the Mexican and Asian crises. A central aspect of the response to the 1980s debt crisis was that financial arrangements were, at official instigation, concluded between creditor banks and the sovereign borrowers who could no longer service their bank debts. The negotiations were long and difficult and it took several months for debt restructurings to be achieved. Liquidity assistance from official sources was to some extent made contingent on creditor banks' agreement to roll over bank debt (or provide new funds).

… more than in the 1990s

It did not happen this way after the Mexican crisis because the country's foreign liabilities took the form of widely dispersed holdings of largely marketable short-term paper. Massive foreign official assistance then allowed holders of short-term dollar-linked Mexican government paper to escape without any loss. The scale of official assistance, covering all of the country's short-term external liabilities, may have set a standard by which financial markets could later judge the adequacy of the subsequent packages for Asian countries. Some observers felt that the Mexican bailout weakened investors' sense of responsibility for their own actions (moral hazard). And because holders of other forms of Mexican paper (equities, long-term bonds or peso-denominated debt) did suffer heavy losses, it may also have distorted the pattern of capital flows from equity to debt, from long to short-term and from local to foreign currency. Such effects would subsequently make borrowing countries more vulnerable to sudden liquidity crises.

Concern about cost and moral hazard of international rescue packages

In any event, several Asian countries did indeed come to rely much more on short-term foreign currency borrowing from banks. When the Asian crisis struck, widespread worries about the burden on the public sector of several large and simultaneous international rescue packages, and some concern about moral hazard risks, encouraged the search for solutions that involved private lenders as well as the official sector. International banks did come to some arrangements to extend the maturities of their loans, but the restructuring of bank debt was not as radical as it had been in the 1980s debt crisis. There have been certain arrangements to roll over the bulk of Thailand's short-term bank debt. Secondly, the Korean Government guaranteed bank debt in return for the foreign banks' agreement to lengthen the maturities of their loans. Both arrangements appear to have contributed to the restoration of some degree of confidence, with exchange rates stabilising in the periods immediately following the announcements. The sharp depreciation of the rupiah was also reversed for a brief period after the announcement of a "temporary pause" in the servicing of corporative offshore foreign currency debt in January. But subsequent negotiations about the restructuring of Indonesian debt proved to be very protracted, not least because a large number of Indonesian corporations were involved.

Monetary policy

Reluctance to support the exchange rate by higher interest rates …

Although maintaining exchange rate pegs was an announced objective of government policy, there was a certain reluctance to tighten monetary policy in Asia in the early stages of the crisis. With some notable exceptions, overnight rates were often raised only after the depletion of usable foreign exchange reserves left little other choice. Moreover, overnight rates were typically allowed to fall back as soon as the immediate pressures had subsided. At the same time, efforts were being made to prevent increases in interest rates from feeding fully through to the domestic interest rate structure.

… leads to dangerous reliance on heavy intervention …

The Thai baht had been under periodic pressure for many months before the final crisis and at least two major attacks were successfully repelled by central bank intervention in the foreign exchange markets. When pressure intensified in mid-1997, the central bank intervened massively in both the spot and forward markets but resisted upward pressure on interest rates. Overnight rates, which were allowed to rise to 20% during the crisis, had, by early August, fallen back to 10%. The run-up in Malaysian rates in the days surrounding the floating of the Thai baht was even more short-lived. However, the Philippines kept overnight rates high in the period immediately after the outbreak of the crisis for longer than either Malaysia or Thailand. Indonesia raised overnight rates to 300% in August but this measure failed to stop the exchange rate from plummeting, probably because of doubts about other domestic policies and because of the provision of liquidity support (at lower rates) for weak banks. Korea failed to increase interest rates significantly until the crisis was well under way. In many countries, subsequent bouts of renewed downward pressure on the exchange rate finally forced substantial increases in interest rates, often in the context of an IMF programme. In most cases, interest rates reached a peak only in the later stages of the crisis (Table VII.10), and exchange rates did not touch bottom until January 1998.

… but some exceptions

One notable exception to this pattern of interest rate policy was Hong Kong, where there were sharp and sustained increases. Interest rates rose along the maturity spectrum (with three-month rates reaching 25% at one point). This served to successfully defend the dollar peg, in the face of steep declines in asset prices.

Interest rate policy after a crisis depends on …

The question of how to set the level of interest rates when the exchange rate is falling and cost inflation pressures are rising was the source of much

Interest rates and the exchange rate during the crisis

	Interest rates					Exchange rate	
	Overnight rate		Three-month rate			Low[1] between July 1997 and March 1998	
	Peak	Date	1st half 1997	Peak	Date	Depreciation[2]	Date
Hong Kong	100.0	23.10	5.8	25.0	23.10	0	–
Taiwan	11.5	7.10	6.1	9.8	7.10	–19.3	12.1.98
Indonesia	300.0	25.8	13.7	27.7	31.10	–84.3	23.1.98
Korea	27.2	30.12	12.7	25.0[3]	23.12	–54.6	23.12
Malaysia	50.0	10.7	7.2	8.8	20.11	–46.3	8.1.98
Philippines	102.6	6.10	14.0	85.0	8.10	–41.8	7.1.98
Singapore	50.0	23.10	3.6	10.3	19.12	–21.0	12.1.98
Thailand	27.4	5.9	13.1	26.0	25.12	–55.0	12.1.98

Note: Dates refer to 1997 unless otherwise indicated.

[1] Closing rate. [2] Percentage change in the US dollar/local currency exchange rate since June 1997.
[3] Not unique.

Table VII.10

controversy as the crisis unfolded. From mid-1997, authorities in the region grappled with a difficult dilemma. Higher interest rates might restore confidence in the currency but only at the cost of exacerbating recessionary tendencies that were already undermining corporate viability and adding to serious banking sector problems.

… the currency denomination of flows …

How effective is raising interest rates in limiting currency depreciation? The link between interest rates and the exchange rate is complex and depends, among other things, on the currency denomination of capital flows and on expectations. As noted above, much of the earlier inflow into Asia (both borrowing from banks and the issuance of international bonds) was denominated in foreign currency. Preventing a steep drop in the exchange rate is desirable if companies with heavy foreign currency debts are not to be pushed into bankruptcy. However, higher domestic interest rates needed to support the exchange rate could undermine the creditworthiness of debtors in domestic currency, and even weaken the currency through this channel.

… expectations …

The issue of expectations is even more complex. It could be argued that only substantial increases in interest rates can effectively support a currency under pressure. Increases in interest rates that are only moderate run the risk that the market will expect further increases; investors might then delay moving into domestic currency assets until they believe that interest rates have peaked and that the likely future direction will be downwards. On this view, the reluctance in several Asian countries to raise interest rates in the early stages of the crisis, and to keep them up for long enough to rebuild reserves, created unfavourable expectations and thus weakened policy-makers' credibility. Brazil's experience with its sudden doubling of interest rates seems to support this interpretation: the reflow of funds into real-denominated assets, at first rather modest, gathered strength only when interest rates began to drift down and the market came to expect further falls. Another example from Latin America is Chile, where downward pressure on the currency was resisted by an increase in its inflation-indexed interest rate. Even Hong Kong, with its very large foreign exchange reserves, raised interest rates sharply when its currency came under pressure.

… and the speed of asset price adjustment

A second consideration is that a prolonged period of high interest rates tends to depress the value of domestic assets. How this affects capital flows depends on the speed of adjustment of asset prices to their new, lower level. If this is relatively slow (as it often is for property prices), expectations of further falls tend to reduce net capital inflows and so further depress the exchange rate.

Policy in an unstable setting

Nor is there a simple way of gauging the domestic appropriateness of interest rates in an environment of an unstable exchange rate and uncertain inflation prospects. One example of the complications is that measures of the level of real interest rates depend on the definition of the rate of inflation used to deflate nominal rates. The standard definition, of the rate of inflation over the previous twelve months, suggests that real short-term interest rates in the countries most affected by the crisis rose steeply towards the end of 1997 and into early 1998 (see the left-hand side of Table VII.11). It also suggests that real rates remained significantly lower in economies which maintained their exchange rate peg (China and Hong Kong). However, inflation rates have changed sharply as a result of recent exchange rate movements. Deflating by the rate of inflation over the previous three months shows a quite different picture (see the right-hand side of the table). Real interest rates thus measured were significantly negative in Indonesia and somewhat below zero in Korea and Malaysia.

In contrast, real interest rates in China, Hong Kong and Singapore (where inflation has fallen in recent months) appear somewhat higher than on the first measure. High real interest rates, if maintained beyond the immediate crisis period, would be a significant change for all three economies, where real rates in the past have been very low or even negative. The change is most marked in the case of Hong Kong, where real short-term rates have risen to 5%, compared with minus 3½% in 1990–95. Other things equal, a shift of this size should have a major effect on asset prices.

The choice of deflator depends in part on trends in underlying inflation, which may have remained rather moderate in many Asian countries because the initial depreciation shock does not appear to have been amplified by wage-price inflation spirals (see Chapter III). A further complication is that the consumer price index may not be an appropriate deflator for interest rates when asset prices are changing rapidly. In any event, such wide discrepancies in the different measures of real interest rates create considerable additional uncertainty for investment decisions and may depress investment even if, ex post, the level of real interest rates turns out to be moderate.

Bank credit contraction …

Recent developments in the growth of bank credit to the private sector are rather diverse. A tightening of monetary policy would normally be expected to produce a significant slowdown in bank credit expansion, particularly after the

Short-term interest rates[1] in real terms: alternative deflators

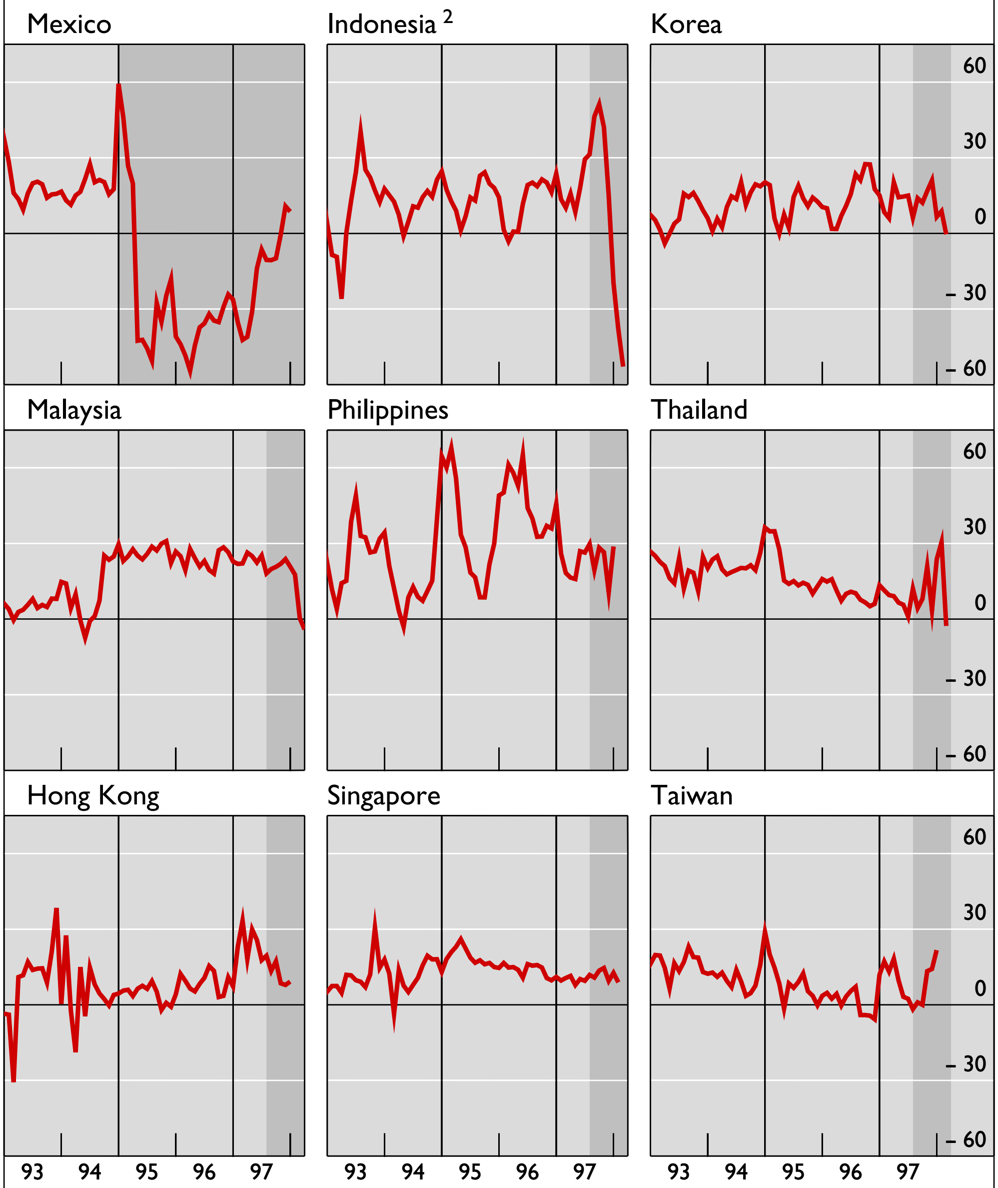
Deflated by:	(a) year-on-year inflation[2]						(b) quarterly inflation[3]			
	1990–95	1996	1997			1998	1997			1998
			Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	annual rates of interest									
India	2.7	4.8	0.8	3.1	2.6	1.9	3.6	2.2	0.3	– 0.4
China	–2.4	0.7	4.4	5.2	4.6	5.6	9.3	–2.0	10.7	8.9
Hong Kong	–3.4	–0.5	0.6	1.2	4.8	3.8	0.6	0.3	7.2	4.7
Taiwan	3.2	2.3	5.4	6.4	7.4	5.5	3.7	2.5	12.0	4.0
Indonesia	8.1	7.3	8.5	17.3	12.4	2.1	9.9	16.4	1.8	–36.6
Korea	6.9	7.3	8.2	8.3	10.0	12.6	8.1	8.3	9.1	– 0.1
Malaysia	2.7	3.5	4.8	5.2	5.9	4.1	6.7	5.7	4.2	– 1.8
Philippines	4.7	3.6	5.7	8.6	10.0	10.8	5.4	6.7	9.9	8.1
Singapore	1.1	1.6	1.9	1.8	4.0	5.2	1.6	0.6	4.9	9.2
Thailand	5.1	4.7	10.4	12.3	12.4	14.5	10.5	6.5	9.2	14.2
Brazil	13.1	10.1	13.3	15.7	29.9	27.3	14.7	18.5	32.0	24.0
Other Latin America[4]	–1.2	4.9	4.6	4.6	5.6	6.7	6.0	6.1	7.7	4.6

[1] Rates on three-month paper with the following exceptions: China, the one-year deposit rate; Taiwan, the overnight rate and, before November 1994, a weighted average of six money market rates with maturities ranging from overnight to six months; Brazil, the overnight rate. [2] Short-term rates deflated by the year-on-year change in the CPI. [3] Short-term rates deflated by the change in the CPI over three months (annualised). [4] Unweighted average of Argentina, Chile, Colombia, Mexico and Peru.

Sources: IMF International Financial Statistics, national data and BIS estimates. Table VII.11

Rate of expansion of bank credit in real terms [1]

In percentages



Note: The shaded areas indicate the period from the outbreak of the crisis, i.e. from December 1994 for Mexico and from July 1997 for Asia.

[1] Four-month annualised percentage change in bank credit to the private sector deflated by the same percentage change in consumer prices. [2] For 1998, excluding credit in foreign currency.

Sources: IMF and national data. Graph VII.4

very high growth rates seen in much of Asia during the 1990s. In addition, many banks in Asia have become overextended and some are no longer viable. If the experience of other countries is any guide, the process of bank restructuring is likely to involve a sharp contraction of credit. For example, the real value of bank credit in Mexico dropped precipitously in the two years after the crisis (Graph VII.4). Although it is too early to judge, there does not yet appear to have been any marked contraction in domestic bank credit in most of the Asian countries shown in the graph. One exception is Indonesia. However, the latest figures suggest that the rate of expansion in several countries has fallen abruptly

Property prices*

	Trough		Peak		Trough or latest value	
	Index	Date	Index	Date	Index	Date
	Commercial property prices					
Hong Kong	100	1995 Q4	155	1997 Q2	111	1997 Q4
Korea			100	1990 Q1	77	1997 Q4
Singapore	100	1993 Q4	164	1996 Q1	146	1997 Q4
Indonesia			100	1992 Q3	65	1997 Q2
Malaysia			100	1995 Q2	86	1997 Q4
Philippines	100	1995 Q2	113	1996 Q1	104	1997 Q4
Thailand	100	1989 Q4	180	1991 Q4	93	1997 Q4
Memorandum items:						
Japan	*100*	*1977*	*328*	*1990*	*104*	*1997*
France	*100*	*1982*	*248*	*1990*	*107*	*1996*
Sweden	*100*	*1980*	*532*	*1989*	*131*	*1993*
United Kingdom	*100*	*1984*	*197*	*1988*	*62*	*1992*
	Residential property prices					
Hong Kong	100	1995 Q4	150	1997 Q2	144	1997 Q4
Korea			100	1994 Q1	93	1997 Q4
Singapore	100	1988 Q2	272	1996 Q2	238	1997 Q4
Indonesia	100	1994 Q1	170	1997 Q3		
Malaysia			100	1995 Q3	91	1997 Q4
Philippines	100	1995 Q3	124	1996 Q3	117	1997 Q4
Thailand			100	1992 Q1	53	1997 Q4
Memorandum items:						
Japan	*100*	*1977*	*214*	*1990*	*152*	*1997*
France	*100*	*1986*	*126*	*1992*	*114*	*1997*
Sweden	*100*	*1985*	*137*	*1990*	*103*	*1993*
United Kingdom	*100*	*1982*	*187*	*1989*	*136*	*1995*

* Based on prices (in local currency) in inflation-adjusted terms.
Sources: Colliers Jardine, Sydney, Jones Lang Wootton and national data. Table VII.12

in recent months. Moreover, the underlying strength of bank credit may be overstated by certain temporary factors such as the more intensive use of existing credit facilities by distressed borrowers, by the capitalisation of interest arrears and by valuation effects from foreign-currency-denominated loans.

… property price slump …

It appears that property prices in some countries are being supported by the capitalisation of interest arrears and perhaps even new loans to keep heavily indebted developers afloat in certain markets (Table VII.12). In a number of centres, unsold or unused properties are being held off the market in order to prevent a collapse in prices; moreover, current construction plans in some cities imply further additions to supply in an already depressed market. However, several large-scale projects – notably in the public sector – have been postponed or cancelled in recent months.

The experience of industrial countries has been that property price bubbles were followed by protracted and substantial declines in prices: average falls of almost 70% in real terms for commercial property and 30% for residential property spread over about five or six years. The future evolution of property prices will have a major impact on the financial sector of most Asian countries, not only because of banks' past property lending, but also because of the use of property as collateral for other loans. With interest rates at present levels, highly leveraged investors are under very heavy pressure to sell, thereby triggering further price declines. How far asset prices fall and how long they remain at low levels may depend in part on the ease with which foreign investors can buy local property since purchases by foreign buyers will tend to limit the decline in prices.

… and recession interact

The deflation of an asset price bubble and the necessary contraction of the banking industry are likely to depress demand in the countries affected for a significant period of time. The collapse of equity values in many centres has saddled banks with large unrealised losses that are a potential claim on already weak bank capital. As some property developers default on their bank loans, banks could be left holding real estate that may not be salable at its collateral value. The effects of economic slowdowns, asset price collapses and banking crises tend to be mutually reinforcing as the curtailment of bank credit depresses asset prices and further deepens recessions. This in turn creates additional problems for banks that are forced to retrench still further. "Vicious circle" has been an overworked term but it describes this banking crisis/asset price collapse/recession interaction all too well.

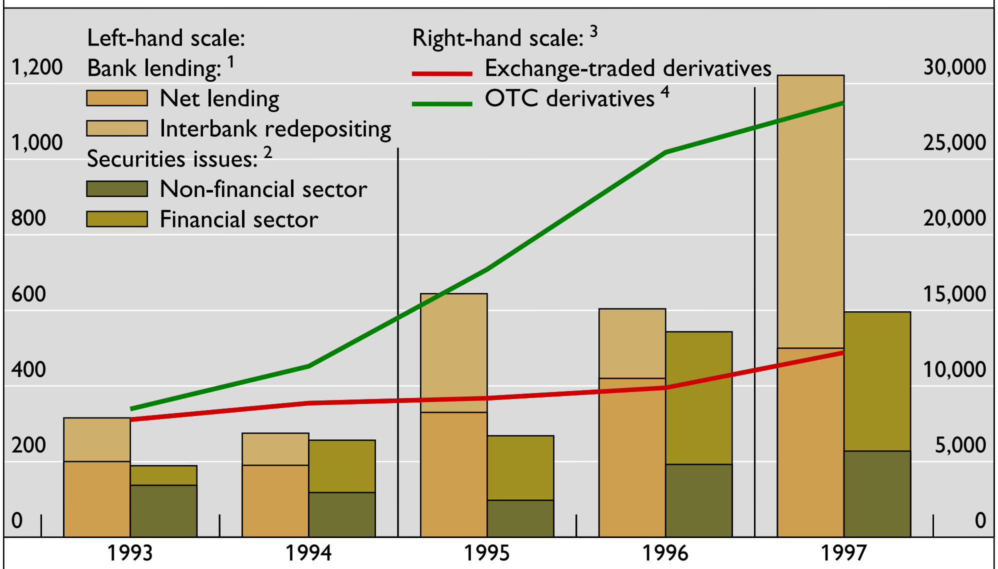
VIII. International financial markets

Highlights

Ample liquidity and subdued inflation provided a favourable climate for cross-border investment flows in 1997. Despite the Asian crisis, the international market-place remained a major channel through which banks and other investors pursued their search for higher returns, as illustrated by a growing willingness to consider new signatures and higher-risk instruments incorporating sophisticated payoff structures. The international financial markets also benefited from their competitive advantages relative to domestic markets, the underlying globalisation of finance and the growing demand for large and complex financing arrangements. The further lowering of regulatory barriers in some of the major centres and the forthcoming introduction of the single European currency gave additional impetus to the consolidation taking place within the financial industry, boosting cross-border flows. The turbulence in Asia led to an abrupt reassessment of lending and investment strategies, with a drying-up of securities flows to emerging market economies in the fourth quarter. While investors continued to shun Asian credits in the early part of 1998, the swift return to the market of other

Activity in international financial markets

In billions of US dollars



[1] Changes in amounts outstanding, excluding exchange rate valuation effects. [2] Net issues (excluding exchange rate valuation effects) of international money market instruments, bonds and notes. [3] Notional amounts outstanding at end-year. [4] For 1997, end-June.

Sources: Bank of England, Euroclear, Euromoney, Futures Industry Association, International Financing Review (IFR), International Swaps and Derivatives Association (ISDA), International Securities Market Association (ISMA), national data and BIS. Graph VIII.1

developing countries suggests that, in spite of the greater focus on credit risk, the integration of emerging economies into the world financial system has not been fundamentally called into question.

Against this background, total net international financing through bank lending and securities issues again grew at a vigorous pace in 1997. The expansion of international bank claims was particularly striking given the rapid development of securitisation worldwide. Thus, banks sharply increased their interbank activity and stepped up their involvement in securities markets. Together with other intermediaries, banks accounted for about two-thirds of the expansion in the outstanding stock of international securities. While the greater importance of securities in banks' balance sheets reflected their more active management of assets and liabilities, the large-scale recourse to the international capital market was a response to investors' reduced interest in traditional forms of saving. In turn, this large overlap between international bank credit and securities financing, together with the strong inroads made by banks into other segments of the financial industry, shows that commercial banks continue to play a leading role in the intermediation process.

Meanwhile, changing perceptions concerning EMU, renewed volatility in foreign exchange and equity markets and the repercussions of the Asian crisis provided fertile ground for the trading of derivatives. Turnover on exchanges expanded after two consecutive years of decline, while business in over-the-counter products continued to thrive. Intense competition from OTC markets, the increasing popularity of electronic trading systems and the prospective introduction of the single European currency accentuated the forces driving

Estimated net financing in international markets[1]

Components of net international financing	1992	1993	1994	1995	1996	1997	Stocks at end-1997
	in billions of US dollars						
Total cross-border bank claims[2]	185.5	316.4	274.9	680.1	532.7	1,156.7	9,038.3
Local claims in foreign currency	– 39.8	–0.9	0.2	–36.0	71.4	65.1	1,344.4
minus: Interbank redepositing	*–19.4*	*115.5*	*85.1*	*314.1*	*184.1*	*721.8*	*5,097.7*
A = Net international bank lending[3]	165.0	200.0	190.0	330.0	420.0	500.0	5,285.0
B = Net money market instruments	12.1	–6.3	3.3	17.4	41.1	19.8	183.8
Total completed bond and note issues	..	..	507.2	541.3	865.9	1,033.2	
minus: Redemptions and repurchases	..	..	*253.9*	*290.4*	*363.6*	*457.1*	
C = Net bond and note financing	137.9	195.2	253.3	250.9	502.3	576.0	3,358.3
D = A + B + C = Total international financing	314.9	389.0	446.5	598.2	963.4	1,095.9	8,827.2
minus: Double-counting[4]	*69.9*	*114.0*	*41.5*	*53.2*	*213.4*	*230.9*	*1,242.2*
E = Total net international financing	245.0	275.0	405.0	545.0	770.0	865.0	7,585.0

[1] Changes in amounts outstanding, excluding exchange rate valuation effects, for banking data and euronote placements; flow data for bond financing. [2] Banks in the Group of Ten countries plus Luxembourg, Austria, Denmark, Finland, Ireland, Norway, Spain, the Bahamas, Bahrain, the Cayman Islands, Hong Kong, the Netherlands Antilles and Singapore, and the branches of US banks in Panama. [3] Excluding, on an estimated basis, redepositing between reporting banks. [4] International bonds purchased or issued by the reporting banks, to the extent that they are included in the banking statistics as claims on non-residents.

Sources: Bank of England, Euroclear, Euromoney, IFR, ISMA and BIS. Table VIII.1

the industry's restructuring. Moreover, the growing importance of repurchase agreements, along with other techniques of risk management, points to a further integration of cash and derivatives markets. These developments, combined with the increasing intertwining of commercial banking, investment banking, insurance and asset management, and the rapid advances in information technology, are adding to the complexity of worldwide financial intermediation and to pressures to adjust the regulatory infrastructure.

The international banking market

Record volume of syndicated loan facilities …

A record volume of international syndicated loan facilities was announced last year. With the BIS data now incorporating refinancing transactions, announcements surged from $901 billion in 1996 (revised from $530 billion) to $1,136 billion. Margins for prime borrowers reached very low levels, leading banks to attach their loans to the provision of ancillary services and to focus on more profitable operations, such as mergers and acquisitions. They also turned to transition and emerging market countries, where lending was buoyed in the early part of the year by strong domestic demand and project financing and, subsequently, by the less receptive attitude of the international securities markets to lower-rated names. The Asian crisis led to a tightening of lending conditions

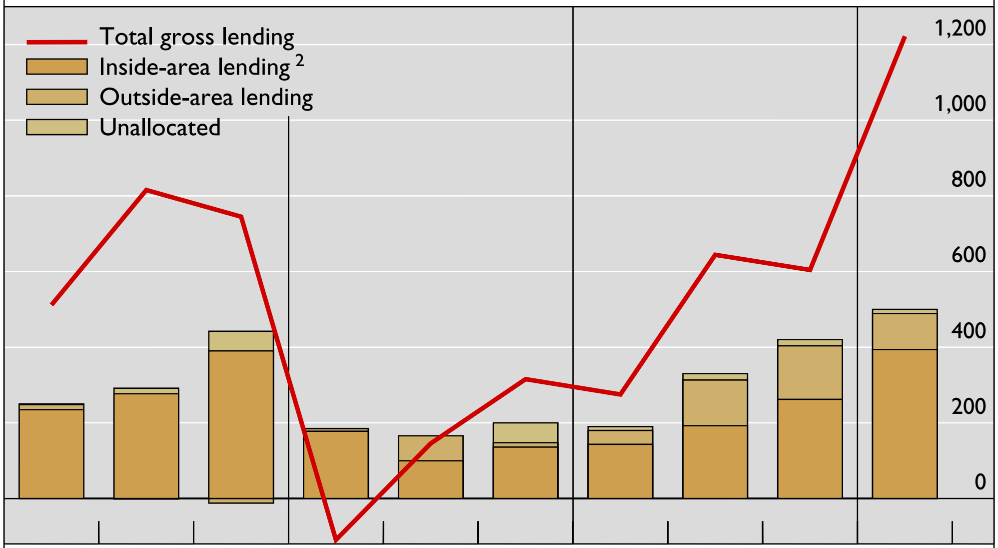
Main features of international banking activity[1]

Uses and sources of international bank credit	1992	1993	1994	1995	1996	1997	Stocks at end-1997
	in billions of US dollars						
A = Claims on outside-area countries	66.0	11.6	36.6	120.8	141.4	94.9	1,197.7
B = Claims on inside-area countries	80.4	251.4	228.3	506.5	446.2	1,115.7	8,935.0
(1) Claims on non-banks	*90.0*	*122.7*	*–49.3*	*189.5*	*302.2*	*262.9*	*2,778.6*
(2) International financing of domestic lending	*9.8*	*13.3*	*192.5*	*2.9*	*–40.1*	*131.0*	*1,058.7*
(3) Interbank redepositing	*–19.4*	*115.5*	*85.1*	*314.1*	*184.1*	*721.8*	*5,097.7*
C = Unallocated	– 0.8	52.5	10.1	16.8	16.4	11.2	250.0
D = A + B + C = Gross international bank lending	145.6	315.5	275.1	644.1	604.1	1,221.8	10,382.7
E = D – B*(3)* = Net international bank lending	165.0	200.0	190.0	330.0	420.0	500.0	5,285.0
A = Liabilities to outside-area countries	13.2	–14.8	74.6	96.4	101.8	75.7	1,043.1
B = Liabilities to inside-area countries	91.2	112.5	539.2	338.5	325.0	969.8	8,130.5
(1) Liabilities to non-banks	*104.4*	*86.2*	*132.8*	*116.7*	*225.7*	*223.7*	*1,959.6*
(2) Domestic funding of international lending	*40.7*	*85.6*	*–64.4*	*18.9*	*–31.7*	*–5.8*	*1,292.2*
(3) Interbank redepositing	*–53.9*	*–59.3*	*470.9*	*202.9*	*131.0*	*751.9*	*4,878.7*
C = Unallocated	6.7	43.0	47.1	98.0	124.1	206.4	990.1
D = A + B + C = Gross international bank borrowing	111.1	140.7	660.9	532.9	551.0	1,251.9	10,163.7
Memorandum item: Syndicated credits[2]	*194.1*	*279.4*	*477.1*	*697.7*	*900.9*	*1,136.3*	

[1] Changes in amounts outstanding, excluding exchange rate valuation effects. [2] Announced new facilities.
Sources: Euromoney and BIS. Table VIII.2

Total international bank lending[1]

In billions of US dollars



[1] Changes in amounts outstanding of banks' cross-border claims and local claims in foreign currency, excluding exchange rate valuation effects. [2] Net of interbank redepositing.

Source: BIS. Graph VIII.2

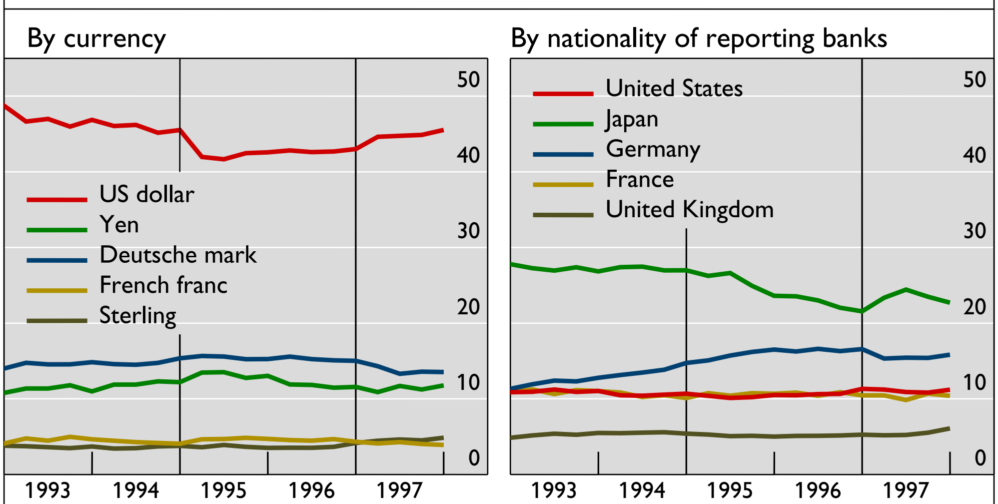
for such borrowers, with wider spreads as well as stricter collateral and material adverse change clauses. Finally, banks continued to broaden the range of their risk management techniques through secondary market trading of loans, asset securitisation and credit derivatives.

… and of interbank transactions …

At the same time, gross credit flows intermediated by the international banking market soared from $604 billion in 1996 to an all-time high of $1,222 billion. The upsurge was almost entirely accounted for by interbank business

Currency and nationality structure of international bank lending*

Percentage shares, at end of quarter



* Cross-border claims and local claims in foreign currency of banks located in industrial reporting countries.

Source: BIS. Graph VIII.3

under the combined influence of a number of forces. First, although banks retreated massively from Asia in the fourth quarter, the need to fund or hedge existing positions and accommodate the abrupt change in the behaviour of investors and borrowers involved a major redistribution of liquidity worldwide. Secondly, the funding difficulties experienced by Japanese banks, especially towards the year-end, required a large supply of fresh capital from the head offices to their branches abroad. Thirdly, consolidation within the industry, especially among European groups, may have created temporary funding requirements. Finally, greater reliance on collateralised lending brought a broader spectrum of participants to the interbank market. In contrast to the buoyancy of interbank business, direct lending to non-bank entities moderated from the record level of 1996, possibly as a result of a cutback in leveraged transactions.

Business with countries inside the reporting area

Among the various reporting centres, the United States and the United Kingdom were the main beneficiaries of the reshuffling of interbank transactions last year. A large volume of interbank funds was also channelled to the Caribbean centres, where many hedge funds and other investment companies are located. In addition, banks stepped up their acquisitions of debt securities, using government paper denominated in the major trading currencies to raise cash on a collateralised basis for the purchase of high-yielding instruments. The abrupt reversal in banks' holdings of securities issued by offshore and emerging market entities in the fourth quarter, from an increase of about $30 billion in the first nine months of the year to a fall of $9 billion, suggests a significant amount of proprietary trading by banks. Excluding securities business, direct credit to the non-bank sector located inside the reporting area showed some weakening from

… but slightly reduced borrowing by non-banks …

Banks' external claims on countries outside the reporting area*

Country groups and countries	1995	1996	1997					Stocks at end-1997
	Year	Year	Year	Q1	Q2	Q3	Q4	
	in billions of US dollars							
Total outside area	120.8	141.4	94.9	41.6	31.0	25.1	– 2.8	1,197.7
Developed countries	24.6	22.8	24.8	4.1	8.8	7.9	4.1	211.5
Eastern Europe	3.3	10.8	18.3	4.3	3.2	8.2	2.4	105.2
Developing countries	93.0	107.9	51.8	33.2	19.0	9.1	– 9.4	880.9
Latin America	16.4	28.5	33.1	7.4	3.7	11.1	11.0	304.4
Argentina	*1.9*	*5.4*	*7.0*	*1.0*	*0.1*	*2.8*	*3.1*	*46.3*
Brazil	*12.0*	*16.7*	*11.5*	*3.2*	*2.7*	*4.8*	*0.8*	*101.2*
Mexico	*–4.2*	*0.1*	*1.7*	*0.8*	*–0.2*	*– 1.3*	*2.4*	*73.9*
Middle East	–7.5	–0.1	10.0	3.6	–0.6	0.3	6.7	80.1
Africa	–2.2	–0.4	2.6	0.8	0.9	0.7	0.2	50.7
Asia	86.3	79.8	6.1	21.4	15.0	– 3.0	–27.3	445.8
Indonesia	*6.9*	*9.4*	*5.6*	*1.8*	*2.8*	*3.2*	*– 2.2*	*62.7*
Korea	*22.5*	*26.6*	*– 4.2*	*4.3*	*4.0*	*– 2.2*	*–10.2*	*104.1*
Thailand	*38.8*	*9.5*	*–17.5*	*0.5*	*–0.3*	*–10.5*	*– 7.3*	*79.6*

* Changes in amounts outstanding, excluding exchange rate valuation effects.
Source: BIS. Table VIII.3

the record level of 1996, especially in the fourth quarter. The flight to quality resulting from the spillover of the Asian turbulence seems to have temporarily dampened the enthusiasm for leveraged investment strategies.

Business with countries outside the reporting area

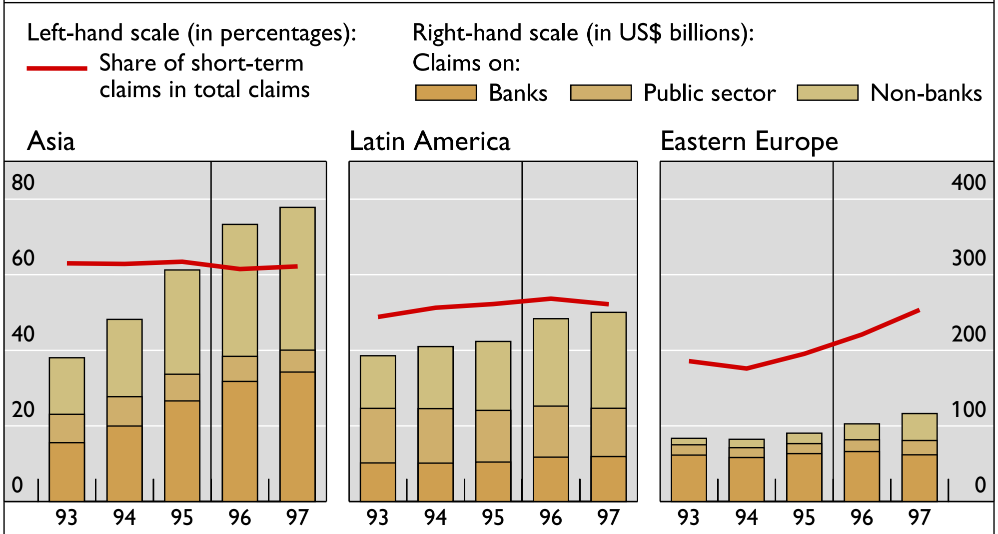
The drop in banking flows to emerging economies in Asia last year (from $80 billion in 1996 to $6 billion) provides an imperfect picture of the extent of the turnaround which took place in the course of the year. The quarterly BIS data show that banking flows were well sustained until the onset of the crisis. Flows to Thailand began to change direction in the second quarter, and in the case of Korea the reconsideration of exposure only became evident in the third quarter. The withdrawal of funds turned into a stampede in the fourth quarter, affecting most Asian countries and leading to a $27 billion reduction in outstanding claims on the region. Interestingly, the over-reliance on short-term banking debt had been recognised well before the first major assault on the Thai baht in February 1997. The national authorities themselves had made unsuccessful attempts to stem such inflows. But the ample availability of liquidity worldwide, together with strong competitive pressures among a broadening range of lenders to what was regarded as a high-growth and profitable region, appears to have made participants oblivious to the weakness of the financial infrastructure and deteriorating economic fundamentals. A notable factor in this process has been the strong increase in the Asian exposure of European banks in recent years, in the face of low returns in traditional markets and limited opportunities for expansion in North America. The resulting lending spree made the reversal all the more abrupt.

... and sudden retreat of banks from Asia

In Latin America, ongoing structural reforms and some tightening of monetary conditions were fairly successful in stemming contagion in the fourth quarter. Indeed, nearly one-third of reporting banks' lending to the region last

Contagion elsewhere is limited

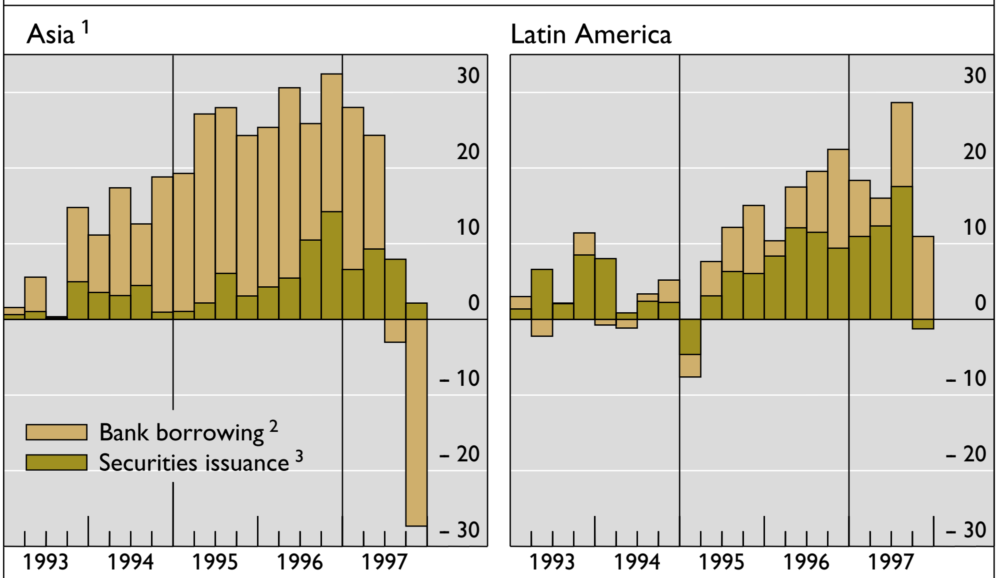
International bank lending to various regions *



* Amounts outstanding at end-year. For 1997, end-June data, which include major breaks in series affecting inter alia the maturity distribution of claims.

Source: BIS. Graph VIII.4

International bank and debt securities financing in Asia and Latin America
In billions of US dollars



[1] Excluding Hong Kong, Japan and Singapore. [2] Exchange-rate-adjusted changes in BIS reporting banks' claims vis-à-vis Asian and Latin American countries. [3] Net issues of international money market instruments, bonds and notes.

Sources: Bank of England, Euroclear, Euromoney, IFR, ISMA, national data and BIS. Graph VIII.5

year was recorded in this period. The major exception was Brazil, where banking inflows dropped from an average of $3.6 billion in the first three quarters to $0.8 billion in the fourth. Although the country was one of the main victims of the crisis outside Asia, policy resolve did much to rapidly restore market confidence (see Chapter III). At the same time, the slowdown in lending to Eastern Europe towards year-end did not prevent a record volume of credit to the region for the year as a whole ($18 billion). The Asian crisis had an uneven impact there in the fourth quarter. The Czech Republic and Hungary saw further sizable imports of banking funds, but the tightening of interest rates failed to maintain flows into Poland and Slovakia. In the case of Russia, the loss of momentum of inflows (from an average of $4.2 billion in the preceding two quarters to $0.9 billion) reflected some repayment of interbank credit, possibly as a result of the debt rescheduling agreement reached in October. The withdrawal of non-resident investors from the Russian Treasury bill market in the wake of the Asian crisis was more than offset by new lines of credit to the public sector.

Questions were raised on the lessons drawn

The events of 1997 raise questions regarding the lessons that have been drawn by market participants. Admittedly, these developments are likely to have prompted changes in risk management practices and to have led to a reconsideration of the narrow reliance on ratings in the pricing of credit. They also seem to have brought a recognition that, with the growing complexity of financial linkages, official actions to preserve systemic stability should not insulate creditors and debtors from the adverse consequences of poor investment and policy decisions. Nevertheless, the renewed decline of risk premia for non-Asian borrowers in 1998, despite the absence of marked improvements in external financial indicators and lingering uncertainty as to the actual impact of the Asian crisis, suggests a return to loose lending standards. It is at least to be hoped that current commitments by authorities in borrowing countries to more rigorous macroeconomic policies and financial market restructuring will be pursued, as well as efforts by intermediaries to develop better systems and strategies for managing credit exposures.

The international securities market

Impact of market turbulence offset by strong expansionary forces …

In spite of the record volume of announced new international debt securities in 1997, the sharp increase in repayments meant that growth in net issuance moderated substantially. Nevertheless, it remained significantly higher than that in domestic securities markets. The high volume of issues and their growing diversity suggest that expansionary factors were sufficiently powerful to offset the impact of recurring market turbulence. The search for higher returns remained a driving force, drawing new classes of investors and issuers to the

… such as the search for yields …

Main features of international debt securities issues[1]

By instrument, residence, currency and type of issuer	1992	1993	1994	1995	1996	1997	Stocks at end-1997
	in billions of US dollars						
Total net issues	149.9	189.0	256.5	268.2	543.4	595.9	3,542.2
Money market instruments[2]	12.1	– 6.3	3.3	17.4	41.1	19.8	183.8
Bonds and notes[2]	137.9	195.2	253.3	250.9	502.3	576.0	3,358.3
Developed countries	114.0	123.0	184.7	198.7	363.3	394.1	2,604.4
Europe[3]	*92.6*	*137.9*	*151.9*	*148.2*	*212.0*	*223.7*	*1,531.5*
Japan	*–3.4*	*–45.8*	*–27.7*	*–29.4*	*–17.6*	*–32.7*	*156.5*
United States	*16.9*	*10.2*	*37.2*	*62.2*	*144.9*	*185.4*	*614.2*
Canada	*10.5*	*19.0*	*16.8*	*9.1*	*9.8*	*9.1*	*187.9*
Offshore centres	0.0	5.2	35.3	33.8	74.6	91.6	323.7
Other countries	12.7	24.7	27.9	24.0	80.4	79.7	297.8
International institutions	23.1	36.1	8.6	11.7	25.0	30.4	316.4
US dollar	58.1	28.9	67.3	70.2	262.8	336.5	1,569.3
EU currencies	84.1	111.2	96.8	98.0	175.3	199.0	1,191.8
Yen	9.1	29.3	87.5	83.6	85.1	34.2	462.0
Other currencies	–1.4	19.6	4.9	16.4	20.2	26.2	319.1
Financial institutions[4]	42.9	51.8	138.5	170.7	351.0	368.2	1,605.5
Public sector[5]	82.7	130.8	103.3	74.0	121.4	101.8	1,067.0
Corporate issuers	24.4	6.5	14.7	23.6	71.0	125.9	869.7
Memorandum items:							
Stand-alone international bonds	109.5	116.8	116.3	75.8	278.3	292.8	2,469.0
Bonds issued under EMTN programmes	11.0	38.4	86.9	104.4	195.9	215.8	604.9

[1] 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] Excluding Eastern Europe. [4] Commercial banks and other financial institutions. [5] Governments, state agencies and international institutions.

Sources: Bank of England, Euroclear, Euromoney, IFR, ISMA and BIS. Table VIII.4

market. Tolerance for risk was illustrated by the positive reception given to first-time sovereign borrowers and the widening spectrum of issuing currencies. Investors were also more willing to consider high-yielding instruments incorporating features such as junior capital status, derivatives-related payoffs or complex securitisation mechanisms.

… financial restructuring …

… market innovation …

… and the advent of the euro

The resilience of international financial activity also resulted from longer-term changes on the borrowing side. First, financial liberalisation in the principal economies has encouraged borrowers to obtain lower costs by tapping new pockets of investment demand elsewhere. Secondly, restructuring in the industrial and financial sectors has been accompanied by increasingly large and complex structures whose technical requirements are more often than not met more easily in the international market-place. Thirdly, innovation has facilitated market access by enabling intermediaries to unbundle and repackage underlying risks, as illustrated by the rapid development of asset-backed securities and credit-linked notes. Fourthly, the shift by investors away from traditional saving instruments has fuelled recourse by intermediaries to the market, while the improvement in the credit quality of North American and certain European banks has facilitated the marketing of their issues. Fifthly, the gradual integration of emerging market and transition economies into the global economy has seen a growing proportion of international business accounted for by borrowers from such countries. Lastly, the scheduled introduction of the single European currency has acted as a catalyst for cross-border European borrowing and investment.

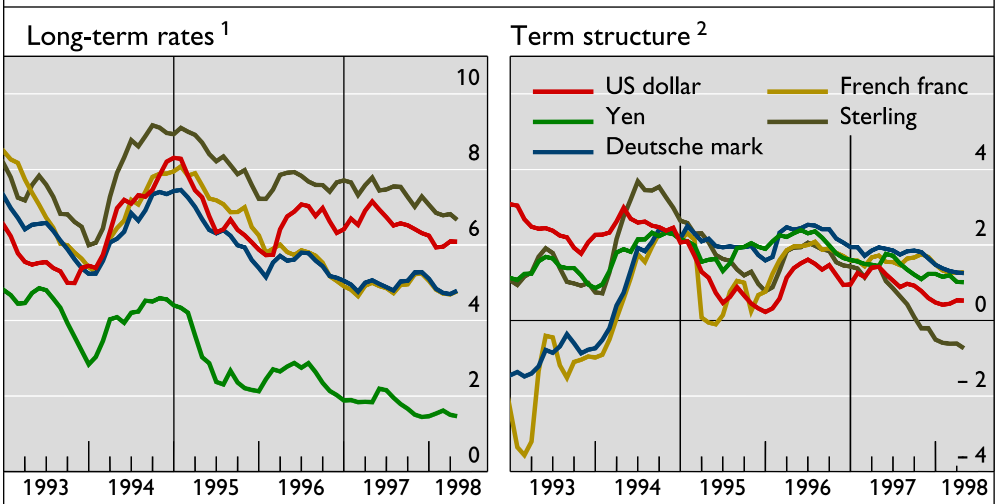
Type and nationality of issuers

Borrowing by financial institutions predominates

Issuance by financial institutions accounted for nearly two-thirds of the growth of the international securities market in 1997, illustrating the importance of cross-border capital in the active management of assets and liabilities. While European

International interest rates

Monthly averages, in percentages and percentage points



[1] Yields in annual terms on five-year interest rate swaps. [2] Five-year rates minus three-month euro-market interest rates.

Sources: DRI and BIS. Graph VIII.6

banks often issued subordinated debt to capitalise their trading books or to finance acquisitions, many US-based institutions exploited existing discrepancies in the regulatory and tax treatment of such debt. The issuance of asset-backed securities through special-purpose vehicles accounted for a significant share of activity by financial institutions. At the same time, budget consolidation dampened sovereign issuance from industrial countries, providing room for new entrants, including recently privatised entities, semi-public financing agencies and local authorities. Meanwhile, borrowing by the corporate sector remained higher than in the early part of the decade.

Sizable issuance by US as well as emerging market entities

An analysis by nationality of borrower reveals that entities from the United States continued the return to the international market that had begun in 1995, accounting for 30% of the increase in the stock of issues. In spite of the Asian crisis, gross issuance from Eastern Europe and Latin America exceeded the record level of 1996. Sovereign borrowers, from Latin America in particular, conducted substantial refinancing operations to lengthen the maturity of their external debt. Argentina, Brazil, Panama and Venezuela brought to market large issues of 30-year uncollateralised global bonds in exchange for part of their outstanding Brady bonds. In addition to reducing financing costs, these transactions were aimed at creating long-term benchmarks to facilitate market access by the private sector. They also illustrated the perceived improvement in the creditworthiness of these countries, which was only briefly interrupted by the Asian crisis.

Types of instrument

The emphasis on liquidity …

Money market instruments (euro-commercial paper and other short-term euronotes) expanded at a slower pace in 1997. Investors' abrupt reassessment of liquidity and credit risks in the wake of the Asian crisis led to a drying-up of net issuance in the fourth quarter. This accentuated the contrast with the US commercial paper market, where expansion proceeded at a brisk rate. Differences in underlying economic conditions between Europe and the United States, and the more fragmented nature and smaller size of European money market funds, continued to hamper the growth of the ECP market. However, further liberalisation and the prospect of a unified pan-European CP market are likely to render ECP more competitive.

… hampers the growth of the ECP market

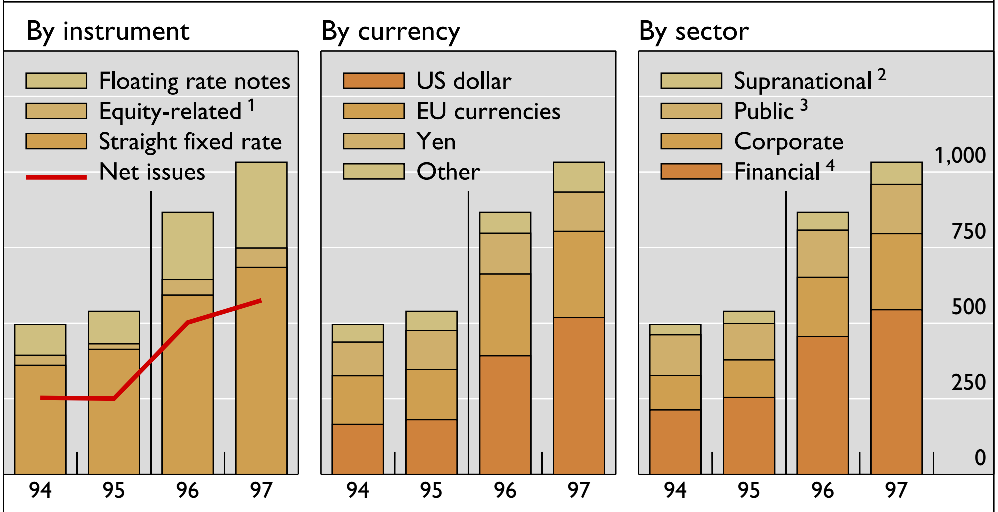
In the longer-term segments of the international securities market, *fixed rate paper* again accounted for the bulk of gross issuance. Although emerging market borrowers and securitisation vehicles launched some very large bond issues, the growing importance of smaller issues under euro-medium-term note facilities meant that the average size of transactions declined. In their search for higher yields, investors purchased longer-dated securities (including a few 100-year Yankee issues), bringing the average maturity back to the near-record length of 1993. While the fixed rate market continued to play a central role in the broadening of market access, announcements of *floating rate notes* reached a historical high. Investment demand for such defensive instruments was encouraged by anticipations of interest rate increases in the major currencies and the strong liquidity position of financial intermediaries. Meanwhile, investors showed renewed interest in *equity-related issues*, as uncertainty about the health

Search for higher yields …

… but strong demand for defensive instruments

Main features of the international bond and note markets

Announced issues, in billions of US dollars



[1] Convertible bonds and bonds with equity warrants. [2] International institutions. [3] Governments and state agencies. [4] Commercial banks and other financial institutions.

Sources: Bank of England, Euroclear, Euromoney, IFR, ISMA and BIS. Graph VIII.7

of Asian economies was more than offset by the favourable climate prevailing in the equity markets of North America and Europe. Although Japanese banks launched a few large convertible issues to bolster their capital structure, Japanese industrial firms, which until the early 1990s had been the main users of this financing vehicle, are no longer a driving force in this market segment.

Increasing popularity of ABSs …

In the particular area of *mortgage and other asset-backed securities* (ABSs), the rise in US and UK interest rates in the early part of the year slowed the origination of new mortgages, but there was a sharp pick-up in activity thereafter, with the issuance of several large collateralised loan obligations (CLOs). The CLO concept was introduced in the United States in the late 1980s and is becoming increasingly popular in the international market. While CLOs have traditionally been structured on the basis of portfolios of high-yielding corporate loans, intermediaries have become more adventurous, as witnessed by transactions that used credit-linked notes. There are also signs that the international ABS market is extending beyond the restructuring of bank or corporate balance sheets to include consumer and mortgage debt financing. This was illustrated by the introduction of new credit card securitisation facilities and the growing internationalisation of the Pfandbrief market. The recent popularity of ABSs results from a combination of factors. On the investors' side, these include the search for new sources of higher-yielding assets in a context of greater understanding of complex structures. On the issuers' side, an important element has been banks' desire to free the regulatory capital tied up in low-margin corporate loans. Moreover, the need for European banks to improve their competitiveness ahead of EMU has led them to put greater emphasis on the efficient management of their balance sheets. However, issuance remains hampered by the fragmentation of the underlying markets and, in some countries, an inadequate legal and regulatory infrastructure.

… reflects a more active management of balance sheets

Currency composition of issuance

The US currency segment benefits from its safe-haven status

Investment demand in the US dollar segment benefited throughout 1997 from favourable interest rate differentials and, in the first half of the year, from EMU-related uncertainties. The deepening of the Asian crisis and strong US economic fundamentals contributed thereafter to reinforcing the safe-haven status of the US currency. Issuance in core European currencies was generally subdued. However, that in higher-yielding currencies (such as sterling and the Italian lira) expanded appreciably, with emerging market borrowers diversifying in their favour. Activity in yen-denominated bonds declined by less than was suggested by market reports of falling investor demand for yen-denominated assets. Sustained demand for euroyen issues (most notably EMTNs) partly offset reduced interest from Japanese retail investors in dual-currency bonds, given the swings in the dollar/yen exchange rate. In addition, the Samurai market benefited from the positive impact of deregulation measures favouring issuance by lower-rated entities and non-resident commercial banks. Lastly, borrowers capitalised on strong investor demand for rand-denominated assets to launch an unprecedented volume of issues in that currency.

Impact of the Asian crisis

The Asian crisis …

The deepening of financial problems in Asia had a marked impact on activity in the fourth quarter. Thus, spreads on the fixed income benchmarks of emerging markets sharply reversed their downward trend, rising in late October to levels not seen since the Mexican crisis in early 1995 (see Chapter VII). Amidst greater uncertainty, issuance by developing country and other lower-rated names came to a virtual halt, with a shift in favour of highly rated sovereign and supranational borrowers. Thereafter, the aversion of investors to market risk was reflected in a shortening of the maturity of lower-rated bonds and some movement into floating rate notes. In addition, renewed awareness of credit risk led to greater interest in structures linking coupon payments or redemption to the evolution of issuers' credit standing. However, the perception of an accommodative monetary stance in the major economies led to a rapid recovery of fixed income and equity markets in the industrial world (with the exception of Japan). The risk premia on Latin American and Eastern European countries' debt fell back quickly from their peaks, contagion to their currencies was muted and the process of financial convergence within Europe was essentially unaffected. By early 1998, non-Asian emerging market borrowers had regained access to the international capital market.

… brings issuance by lower-rated names to a standstill …

… although contagion is contained

The influence of EMU

The euro acts as a catalyst for innovation …

The forthcoming introduction of the single European currency led to a revival of the ECU market with a number of issues making explicit provision for redenomination at the outset of EMU. Such bonds were issued either specifically in ECUs/euros or in separate European currencies, with similar coupons and maturities, and consolidation upon conversion into large fungible domestic or offshore issues. Initially confined to European entities, they have become part of the strategy of a broader range of issuers aiming at establishing pricing

… with fungible issues …

benchmarks in the European market ahead of the introduction of the euro. These instruments, which have provided additional impetus to the convergence of interest rates in the core European countries, are precursors of a full-fledged bond market in euros. Supranational borrowers and state agencies also attempted to align their practices with those of European governments through large issues, regular issuing calendars and repurchase facilities. Moreover, some of the smaller European countries took initiatives aimed at broadening their investment bases. For example, Belgium launched a "domestic" ten-year multi-tranche issue in Belgian francs, French francs and Deutsche marks, which will be convertible into euros. However, growing recourse to euro-fungible issues might, as a by-product, reduce the liquidity of other European bond issues.

… and the introduction of high-yielding securities

With profit opportunities based on the convergence of European interest rates becoming limited, investors increasingly realised that credit risk would replace currency risk as the main tool for outperforming benchmarks. Thus, the year saw the emergence of a European market for high-yield ("junk") bonds. Such securities offer borrowers a number of advantages relative to bank loans, such as bullet repayment, which removes the financial pressures associated with gradual amortisation, and less constraining covenant clauses. The move by European investors to obtain incremental returns is likely to encourage further the use of securities by lower-rated companies that have so far relied on bank financing. Whereas euromarket securities have traditionally been the preserve of borrowers of high credit standing, the recent inroads made by lower-rated issuers are likely to present new challenges for investors.

Global derivatives markets

Fertile ground for the trading of derivatives …

Changing perceptions concerning EMU, renewed exchange rate volatility and the high levels reached by major equity indices provided fertile ground for the trading of derivatives in 1997. In addition, by revealing that some dealers and end-users had inadequately hedged their positions, the Asian crisis prompted a reconsideration of risk management strategies. Against this background, the growth of transactions on exchanges resumed, while there was a further rapid expansion of over-the-counter trading. The increasing sophistication of borrowers and investors, the progress made in the area of information technology and the prospective introduction of the single European currency added to pressures for a fundamental restructuring of the industry. In particular, the need for organised exchanges to reduce operating costs created strong interest in electronic trading systems, leading to a re-evaluation of the merits of open outcry and linkages based on such trading. Exchanges also continued to face competition from the OTC markets, as a result of the growing standardisation of rules and practices, but at the same time their greater flexibility in responding to market demand. Finally, the entry of new actors such as providers of electronic information services added another layer of competition.

… but intense pressures for the restructuring of the industry

Exchange-traded instruments

There was a return to growth in the turnover of exchange-traded contracts (by 11%, to $357 trillion), following two consecutive years of decline. Interest rate

Exchanges benefit from the demand for equity products …

products remained by far the most actively traded in value terms, but contracts on equity indices recorded the fastest expansion. Persistent expectations of US monetary tightening, recurring uncertainty with respect to EMU and the Asian crisis led on occasion to sharp surges in interest-rate-related transactions. Despite some increase in the volatility of Japanese interest rates, their low absolute levels reduced the need for yen-denominated hedging instruments. In the area of equity-related contracts, bouts of weakness in North American and European stock markets as well as growing investor interest in equity markets in Europe and certain emerging markets added to underlying demand. Options on single equities (which are not included in the reported figures) continued to grow more rapidly than those on large indices, reflecting the high trading cost of traditional contracts on indices and the increasing preference of institutional investors for instruments offering a more closely tailored exposure. Activity was much less buoyant in the area of currency contracts, with the impact of increased volatility in the major currency pairs being partly offset by reduced activity in European cross rates. The failure of exchanges to capitalise on the turbulence in currency markets reflects the strong competitive challenge from OTC instruments in this segment.

… with a preference for single equity instruments

LIFFE takes second place after the CBOT …

While the CBOT remained the busiest market-place (in terms of the number of contracts), LIFFE derived significant benefits from its wide range of European fixed income products, overtaking the CME as the second most active exchange in the world. Meanwhile, the DTB reached new trading records, enabling it to consolidate its second place in Europe. The exchange, which already occupied a dominant position in instruments on medium-term German government bonds, rapidly caught up with LIFFE in the trading of Bund futures, accounting for 41% of turnover in 1997 compared with 29% in 1996. Trading on the DTB was encouraged by the successful introduction of new products, the installation of

… but the DTB is catching up …

Markets for selected financial derivative instruments

Instruments	Notional amounts outstanding at end-year					
	1992	1993	1994	1995	1996	1997[1]
	in billions of US dollars					
Exchange-traded instruments	4,634.5	7,771.2	8,862.9	9,188.6	9,879.6	12,207.3
Interest rate futures	2,913.1	4,958.8	5,777.6	5,863.4	5,931.2	7,489.2
Interest rate options[2]	1,385.4	2,362.4	2,623.6	2,741.8	3,277.8	3,639.9
Currency futures	26.5	34.7	40.1	38.3	50.3	51.9
Currency options[2]	71.1	75.6	55.6	43.5	46.5	33.2
Stock market index futures	79.8	110.0	127.7	172.4	195.9	216.6
Stock market index options[2]	158.6	229.7	238.4	329.3	378.0	776.5
OTC instruments[3]	5,345.7	8,474.6	11,303.2	17,712.6	25,453.1	*28,733.4*
Interest rate swaps	3,850.8	6,177.3	8,815.6	12,810.7	19,170.9	*22,115.5*
Currency swaps[4]	860.4	899.6	914.8	1,197.4	1,559.6	*1,584.8*
Interest rate options[5]	634.5	1,397.6	1,572.8	3,704.5	4,722.6	*5,033.1*

[1] For OTC instruments, end-June 1997. [2] Calls and puts. [3] Data collected by ISDA only; the two sides of contracts between ISDA members are reported once only. [4] Adjusted for reporting of both currencies; including cross-currency interest rate swaps. [5] Caps, collars, floors and swaptions.

Sources: Futures Industry Association, various futures and options exchanges, ISDA and BIS calculations. Table VIII.5

additional terminals abroad and the partial abolition of reserve requirements on repos. The launching of a thriving futures contract on five-year French government bonds underpinned turnover on the MATIF, but activity there remains overshadowed by that of the DTB. Trading in Japan remained subdued. A few exchanges located in emerging market countries accounted for sizable fluctuations in the number of contracts traded (notably in Brazil), but their small size muted the impact of these swings on the total value of trading.

… overshadowing the MATIF

The battle for market share ahead of the introduction of the euro led to a flurry of initiatives, including changes in contract specifications, the creation of new products across yield curves, the reduction of trading fees and the extension of trading hours. The struggle to capture German interest rate business was particularly fierce, as illustrated by the introduction of several related contracts. However, with strategies structured around interest rate products reaching a stage of diminishing returns, there was a shift in the locus of innovation to cost-reducing mechanisms, equity products (which are expected to be less affected by the introduction of the euro), services catering to OTC markets and trading links. Mention may be made of the announcement of a trading alliance between

The battle for market share focuses on …

… DM interest rate contracts …

… equity products and alliances

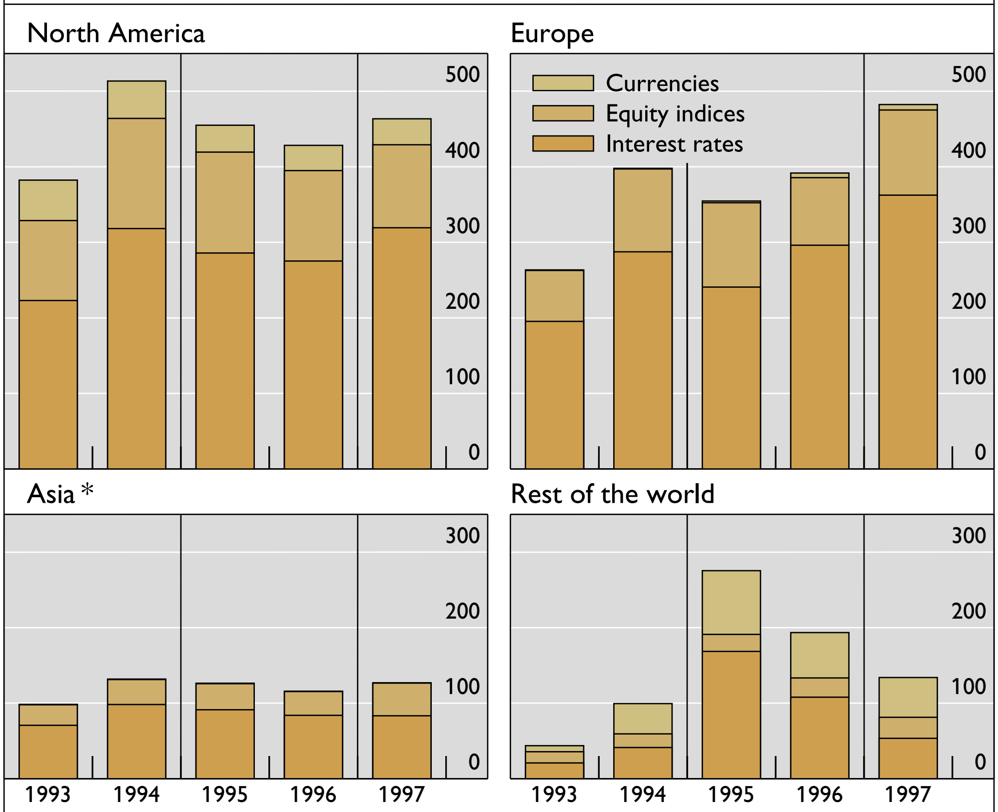
Financial derivative instruments traded on organised exchanges

Instruments	Turnover in notional amounts						Notional amounts outstanding at end-1997
	1992	1993	1994	1995	1996	1997	
	in trillions of US dollars						
Interest rate futures	141.0	177.3	271.7	266.3	253.5	274.6	7.5
On short-term instruments	113.3	138.9	222.1	218.2	204.8	223.2	7.1
of which: Three-month eurodollar rates	*66.9*	*70.2*	*113.6*	*104.1*	*97.1*	*107.2*	*2.6*
Three-month euroyen rates	*14.0*	*24.6*	*44.2*	*46.8*	*34.7*	*29.9*	*1.6*
Three-month euro-DM rates	*7.5*	*12.9*	*18.5*	*18.4*	*23.9*	*25.3*	*1.0*
Three-month PIBOR	*5.8*	*10.4*	*12.0*	*15.9*	*13.7*	*12.3*	*0.2*
On long-term instruments	27.7	38.5	49.6	48.2	48.7	51.4	0.4
of which: US Treasury bonds	*7.1*	*8.0*	*10.1*	*8.7*	*8.5*	*10.1*	*0.1*
Japanese government bonds	*9.7*	*14.2*	*13.8*	*16.2*	*12.3*	*10.6*	*0.1*
German government bonds	*3.2*	*5.1*	*8.9*	*9.3*	*12.3*	*14.5*	*0.1*
French government bonds	*2.8*	*3.2*	*4.6*	*3.4*	*3.4*	*3.1*	*0.0*
Interest rate options[1]	25.5	32.8	46.7	43.3	41.0	48.6	3.6
Currency futures	2.3	2.8	3.3	3.3	3.0	3.5	0.1
Currency options[1]	1.4	1.4	1.4	1.0	0.9	0.7	0.0
Stock market index futures	6.0	7.1	9.4	10.6	12.9	16.4	0.2
Stock market index options[1]	5.7	6.3	8.0	9.2	10.1	13.0	0.8
Total	181.9	227.8	340.5	333.9	321.5	356.8	12.2
In North America	*102.1*	*113.1*	*175.9*	*161.1*	*154.2*	*182.7*	*6.3*
In Europe	*42.8*	*61.4*	*83.9*	*87.5*	*100.1*	*114.9*	*3.6*
In Asia[2]	*36.9*	*53.0*	*77.8*	*81.1*	*63.8*	*56.3*	*2.2*
Other	*0.1*	*0.4*	*2.9*	*4.2*	*3.4*	*2.9*	*0.1*

[1] Calls and puts. [2] Including Australia and New Zealand.

Sources: Futures Industry Association, various futures and options exchanges and BIS calculations. Table VIII.6

Turnover in financial futures and options traded on organised exchanges
In millions of contracts



* Including Australia and New Zealand.
Sources: Futures Industry Association, national data and BIS. Graph VIII.8

the French, German and Swiss market-places in both underlyings and derivatives, and the gradual emergence of a unified Nordic platform for the trading of cash and derivative instruments.

The refocusing of innovative efforts was also evident in North America, with the introduction of small-sized contracts aimed at attracting retail demand for equity products, the listing of warrants and structured notes, the development of electronic facilities, including with wholesale market brokers, and moves in the direction of joint clearing.

Growth of pit trading lags that of electronic trading systems

The successful expansion of electronic platforms, as well as of out-of-hours automated systems on open outcry exchanges, led market-places that had aggressively promoted open outcry to fundamentally reconsider their strategies. While pit-trading exchanges are now surrounding themselves with new technologies for small orders and less active contracts, some, such as the CBOT and LIFFE, have announced that they will move further in the direction of electronic trading. These developments are having important repercussions on trading links. As illustrated by the DTB's strategy, which has been based primarily on inward remote access and extended trading hours, electronic trading systems now allow exchanges to expand their investor base directly and more cheaply than open outcry linkages. In fact, the approach adopted by the DTB is now being considered by other major exchanges, including the CBOT and LIFFE, which have agreed to terminate a recently introduced open outcry link. The development of exchanges' own facilities and bilateral electronic links may also explain the declining interest in the existing version of Globex, the multilateral electronic system which was designed as a standardised tool for cross-border after-hours trading.

Over-the-counter instruments

Despite the slowdown in OTC trading …

Data released by the International Swaps and Derivatives Association (ISDA) on activity in swaps and swap-related interest rate options show a deceleration in the growth of notional amounts outstanding in the first half of 1997. Preliminary information available for the second half of the year appears to confirm this loss of momentum, even though expansion continued to be well in excess of that of exchange-traded markets. The slowdown was evident in all major groups of contracts (interest rate swaps, currency swaps and swap-related interest rate options), but it was most pronounced in the area of currency swaps (from 20% in the second half of 1996 to 2%).

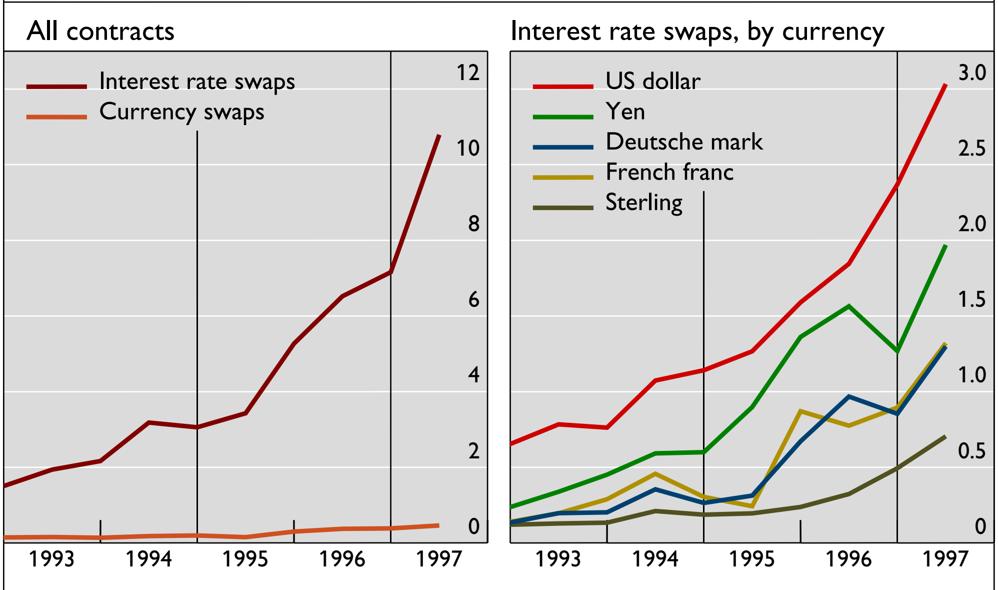
… activity is more dynamic than on exchanges

In the case of *currency products*, the sharp swings seen in the major currencies against the US dollar provided some support to currency hedging instruments, with intermediaries adjusting their strategies (particularly for products based on trading ranges) and offering premium-reducing structures. EMU uncertainty created occasional spikes of volatility, and therefore of trading activity in European core/periphery cross rates, but the overall stability of core European cross rates meant that such business was generally subdued. In the area of emerging market currencies, business in non-deliverable forwards expanded. Such synthetic foreign currency contracts permit the circumvention of foreign exchange restrictions by providing for compensatory payments in a

Subdued OTC currency business …

New interest rate and currency swaps

Notional amounts; half-yearly turnover, in trillions of US dollars



Sources: ISDA and BIS. Graph VIII.9

single base currency (usually the US dollar). The Asian crisis, however, disrupted activity in emerging market currencies, with the sharp rise in short-term interest rates and the temporary imposition of capital controls causing substantial losses on dealers' short positions.

… but still buoyant activity in interest rate products

In the area of *interest rate products*, the ISDA figures reveal that swaps and swap-related options grew by 14% in the first half of 1997. For the year as a whole, active swap trading in the major currencies seems to have compensated for a slackening of transactions in less liquid markets. The limited supply of US Treasury paper and the flattening of the US yield curve combined to widen dollar swap spreads, supporting swap-related issuance in that currency. In Europe, the periodic emergence of doubts concerning EMU stimulated convergence trades against German interest rates and between the higher-yielding currencies themselves. However, believing that the convergence of long-term rates had failed to capture adequately credit risk premia following the introduction of EMU, some dealers began to propose deals based on a subsequent widening of yield differentials. Perceptions of the United Kingdom's more favourable disposition towards EMU were also followed towards the end of the year by active trading involving UK and Irish rates. Aside from option products based on interest rate spreads, instruments based on anticipated interest rate volatility, such as forward-starting caps or swaptions, were increasingly popular. As in the area of currency products, the Asian crisis had negative repercussions for some dealers, with several banks holding short volatility positions in the debt securities of emerging market countries suffering heavy losses.

Sizable growth in equity instruments …

There was evidence of sizable growth in OTC *equity derivatives* (which are not covered by the ISDA survey) last year. The occasional but abrupt declines in indices created strong demand for hedging products. The turbulence in equity markets occurred against the background of a shift by retail investors out of traditional fixed income products. This additional source of underlying demand for equity products was reported to have exacerbated market volatility and pushed up the cost of protection. In response, investors sought lower-cost alternatives, such as "buy now/pay later" and "knock-out" options as well as average rate options and basket products. Warrants on established stock market indices and on narrower pools of stocks were reported to have been highly popular. There was particularly strong interest in warrants on European companies that are expected to face restructuring as well as a wide array of products based on indices of Eastern European stocks. Basket instruments remove the need for active stock selection and permit a rapid and low-cost entry into desired market segments. More complex instruments such as options and swaps on cross-border index spreads and swaps on the volatility of equity indices were also actively marketed.

… and further development of credit derivatives

Regulatory uncertainty, limited availability of information on defaults and the lack of adequate hedging instruments continued to hamper trading in *credit derivatives*, which remained restricted to a fairly narrow range of institutions. Nevertheless, such instruments were increasingly used in the arrangement of securities issues (such as asset-backed securities and synthetic equity-related issues) and in other areas where separation of the credit risk from the underlying exposure was actively sought (such as leasing and reinsurance). The growing interest in Europe in higher-yielding securities, financial strains in Asia and the increase in the size of counterparties resulting from global consolidation have done much to direct financial market participants' attention to the issue of credit risk. The development of new risk management instruments is encouraging a change in the lending culture, with emphasis on the efficient management of capital and a focus on risk-adjusted returns. While intermediaries have in recent years designed increasingly sophisticated systems for the management of market risk, that of credit risk has been much less developed. This explains the drive to launch a variety of software systems which allow credit risk to be measured across assets and enable intermediaries to evaluate changes in the aggregate value of portfolios caused by credit events. These efforts, if successfully pursued, should lead to greater market efficiency, more refined pricing and a better allocation of capital.

Globalisation and financial intermediation

Global market integration aided by …

In spite of the retrenchment caused by the Asian crisis, global market integration proceeded further in 1997. Longer-term trends continued to assert their influence. For example, the rapid development of trading and communication technologies posed new challenges to existing franchises in industry segments that had hitherto been protected. Market harmonisation was further enhanced by steps taken in Japan and the United States to dismantle the regulatory barriers between banking and securities business, while the forthcoming introduction of EMU acted as a catalyst for European harmonisation and consolidation. Conjunctural elements also played an important role. Ample liquidity and the search for higher yields boosted cross-border flows, accelerating the integration of emerging market economies into the global financial system. Moreover, the Asian crisis served as a painful reminder that adherence to the free working of market forces at the international level was not compatible with the maintenance of opaque, inefficient and loosely regulated local financial systems. Recent events could indeed, perhaps somewhat paradoxically, lead to a further integration of emerging market economies by encouraging adjustment in countries where infrastructures have been inadequate.

… deregulation …

… adjustments to infrastructures …

Globalisation was again most evident last year in wholesale markets, with a lowering of the traditional barriers between commercial banking, investment banking, insurance and asset management. The gradual entry of other entities, such as providers of electronic information services, added a new group of competitors. In addition, progress made in the area of credit risk accentuated the convergence of practices in asset and liability management among the various categories of players. It also contributed to broadening the scope of intermediation through the unbundling and trading of the various risk components of exposures.

… and convergence of market practices

Notwithstanding these developments, commercial banks remained at the centre of the international intermediation process last year. First, they compensated for the stagnation in traditional deposits with large-scale financing in the capital markets. Secondly, buoyant demand for bank credit from non-bank entities located in offshore centres supports anecdotal evidence that a large

Commercial banks move into investment banking business …

volume of leveraged investment was funded by international bank credit. Thirdly, commercial banks expanded into the field of investment banking by purchasing securities operations. Strong motivations were the boom in equity and bond markets, which helped to create new markets in high-yielding instruments, and the wave of mergers and acquisitions, for which investment banks provide lucrative services. Fourthly, the entry of commercial banks into investment banking, by eroding the profits in some of that industry's traditional businesses (such as the underwriting and trading of securities), in turn created a strong impetus for both groups to diversify earnings sources and, therefore, to expand into the area of asset management.

… with both groups expanding into asset management …

As a result, there was last year a growing dichotomy between strategies aimed at providing fully integrated global financial services, on the one hand, and those focusing on core or niche business, on the other. However, the recent wave of acquisitions has raised questions as to whether the expansion of certain groups into areas in which they have little or no expertise might not represent a drain on their resources. It has also created concerns that cross-subsidising of business in the competition for global status could lead to distortions in the pricing of securities and derivative products. Indeed, the scaling-back of business by some banks last year may have reflected not only the failure to benefit from synergies between products and services, but also the inadequate pricing of instruments.

… raising a number of new issues

Conglomerates in particular …

The emergence of large international conglomerates in a world where regulation remains based on sectoral and national frameworks raises a number of issues on which there is as yet no clear consensus. In this increasingly complex environment, the regulatory framework needs to evolve in terms of both its methods and its scope. Two common trends seem to have emerged from recent market and official initiatives (see also "Activities of the Bank" at the end of this Report). The first is towards a greater market orientation of regulation, which is evident in the shift from an approach based on mechanical rules to reliance on market discipline. This was illustrated by the recent amendment to the Basle Capital Accord to permit the use of internal models for market risk, as well as the ongoing discussions on possible alternatives (including the pre-commitment approach, which would allow a self-determined ex ante allocation of capital, accompanied by ex post penalties if losses exceed the pre-committed amount). The second trend is for the official community to show greater tolerance for the failure of individual institutions but, at the same time, to put more emphasis on limiting the knock-on effects of financial distress. Current efforts to upgrade payment and settlement systems in wholesale markets go in this direction, as do initiatives to improve the architecture of the international financial system in areas such as transparency, infrastructure and burden-sharing between the public and private sectors. Determining the appropriate allocation of regulatory responsibilities, both within and across countries, is a necessary first step, but implementing it is the critical second one.

… pose challenges for the regulatory framework …

… in terms of methods …

… and scope

IX. Conclusion: identifying risks and preventive measures

In spite of the traumatic events in Asia, the economic prospects for the rest of the world are still thought to look generally positive. The long-running expansion of the economies of the United States and the United Kingdom is projected to continue. European economic and monetary union is to be introduced on schedule with a broad membership, amid emerging signs of strengthening growth and confidence. Not only have serious contagion effects thus far been avoided elsewhere outside the Asian region, but some have argued that the worst may be over in Asia itself given that financial markets there have stabilised to some degree. In most of the industrial countries, asset markets have reached record highs, accompanied by an extraordinary flurry of mergers and acquisitions and associated financing. At a more fundamental level, the events in Asia have even been interpreted positively by some as a confirmation of the dominance of the market-driven model of economic growth that has become increasingly fashionable since the 1970s.

Like fashion, however, economic circumstances can change quite quickly and all economic projections and judgements should be approached with a proper sense of humility. One good reason for this, illustrated clearly by the Asian crisis, is that the economic and financial world is a highly uncertain place in which perceptions of liquidity risk, market risk and credit risk can interact to produce multiplicative effects and unpredictable outcomes. And if economic developments have social and political ramifications, the results can be more uncertain still. A second reason for humility is that success seems all too frequently to contain within it the seeds of failure. Over-optimism, in a word, has commonly affected the judgement of markets and policy-makers alike.

Mexico, for example, was widely praised and rewarded by the markets in the early 1990s for its deregulation and fiscal austerity, as were many Asian countries (including Japan) for their very high rates of saving and investment. However, these countries were nevertheless subjected subsequently to very rapid shifts in market sentiment. In Mexico it was realised that deregulation, particularly in the financial sector, had led to a consumption boom and an unsustainable current account position. In the case of a number of Asian countries, the markets came to understand that high savings were not an unmitigated advantage if they were associated with unprofitable investments that were likely to depress asset prices for years.

In both these cases, and many others, the process of boom and bust seemed to follow a very similar dynamic. Good domestic "fundamentals" were followed by spending excesses fuelled by domestic credit. In such an environment, profit opportunities first attracted the attention of more thoughtful foreign lenders, whose activities in turn attracted the money of the less thoughtful. Structural change in financial systems worldwide gave further impetus to these developments. Domestic deregulation in emerging markets frequently made credit more easily available, while heightened competitive pressures in industrial countries led many financial institutions to turn to new markets in the confident expectation of compensating for shrinking rates of return at home. In the end, the unwinding of this excessive optimism on the part of both borrowers and lenders was sudden, brutal and costly for all concerned.

Over-optimism of a related sort can also affect policy decisions. Whether in emerging or industrial economies, it is always difficult to change policies incrementally so as to avoid crises, and it is even more difficult when the public is strongly of the view that economic prospects remain excellent. Even the broad success of policy-makers in reducing consumer price inflation may have attendant dangers if this success inadvertently encourages the development of asset price bubbles, while at the same time reducing the policy scope to resist them. When nominal and even real interest rates decline as inflationary pressures recede, investors may well search for higher returns elsewhere. Unfortunately, whether in domestic equities or in foreign investments, higher returns come only with commensurately higher risks.

Policy-makers who focus primarily on traditional measures of inflation commonly argue that higher asset prices can generally be ignored, unless their effects on consumer price inflation can be confirmed. While true, this argument should also be complemented by concern about the effects on the health of financial systems if intermediated credit is being used to fuel an asset price bubble which will subsequently burst. The policy-makers' hard choice in such a situation may then be to raise interest rates to resist the bubble, and undershoot inflation targets a little, or to desist and eventually undershoot them a lot. This may be a particular risk if, as the Japanese experience seems to bear out, reflating the economy may prove especially difficult at low rates of inflation that leave little room for reductions in real interest rates. While the increase in property prices which has accompanied the rise in securities markets in most western industrial countries has been nowhere near as great as that seen in Asia, the recent acceleration of monetary growth in the industrial countries nonetheless merits attention.

Obviously, the intended message here is not that economic growth, deregulation and low inflation should be avoided because they might have attendant risks. Rather, three more sensible conclusions seem warranted. The first is that, by better understanding the dynamics of macroeconomic processes, we may be able to head off problems before they become too disruptive. The second is that market liberalisation must be pursued vigorously but prudently. And the third is that efforts must be made to strengthen the health of financial systems everywhere to ensure resilience in the face of the larger shocks likely to be faced in freer markets.

Macroeconomic perspectives and policy lessons

The prolonged divergence in the cyclical positions of the major industrial countries has given rise to certain tensions. In particular, the relative strength of demand in the United States (and also in the United Kingdom) has led to sharp currency appreciation and an associated deterioration of the current account balance. This has been matched by growing surpluses in Japan and continental Europe. Moreover, forecasts by the IMF and the OECD indicate that the United States will provide most of the offset to the anticipated improvement in Asian trade deficits, pushing the current account deficit as a proportion of GDP to near-record levels.

The dangers in this are twofold. The first is that the markets will lose patience with the accumulation of US external debt and drive the dollar sharply lower. Such a movement would reverse the beneficial and significant disinflationary effects of the appreciating dollar and raise further the probability of monetary tightening in the face of emerging capacity constraints in the United States. Were this to happen, an associated reduction in asset prices might also be expected, with substantial knock-on effects on US consumer spending and confidence given the increased importance of financial assets in household portfolios. The second danger inherent in the strong dollar is the possibility of a resort to protectionist policies in the United States. While the robust economy has kept such sentiments below the surface, a marked slowing of growth could easily change this situation.

Any threat to continuing, non-inflationary growth in the United States might also have broader implications. While the recent strengthening of demand in Europe could make those economies more resilient to an appreciation of their currencies, the same cannot be said for Japan. Moreover, a general rise in interest rates, whether initiated in the United States or in Europe, might provide the incentive for a further withdrawal of funds from emerging market economies as well as an overdue reassessment of credit risk in all markets. It is not clear what the full implications of this latter possibility would be in a world where the growth of international interbank deposits increased almost fourfold to over $700 billion last year, and where international securities issues have recently hit all-time record highs.

It should be clear that this is a scenario rather than a forecast. A forecast would rightly be more benign with respect to the US current account problem, pointing out that the ratio of net external debt to GDP, while rising, remains low (and debt service lower still) and that, for the moment, the dollar's unrivalled position as the world reserve currency will help protect its value. But it is through identifying risks that attention is directed to the policies that might avoid them. In principle, this would seem to come down to encouraging more demand in slower-growing industrial economies and the opposite elsewhere. Yet there are obstacles in many countries to the practical implementation of such policies. Relying on fiscal policy to stimulate demand, for example, might in some countries conflict with medium-term goals for fiscal consolidation, while relying on monetary easing would run the risk of further fuelling asset prices.

In the emerging economies of Asia, prompt, and above all politically committed, responses to the prescriptions of the International Monetary Fund would do more to revive growth prospects than anything else in countries where such commitment is still lacking. This would help restore confidence, allowing interest rates to decline and exchange rates to rise from excessively low levels.

As the burden of both domestic and external debt service became more bearable, credit spreads would be expected to narrow and the availability of foreign credit to increase again. Clearly, the likelihood of securing such political commitment would rise if the scope of the Fund's recommendations were to narrow towards the re-establishment of financial stability and traditional measures required to ensure balance-of-payments equilibrium.

A further necessary step towards the reliquification of many of the Asian economies would be an early, transparent and politically neutral restructuring of domestic banking systems. While there has not thus far been credit rationing on the scale seen in Mexico, except in Indonesia, the potential for such an outcome elsewhere in Asia must be reduced. While some might argue that restructuring will itself contribute to credit rationing, history would seem to teach just the opposite. Closing the weakest banks and definitively recapitalising the others need not cause problems, although it is admittedly a delicate task. Rather, credit rationing arises most frequently when the authorities allow uncertainty about the good health of the banks to continue, particularly when this interacts with the banks' own uncertainty about the soundness of their customers. Finally, it must be recognised that optimal policies cannot be counted on in the first place and will take time to work in any event. Assuming an interim and perhaps prolonged period of slow growth, the World Bank and others have been quite right to emphasise the need to cushion the plight of the poorest who are bearing the heaviest burden of the Asian crisis.

Rekindling growth in Japan will not be easy after almost a decade of temporising with underlying problems which bear some similarity to those which have only recently emerged elsewhere in Asia. In the meantime, consumer confidence and the financial situation of both the corporate and banking sectors have greatly deteriorated. Indeed, the Japanese experience ought to be an object lesson in the need for decisive action to re-establish stability quickly after a bubble bursts. Nevertheless, it is still not too late to restructure the banking system, broadly as suggested above, and to stimulate the economy further through permanent tax cuts directed at those thought most likely to spend the extra income in the current environment. This is all the more necessary since monetary easing seems increasingly constrained by a sharp rise in domestic liquidity preference (partially related to concerns about the health of banks) and by fears that a lower yen will aggravate trade tensions with the United States. This latter concern may well be inappropriate, in that the US current account deficit is essentially the home-grown product of a fully employed economy and a relatively low national saving rate, but it seems nonetheless to be a political reality.

One recent development, related to the Asian crisis, will help support demand in Japan and many other countries. The recent fall in oil and other commodity prices amounts to a positive terms-of-trade shock for all the larger industrial countries, and many emerging economies as well, helping to raise disposable incomes. Moreover, it will contribute to reducing the absolute US trade deficit even if it further increases the Japanese and European surpluses. The downside to this development is that the costs will be borne by a limited number of countries, particularly the main oil exporters, which may not find it easy to adjust. In both Mexico and Russia, oil exports still account for about one-third of all government revenues, and fiscal restraint will thus imply sharp decreases in government expenditures. Saudi Arabia, Venezuela, Nigeria and Indonesia will face similar problems. On balance, given that those who lose are forced to adjust, while those who gain need not, the decline in commodity prices is likely to slow global demand overall.

With monetary union well on the way to completion, the prospects for non-inflationary economic growth in Europe, and the implications for monetary policy, must increasingly be assessed on an aggregate basis. If German and French interest rates are currently set at levels appropriate for those two countries taken alone, rates appropriate for the whole EMU area might be somewhat higher given the more advanced cyclical position of some other member countries. This conclusion is, however, subject to three important caveats. First, ongoing fiscal consolidation and structural adjustment in Europe would mitigate the need for such monetary tightening. Secondly, should the dollar fall against the European currencies, there would be further disinflationary effects. And finally, the full impact on Europe of the Asian crisis still needs to be assessed. Perhaps the only thing that is completely clear is that the European Central Bank will have to monitor the conjunctural situation with great care both prior to 1st January 1999 and subsequently.

In both the United States and the United Kingdom, a combination of tightening labour markets, worsening trade balances and booming prices for financial assets would indicate that inflationary risks are on the upside. Further monetary tightening might then seem to be recommended, even if there are also other risks. Higher interest rates, particularly in the United States, would complicate the problem faced by highly indebted emerging economies and could have effects of unpredictable magnitude on domestic equity prices as well as exchange rates. In the circumstances, an additional degree of fiscal restraint would contribute to meeting both short-term cyclical requirements and longer-run concerns about fiscal sustainability. In neither country, however, can it be said that the likelihood of this happening is very great.

Financial liberalisation and structural change

As if the conduct of macroeconomic policy were not difficult enough, policy-makers must increasingly make their judgements against the backdrop of continuing liberalisation and structural change in financial markets. Three important developments can be identified. First, there is increasing competition worldwide in the provision of financial services, with traditional banking firms already coming under particular pressure. This could well have implications for the monetary policy transmission mechanism. Secondly, swings in international capital flows to emerging markets have severely complicated the formulation of their domestic policies. Thirdly, the introduction of EMU will provide a new context for the conduct of macroeconomic policy in Europe. All of these developments also have implications for prudential policies, as is discussed further below.

Non-bank financial intermediaries are receiving a growing proportion of the savings of the industrial world. Moreover, with the recognition that unfunded pension schemes in Europe and elsewhere are not likely to be adequate to meet future needs, this trend looks likely to accelerate. It can plausibly be argued that the behaviour of those allocating such funds will be different from, although not necessarily better or worse than, the behaviour of traditional bankers. For example, the increasing tendency of private savers to choose equity funds as a vehicle for longer-term savings may have contributed to the recent strength of stock markets worldwide. Nor is it easy to predict what the same savers might do in the face of a sharp correction in equity prices.

It is also the case that traditional banking intermediation is increasingly under threat from securities markets and that, as a defensive manoeuvre, banks are becoming increasingly involved in the securities business. Narrowing margins everywhere, only temporarily reversed by the Asian crisis, indicate the extent of these competitive pressures and help explain why credit growth has been faster in some countries than might otherwise have been expected. Furthermore, the effective demise of Glass-Steagall restrictions in the United States, the advent of the "Big Bang" in Japan from 1st April this year, and the spur to international competition likely to be provided by the euro indicate that this process of structural change and heightened competition is likely to intensify further.

Emerging markets may already have been affected by these trends and the resulting search for higher returns. Inflows of international capital, in large part in the form of short-term bank credit, rose from virtually zero in 1989 to a peak of almost $170 billion in 1996, to be followed most recently by major outflows. Coping with these swings has been enormously difficult, as they have generally fuelled existing spending booms on the way in and precipitated crisis on the way back out. While greater upward exchange rate flexibility would clearly have helped restrict such flows by opening up a two-way bet in exchange markets, the Mexican experience of the early 1990s teaches us that this is no panacea. In the light of recent developments in Asia, there has been a renewed debate about the merits of international capital controls, a debate given added vigour by a simultaneous proposal to amend the Articles of the International Monetary Fund to provide it with an explicit mandate to encourage capital account liberalisation.

Those proposing more controls point out that countries with high domestic saving rates often have problems in allocating even their own capital properly. They also emphasise the shorter-run problems of macroeconomic instability, and generally assume that international financial markets are prone to destabilising behaviour. In contrast, the Fund's approach is focused on the longer-run objective of microeconomic efficiency in the allocation of capital, allied with the belief that there are less distortive ways to deal with potential short-term macroeconomic problems. Insofar as these problems arise from herd-like behaviour on the part of banks, and indeed this does seem recently to have been the case, possible remedies are discussed below in the context of crisis prevention and management. There is clearly no single answer to this traditional problem, which involves a trade-off of longer-run efficiency against stability. Nevertheless, a consensus seems to be emerging that decontrol, while desirable, must be carried out extremely carefully and that capital inflows of longer maturity are preferable to shorter-term ones. Were the proposed amendment to the Fund's Articles to be accepted, it seems likely that the first fruits would be increased pressure on emerging market countries to strengthen their financial systems as a necessary precondition for a subsequent liberalisation of capital flows. This would be no bad thing.

The third major structural change affecting financial markets, for which preparations are well under way, will be the introduction of the euro. The newly formed European Central Bank will initially have to take account of a number of transitional issues in the conduct of monetary policy. A full understanding of the transmission mechanism of monetary policy in the integrated market will take time to develop, and hoped-for increases in competitive forces may well prompt further changes in the underlying financial structure. This is particularly likely to affect the behaviour of monetary aggregates in the near term, suggesting the need to adopt a rather eclectic mix of monetary and inflation targeting for a period of time at least. As the ECB gains credibility, the associated effect on the process of wage and price formation will also change, albeit in a beneficial direction.

The longer-run conduct of macroeconomic policy in the euro area will obviously be affected by the introduction of the single currency. Countries whose wages and prices get out of line relative to competitors will no longer have recourse to exchange rate depreciation. The necessary adjustments will have to come from appropriate changes in domestic wages and prices if a rise in national unemployment rates is to be avoided. While the anchoring role played by a transparent inflation objective for the area as a whole will facilitate such an adjustment, much more far-reaching reforms in labour and product markets will also be needed. Unfortunately, while there has been significant progress in a few countries, the record of reform in Europe to date is very mixed in this regard. It is to be hoped that the introduction of the euro will also serve as a catalyst to spur needed structural changes across the broader European landscape.

Crisis prevention and crisis management

The Mexican and Asian crises were similar in that balance-of-payments difficulties interacted with weak domestic financial systems to calamitous effect. However, they differed in that the former was characterised by excessive consumption and the latter by excessive investment. Moreover, the Mexican crisis primarily involved a sovereign debtor and non-bank creditors while the Asian crisis has primarily involved private sector debtors and bank creditors. While the fact that no two crises are alike complicates the search for measures both to prevent and to resolve crises, some positive steps can still be recommended.

Crisis prevention demands, above all, healthy domestic financial systems. While the Basle Core Principles for Effective Banking Supervision provide a crucial building-block for improvements in this area, implementation will be a challenge. There is currently a great shortage of trained personnel among banks and supervisors alike, which will take a significant educational effort and require many years and considerable resources to rectify. Perhaps an even more difficult problem is political resistance to reform from those who have thus far benefited from the existing system. If market discipline, as well as peer pressure from supervisors and politicians in more progressive countries, do not suffice to overcome such obstacles, the withdrawal of rights of establishment for banks from jurisdictions with inadequate prudential standards might eventually have to be contemplated.

It may also be that international standards will be required in other areas if healthy financial systems are to be assured. Committees reporting to the Group of Ten Governors at the BIS are currently assessing the need for and the feasibility of developing such guidelines or principles in a number of areas. One obvious issue is the need for clear, internationally comparable and transparent accounting standards. Without clarity as to what corporate accounting numbers mean, it is impossible to assess the quality of credits or the health of the banks that have granted those credits. Confusion as to what the banks' own accounts might mean adds another unwelcome layer of opacity in many emerging market and even a few industrial countries. Both of these problems need to be urgently addressed. More broadly, there is a great need for more transparency and more disclosure about the financial activities of both the private and the public sectors in all countries.

Crisis prevention, however, goes beyond having a sound financial system at the outset. It also requires adequate indicators of any threat to macroeconomic stability, whether arising from new developments in the banking system or elsewhere, and a set of incentives to ensure that those who should act do so before the eruption of a crisis. However, the indicator problem is a thorny one for the reasons mentioned above. Dangerous excesses generally build upon good fundamentals, and knowing when the line has been crossed is not easy. While a number of empirical models have been developed for predicting both balance-of-payments crises and banking crises, their common shortcoming is the frequency with which they predict crises that never happen. Uncertainties of this sort may help explain the reticence of public authorities to make predictions in this regard and the unwillingness of rating agencies to respond promptly to early signs of trouble.

The issue of incentives to act pre-emptively is equally thorny. Consider the Mexican and Asian crises and the application of market discipline. In both cases money continued to flow in, even though widely available statistics made it clear that the stock of tesobonos and other short-term debt, in the former instance, and the level of short-term international bank lending, in the latter, had risen dramatically. These data were generally ignored, although in the Asian case there is also some evidence that non-bank financial institutions did withdraw funds before the crisis hit. Studies are urgently needed to understand the mechanisms which led banks to further increase their exposure to countries already subject to warning signals, including in some cases warnings emanating from within the banks themselves. One possible answer is that the sums involved were relatively small from the perspective of individual investors, even if of dangerous size from the perspective of the recipients. Should the existence of such externalities be proved, this would in itself provide an argument for some form of public policy intervention.

The public sector must also question whether its own incentive structures need improvement in at least three areas. One possible reason for the magnitude of international bank lending in Asia was the existence of public safety nets for both debtors and creditors which seemed to attenuate virtually every form of risk. With most foreign loans being made to domestic banks, normal credit risk was reduced by the expectation of their governments' support. Concerns about liquidity risk may have been eased by the series of liquidity support measures which had been organised earlier by the international financial community, however necessary those measures were at the time. And finally, the fact that most such Asian loans were short-term and denominated in foreign currency lowered perceptions of market risk as well.

A second question for the public sector is whether the detailed specifications of regulatory capital ratios made short-term interbank lending look particularly attractive. If so, the various arguments for such specifications need to be reassessed. And finally, it may be asked whether the proper incentives are in place, in both lending and borrowing countries, for supervisors themselves to act expeditiously before a crisis erupts. Analogous to monetary authorities in the modern world, supervisors need a clear and consistent mandate, powers to act in pursuit of their objectives, and public accountability for their actions. In the absence of these conditions, and they are by no means present everywhere, supervisors too may be tempted to exercise forbearance.

Even though the Asian crisis is not yet definitively over, some issues pertinent to the problems of crisis management can already be identified. The first is the need for the private sector to take some responsibility for the ongoing provision of credit to customers to whom they had previously lent all too freely. This is not just to avoid moral hazard problems, but also to acknowledge a simple reality. Capital flows have now grown so large that public sector funds simply cannot fill all the potential gaps that might open up as capital inflows reverse. Thus, some better means of burden-sharing will be required. A second issue begins with the recognition that the threat of a unilateral stay on payments would help bring banks to the negotiating table earlier. Such a threat would be more credible if the international financial institutions were to announce in advance their willingness to provide further needed financing by "lending into arrears" to countries whose domestic policies were deemed acceptable. The Ministers and Governors of the Group of Ten have endorsed the suggestion that the IMF should reconsider its policies in this respect. Finally, after the Mexican crisis the G-10 Deputies made a number of recommendations designed to facilitate crisis management. None of these has so far been implemented, which raises the question of what could and should now be done in this regard.

Resolving issues pertaining to crisis management will continue to be important since measures for crisis prevention will never prove totally reliable. This is not a statement of despair but of realism. Hopefully, it will encourage policy-makers not only to redouble their efforts to promote price and financial stability, but also to plan their reactions in advance should events fail to unfold as they might desire. Given the troubling way in which economic, political and social factors can sometimes interact, it is simply not prudent to assume that everything will turn out for the best.

Activities of the Bank

1. International monetary and financial cooperation

During the past year, the Bank has continued to play its traditional role in fostering international monetary cooperation. It organised periodic meetings on a variety of subjects bearing on monetary and financial stability. The financial crisis in East Asia figured prominently in these meetings, as described in greater detail below. Other topics included, in the monetary field, issues in the implementation and tactics of monetary policy, monetary policy and asset prices, and the conduct of monetary policy in a low-inflation environment. Meetings also addressed questions relating to the management of foreign exchange reserves and central bank responses to currency attacks. Discussion of ways to strengthen financial systems focused, inter alia, on the role of regulation and disclosure in disciplining institutions and markets, and on the implications of structural changes in financial systems for the nature of systemic risk. In this regard, and reflecting changing institutional arrangements in a number of countries, interest also centred on the role of central banks in the regulation and supervision of financial institutions and markets. In addition, the Bank continued to host and support regular meetings of the Governors of the central banks of the Group of Ten countries on the global economic and financial conjuncture.

The rapid pace of ongoing financial integration, and the consequent need for international cooperation to embrace a wider circle of countries, were reflected in the deepening involvement of officials from emerging market central banks and other supervisory bodies in the Bank's meetings. In this regard, the East Asian financial crisis added urgency to the implementation of earlier initiatives. It also gave the impetus to new initiatives, including the establishment of a BIS Institute for Financial Stability to respond to increasing needs for guidance and training in implementing sound principles in all areas bearing on financial stability. The Bank's expanded focus on emerging market economies was also seen in other tangible ways. Externally, the Bank concluded negotiations with the Government of the People's Republic of China to open a Representative Office for Asia and the Pacific in Hong Kong. The office, which will facilitate the development of the Bank's activities in the region, will aim to strengthen further relations and information sharing among the region's central banks and monetary authorities. Internally, a reorganisation and rationalisation of the General Secretariat resulted in the release of resources which will strengthen the capacity of the Banking Department and the Monetary and Economic Department to service the Bank's enlarged shareholdership.

As usual, the Bank participated as an observer at meetings of the Interim Committee of the Board of Governors of the International Monetary Fund, and of the Finance Ministers and central bank Governors of the G-10 countries. It also contributed to the work of the Deputies of the G-10 Ministers and Governors referred to below. Moreover, the Bank provided the secretariats for various committees and groups of experts concerned with international monetary and financial stability.

Basle Committee on Banking Supervision

In its principal area of operation, the Basle Committee on Banking Supervision has continued to focus its efforts on the development of supervisory policy. As the financial markets have become more sophisticated and traditional barriers have diminished, the process of supervision has become far more complex. The response of G-10 supervisors has been to try to strengthen market discipline and to create an environment in which banks have positive incentives to operate in a safe and sound manner. Accordingly, the Basle Committee has been placing increased emphasis on the need for greater market transparency and sound risk management principles. Initiatives have been taken to enhance disclosure through regular surveys of trading and derivatives activities and preliminary work has been undertaken with a view to achieving greater consistency in banks' loan valuation and loan loss procedures. In relation to risk management, the Committee has released a range of papers over the past year providing guidance on the management of interest rate risk, on internal control systems and on electronic money and electronic banking activities.

In recent months, the Basle Committee has been devoting considerable attention to the steps that need to be taken by the financial industry to prepare for the changeover to the new century in their information-processing systems. Following an alert in July 1997, the Committee issued a detailed paper on Year 2000 risks in September 1997, conducted a survey of preparations by supervisors and banks in early 1998 and, as described below, co-sponsored a Round Table on this issue in April 1998. The Basle Committee will be a member of the Joint Year 2000 Council set up following the Round Table. Work is now in progress to formulate guidelines for supervisors monitoring banks' Year 2000 compliance and a contact list of supervisors working on Year 2000 issues has been compiled in order to foster coordination and contingency planning.

The Basle Committee has continued to develop refinements to the Capital Accord. In recent years, attention has focused principally on the treatment of market risk, for which capital charges were introduced at the beginning of 1998. However, the Committee has also been continuously monitoring the credit risk framework and is currently examining banks' use of credit risk models. In April 1998 the Committee announced a reduction in the credit risk weighting for regulated securities firms (but not for unregulated securities firms or holding companies) and issued a consultative paper on on-balance-sheet netting.

Last year's Annual Report described the widening focus of the Basle Committee's work beyond the G-10 countries. The initiatives that had been set in train with the close collaboration of non-G-10 supervisors resulted in the issue of the Core Principles for Effective Banking Supervision as a consultative paper. Following a consultation period, the final version of the document was presented to Ministers and Governors at the time of the IMF/World Bank Annual Meetings in Hong Kong.

With the Principles agreed, attention is now turning to implementation. As discussed at length elsewhere in this Report, events in Asia have revealed distinct weaknesses in the supervisory arrangements in many emerging market economies and have thus served to underline the relevance of the Core Principles for all banking systems. There is now a clear awareness on the part of the authorities, not only in Asia but also in many other countries around the world, that the Core Principles need to be implemented not only in letter but also in spirit. To provide a suitable forum for discussing the problems with which countries are confronted, the Basle Committee has created a Liaison Group and a wider Consultation Group of G-10 and non-G-10 countries. The Liaison Group, consisting of some 20 countries, and in which the IMF, the World Bank and the European Commission serve in an informal capacity, has already prepared a detailed survey to be conducted over the next few months. The survey is designed to identify the steps that supervisory authorities are taking to implement the Principles, the impediments they may face and the assistance that they may require. The results of this survey are to be one of two principal topics of discussion (the other being operational risk) at the next International Conference of Banking Supervisors in Australia in October 1998, which will be organised by the Basle Committee and the Australian supervisory authorities.

The Basle Committee has continued to work actively to develop international cooperation among banking supervisors through meetings and personal contacts. Collaboration with other financial sector regulators has been intensified through the Joint Forum on Financial Conglomerates. The Joint Forum, which consists of banking, securities and insurance supervisors, issued a package of consultative papers in February 1998 addressing several different aspects relating to the supervision of financial conglomerates. Moreover, the Basle Committee is becoming increasingly engaged in wider debates with other bodies representing, among others, the banking industry, financial sector specialists, accountants and trade organisations. As part of this widening role, the Committee prepared a report for the Group of Seven Finance Ministers at the Birmingham Summit describing the work it is doing to improve supervisory collaboration and to strengthen financial stability around the world.

Euro-currency Standing Committee

In the latter part of 1997 and the first months of 1998, the agenda of the Euro-currency Standing Committee was dominated by developments in, and the lessons to be drawn from, the financial crisis in East Asia. Besides monitoring the general situation, the Committee focused on three specific aspects of the crisis: the implications for potential improvements in the availability and use of information; the interaction of domestic institutions with the international financial system; and the effectiveness of international support efforts. The crisis also led to decisions that the Committee should assume a more active role in monitoring systemic vulnerabilities, and extend participation in its meetings beyond the G-10 central banks.

Partly in response to the Asian crisis, the Committee agreed a number of proposals for improving the BIS international banking statistics, a key source of information on creditor exposures and countries' external debt. Working in close consultation with statistical experts at the BIS and at member central banks, the Committee explored possible improvements in terms of coverage, quality and timeliness. It was decided to reduce lags in the reporting of data to the BIS and in the release of data to the public, to move to quarterly reporting on a best-efforts basis, to move towards reporting of exposures on an "ultimate risk" basis, and to intensify efforts to add new reporting countries. These improvements should enhance the usefulness of the statistics for policy-makers and market participants analysing cross-border exposures involving specific countries, as well as the size and structure of countries' debt.

At the same time, the Committee continued its activities in other areas. As part of a concerted strategy to promote financial stability, it examined, together with the other Basle-based groupings, the desirability and feasibility of developing international best practice guidelines, norms or standards in four areas: improving transparency; making the best use of information; the design and operation of safety nets; and the promotion of deep and liquid markets. The conclusions of this work will be reported to the G-10 Governors in July 1998.

Longer-term analyses of structural developments with a bearing on financial stability were also carried forward. A collection of studies on the measurement of aggregate market risk was released in November 1997. Two working groups, one on the implications of structural changes for systemic risk and the second on capital flows and portfolio management activities, submitted their reports to the Committee in December. A joint study group with the Committee on Payment and Settlement Systems on clearing house and collateral arrangements in the OTC derivatives markets presented a preliminary report to the two Committees in May 1998. In early 1998, two studies among interested central banks were initiated: one to examine the structure and functioning of markets for repurchase agreements in different countries, and the other to examine the determinants of market liquidity at the theoretical and empirical levels, with an emphasis on the liquidity of government bond markets. Both groups plan to report their findings in December 1998.

In April 1998, the Governors of the G-10 central banks appointed Mr. Yutaka Yamaguchi, Deputy Governor of the Bank of Japan, as Chairman of the Euro-currency Standing Committee for a term of three years as from 1st May. Mr. Yamaguchi succeeds Mr. Toshihiko Fukui, who had held the chairmanship from January 1997 until his retirement as Senior Deputy Governor of the Bank of Japan in March 1998.

Committee on Payment and Settlement Systems

The Committee on Payment and Settlement Systems (CPSS) continued its efforts to strengthen financial market infrastructures. In this regard, the implementation of the G-10 central banks' strategy to reduce foreign exchange settlement risk remained a high priority during the year. The three-pronged strategy endorsed by the G-10 Governors in early 1996 involved the promotion of improved internal risk management by individual banks, the encouragement of private sector initiatives to develop risk-reducing multicurrency settlement mechanisms, and further relevant enhancements to domestic payment system arrangements. The

CPSS has been engaged in an ongoing dialogue with various private sector groupings involved in the design and enhancement of cross-border schemes. The Committee is preparing an assessment of the results achieved so far in order to decide whether further action needs to be taken.

The publication of the Committee's report on Real-Time Gross Settlement (RTGS) Systems in March 1997 has led to a much better understanding of such procedures in large-value interbank funds transfer systems among market participants and system operators. A number of conferences are now being organised around the world at which market participants and service providers will discuss the policy issues identified in the report and the implications for market participants of the introduction and enhancement of such interbank payment mechanisms. Since an increasing number of non-G-10 countries are planning to introduce RTGS systems in the future, the report has contributed to ensuring that the design features of such systems take account of the needs of market participants, the concerns of the central banks, and the requirements of other wholesale payment systems such as securities settlement systems that may be linked to them.

In cooperation with the International Organization of Securities Commissions (IOSCO), the CPSS is continuing to promote greater transparency in securities settlement arrangements through the implementation of the Disclosure Framework for Securities Settlement Systems, which was released in February 1997. A large number of system operators have provided information on their ownership structure, their custody, clearing and settlement operations and their risk management procedures. This information is posted on the BIS Web site (http://www.bis.org).

Following publication by the Committee in March 1997 of an analysis on Clearing Arrangements for Exchange-Traded Derivatives, many clearing organisations are in the process of reviewing their internal risk control procedures. In cooperation with the Euro-currency Standing Committee, the CPSS is extending this analysis to clearing arrangements for OTC instruments, with a view to identifying possible policy issues.

A joint working group of the CPSS and IOSCO, consisting of officials from both G-10 countries and emerging market economies, has recently conducted a survey of the benefits of securities lending as well as the risk management procedures employed by participants in this activity. Analysis of the survey results will focus on the procedures used by market participants to complete securities lending transactions, the impact of the economic, legal and regulatory environment on securities lending activity, the risks that may arise in the course of settling these transactions, and potential implications for securities regulators and central banks.

The Committee has set up a sub-group to carry out a review of retail payment systems and related policy issues. The group is identifying and analysing recent and prospective trends in the use of retail payment instruments and in the corresponding clearing and settlement arrangements. It is expected that an improved understanding of the retail payments industry will allow G-10 central banks to assess the challenges posed by recent and expected innovations in this area. With respect to electronic money, the Committee, through its Secretariat at the BIS, has been carefully monitoring global developments in card and software-based products.

Like other international groupings, the CPSS has taken various initiatives to raise awareness of the serious policy issues related to the Year 2000 problem, inter alia by encouraging payment system operators worldwide to publicly disclose relevant information on the state of preparedness of their respective domestic payment systems for the Year 2000.

Together with the Basle Committee, IOSCO and the International Association of Insurance Supervisors (IAIS), the Committee organised in April 1998 a global Year 2000 Round Table which was attended by senior executives of a variety of public and private sector organisations from the financial, information technology, telecommunications and business communities. The Round Table confirmed that the Year 2000 problem needs to remain a top priority of senior management and emphasised that private and public sector bodies should coordinate their focus on a number of important issues and approaches. These include addressing the need to widen external testing programmes, improving information sharing among market participants, their vendors and service providers, fostering increased disclosure by financial and non-financial corporations of their Year 2000 readiness and testing results, establishing market conventions and procedures for dealing with potential contingencies, and reinforcing the role of oversight bodies such as supervisors and auditors. The importance of thorough testing, both internally and externally with counterparties, was emphasised as the most effective way to ensure that problems in the transition to the new millennium are minimised.

Several private sector initiatives aimed at promoting international coordination and cooperation with respect to Year 2000 testing programmes were identified during the Round Table. To maintain a high level of attention within the supervisory community and to support these private sector efforts, the committees which sponsored the Round Table decided to form a Joint Year 2000 Council which will be composed of senior members of each committee and supported by the CPSS Secretariat. The BIS Web site contains further information on the Round Table and will provide regular updates on the activities of the sponsoring organisations and of the Joint Year 2000 Council.

The Committee has continued to strengthen its cooperation with non-G-10 central banks, particularly those from emerging market economies. Various individual central banks or regional central banking groups are preparing, with the assistance of the Committee's Secretariat, publications that describe the payment systems in their country or region. The Committee has also supported an increasing number of payment system workshops and seminars organised by the BIS in cooperation with regional central banking groups.

In December 1997 the Committee organised a payment system conference at the BIS for the global central banking community. More than 80 central banks were represented at the event, where views were shared on the process of managing change in payment systems. The proceedings of the conference have been published by the BIS.

BIS contributions to the work of emerging market central banks

As noted above in this chapter, the Bank intensified efforts to foster closer contacts among the central banks of the major emerging market economies and to strengthen cooperation between them and their counterparts in the industrial countries. One important new initiative was the organisation of two regional meetings on strategic monetary policy issues. The first of these focused on Latin American policy issues and was co-hosted by the Bank of Mexico in Mexico City in November 1997; the second meeting was held in Singapore in March 1998 and was sponsored by The Monetary Authority of Singapore. Participants included senior central bank officials from both emerging market and industrial economies.

The Bank has also organised in recent years an annual policy meeting of Deputy Governors of central banks of the major emerging market economies on special topics of common interest. The 1997 meeting dealt with the transmission channels of monetary policy in their economies; this topic was further discussed by the Governors of participating central banks, as well as Governors of a number of industrial country central banks, at a special meeting held at the time of last year's Annual General Meeting. Some of the papers prepared for this meeting were published in the BIS Policy Paper series in early 1998. This year's Deputy Governors' meeting examined monetary policy operating procedures in emerging market economies. Finally, against the background of spreading financial turmoil in Asia, senior central bank officials from industrial and emerging market economies discussed central bank responses to currency crises at the BIS in mid-July 1997.

Coordinating Services for Central Banks and International Organisations

The demand for assistance in implementing sound policies in areas bearing on financial stability was reflected in expanded cooperation between the BIS, the committees hosted by it and various regional central bank groupings in the organisation of seminars and training activities. The regional groups, in particular CEMLA (Centro de Estudios Monetarios Latinoamericanos), EMEAP (Executive Meeting of East Asian and Pacific Central Banks), SEACEN (South-East Asian Central Banks), SAARC (South Asian Association for Regional Cooperation), the GCC (Gulf Cooperation Council) and SADC (Southern African Development Community), assisted the BIS and the Basle-based committees in disseminating standards and best practices to the central banks in their regions. As in the past, the BIS and the main Basle-based committees conducted joint seminars with a number of the regional groupings. The need for technical assistance in countries in transition continued to be addressed within the framework of the Joint Vienna Institute. The seminars, organised by the BIS but drawing on input from central banks and supervisory agencies, covered monetary policy, banking supervision, payment and settlement systems, legal issues and reserve management.

To help respond to increasing demands in the above areas, and to improve the efficiency with which training is planned, coordinated and delivered, the BIS decided, in a joint initiative with the Basle Committee on Banking Supervision, to establish the BIS Institute for Financial Stability. The Institute, which will start operations in the second half of 1998, will be engaged in three principal activities:

the organisation of seminars aimed at key policy-making officials in central banks and supervisory agencies; the provision of training on a regional basis for officials responsible for implementing policy; and acting as a clearing house for information on the provision of technical assistance by central banks and supervisory authorities.

Group of Computer Experts

The Year 2000 issue was one of the major topics of discussion of the Group of Computer Experts. A special meeting between G-10 and non-G-10 central banks was devoted to the question. Most of the institutions had begun to evaluate the impact of the millennium change on their information systems as early as 1996. They have now made a detailed estimate of the adaptations required for their systems, contacted hardware and software suppliers and embarked on the upgrading work.

In the European Union central banks, preparations for the euro are also requiring considerable IT resources. Owing to shortages in the supply of qualified staff as a result of the demands related to the Year 2000 issue and the introduction of the euro, a number of central banks are experiencing difficulty both in hiring and in retaining valuable IT staff. Another important development in many central banks is the introduction of Web technologies to allow access to the Internet, to disseminate information internally, to make information available to the public, and to provide services to the central banks' customers.

Group of Experts on Monetary and Economic Data Bank Questions

The Group of Experts on Monetary and Economic Data Bank Questions focused its attention on challenges relating to the Year 2000, European monetary union and the potential for broadening the scope of secure electronic information exchange among central banks to include data, documents, voice and video. In addition, the Group addressed issues concerning a new international standard for the electronic exchange of statistical information, and its member central banks encouraged the coordination of developments in this area with other international organisations. It was agreed that steps should be taken towards widening central bank participation in the data exchange arrangements involving BIS Data Bank Services, in order to respond to increasing demands for more global data coverage and the interest of additional institutions in benefiting from these arrangements. The Group also reviewed changes taking place in the use of computers by central bank economists and statisticians, especially changes offering opportunities for greater efficiency in database management and analytical techniques.

BIS contributions to the work of the Group of Ten

As in the past, the BIS contributed to the work undertaken by the G-10 Finance Ministers and central bank Governors, their Deputies and the working parties set up under their auspices. Three major topics were considered during the period under review. A thorough assessment of the macroeconomic and financial implications of the ageing of populations was motivated by the recognition that population ageing is bound to have profound effects on economic well-being in the years to come. The need for action is urgent because the burden of adjustment for both governments and individuals grows the longer such adjustment is delayed. The Ministers and Governors stressed the importance of appropriately timed fiscal consolidation, increased funding of public pensions, and the encouragement of funded private pension schemes as means of raising national savings. They also underscored the importance of strengthening financial infrastructures, encouraging financial transparency, enhancing financial supervision and eliminating barriers to international capital flows in order to ensure that retirement savings are invested efficiently and safely.

A second topic of continuing interest concerned improved crisis prevention and crisis management. The Ministers and Governors stressed the urgency of finding innovative approaches to achieving closer and faster involvement of the private sector in crisis management and resolution and to containing the risk of moral hazard. Greater transparency and disclosure is also crucial, both for preventing the eruption of crises and for being able to resolve them swiftly when they occur.

The crisis in Asia also demonstrated the importance of strengthening financial systems in emerging market economies. Even before its outbreak a concerted strategy for fostering more robust financial systems in emerging market economies had been developed jointly by representatives of these economies and the G-10 countries. This strategy has three basic elements: sound macroeconomic and structural policies, effective market discipline by informed stakeholders, and strong supervision and regulation underpinning the operation of effective market discipline. It also provides for a division of labour among all the relevant parties – national authorities, international financial institutions and international groups of experts. The priority for the immediate future is to make sure that this strategy is implemented. This will mean ensuring that the incentives to make changes are in place, giving greater attention to financial stability in multilateral and regional surveillance and providing technical assistance and training.

2. Functions as Agent and Trustee

During the past financial year the Bank continued to act as Agent and Trustee in connection with international financial settlements.

Agent for the private ECU clearing and settlement system

Since October 1986 the Bank has performed the functions of Agent for the private ECU clearing and settlement system in accordance with the provisions of successive agreements concluded between the Euro Banking Association (EBA), formerly the ECU Banking Association, Paris, and the BIS, the most recent of which was signed and entered into force on 16th September 1996. A description of the structure and operation of the clearing system is contained in the 56th Annual Report of June 1986. During the period under review, eight further banks were granted the status of clearing bank by the EBA, while one bank withdrew from the system following a merger with another clearing bank. The total number of ECU clearing banks thus increased to 56 at the end of

May 1998. It is expected that a further 11 banks will join the clearing and settlement system during the summer of 1998.

Trustee for international government loans

With regard to the funding bonds 1990–2010 of the Dawes and Young Loans, the Deutsche Bundesbank, as Paying Agent for all uncertificated bonds of all issues of the Dawes and Young Loans, notified the Bank that it had paid out approximately DM 2.8 million to bondholders in respect of redemption at the maturity date of 3rd October 1997 and DM 6.6 million in respect of interest at the maturity dates of 3rd April and 3rd October 1997, as well as interest arrears. The newly calculated redemption values and conversion factors in respect of the aforementioned interest maturity dates were published by the German Federal Debt Administration (Bundesschuldenverwaltung) in the Federal Journal.

Concerning the application of the exchange guarantee clause for the Young Loan by the German Federal Debt Administration, the Bank has repeated its earlier reservations stated in the 50th Annual Report of June 1980, which also extend to the funding bonds 1990–2010. The Paying Agents have been advised to take the appropriate precautionary measures in order to safeguard the rights of the bondholders.

Details of these bond issues and the Bank's functions may be found in the Bank's 63rd Annual Report of June 1993.

Collateral Agent for Brazilian bonds

In accordance with two Collateral Pledge Agreements signed on 15th April 1994, the BIS acts in the capacity of Collateral Agent to hold and invest collateral for the benefit of the holders of certain US dollar denominated bonds, maturing in either 15 or 30 years, which have been issued by Brazil under the external debt restructuring arrangements agreed in November 1993.

Collateral Agent for Peruvian bonds

Similarly, in accordance with Agreements signed on 7th March 1997, the BIS acts in the capacity of Collateral Agent to hold and invest collateral for the benefit of the holders of certain US dollar denominated bonds, maturing in either 20 or 30 years, which have been issued by Peru under the external debt restructuring arrangements agreed in November 1996.

Collateral Agent for Côte d'Ivoire bonds

Under Agreements signed on 31st March 1998, the BIS also acts in the capacity of Collateral Agent to hold and invest collateral for the benefit of the holders of certain US dollar and French franc denominated bonds, maturing in either 20 or 30 years, which have been issued by Côte d'Ivoire under the external debt restructuring arrangements agreed in May 1997.

3. Financial assistance to central banks

In addition to granting various bilateral short-term credits to its central bank customers, during the period under review the BIS participated in a multilateral initiative of the G-10 and certain other Asian and European countries to provide, in case of need, liquidity to the Bank of Thailand in the form of short-term bridging finance. The arrangements established for this purpose were not activated and have since expired.

4. Cooperation with official commissions in research on wartime activities – Opening of the BIS archives

In connection with the ongoing interest in the issue of assets looted during the Second World War, the BIS continued to cooperate fully with all official investigations, notably that conducted by the Independent Commission of Experts: "Switzerland – Second World War" (Bergier Commission), and the US Government investigation on "U.S. and Allied Efforts to recover and restore Gold and other Assets stolen or hidden by Germany during World War II", coordinated by Stuart E. Eizenstat, the US Under Secretary of Commerce for International Trade. The BIS provided detailed information on wartime gold transactions with the Reichsbank and on gold shipments and gold exchanges in two reports that were certified by Coopers & Lybrand. These reports have been made available to the public and can be accessed on the BIS Web site (http://www.bis.org). The BIS also submitted a paper to the London Conference on Nazi Gold held on 2nd–4th December 1997.

The decision of the Board of Directors in April 1997 to open the BIS archives was implemented in two stages. In July 1997, a number of key records documenting the Bank's wartime activities were made available to researchers. From 1st March 1998 all BIS archives that are more than 30 years old have been opened to the public for consultation by appointment on the Bank's premises.

5. Operations of the Banking Department

As at 31st March 1998 the Balance Sheet stood at 62,450 million gold francs, representing a decline of 4,343 million gold francs, or 6.5%, from the total of 66,793 million reached a year earlier. More than 40% of this decrease was due to exchange rate factors as the strengthening of the US dollar over the financial year had the effect of depressing the value of other currencies in gold franc terms. At constant end-March 1997 exchange rates, the Balance Sheet at the end of the financial year 1997/98 would have amounted to around 64 billion gold francs.

Liabilities

On 31st March 1998 borrowed funds in gold and currencies totalled 57,497 million gold francs, compared with 61,422 million at the end of the previous financial year. Deposits in gold, which declined by 362 million gold francs to 3,474 million, accounted for 6% of total borrowed funds against 6.2% a year earlier. Currency deposits fell over the period by some 3.6 billion gold francs and finished the financial year at 54,024 million gold francs. The volume of such currency deposits tends to be volatile, reflecting the fact that many central banks make active use of BIS banking facilities to manage their liquidity. Although the end-March 1998 level was the lowest recorded at any month-end during the past financial year, the average volume of borrowed currencies measured on a daily basis was 4% higher than in the financial year 1996/97.

The bulk of the contraction in borrowed currencies resulted from withdrawals in US dollars (some 2.3 billion gold francs) and, to a lesser extent, in pounds sterling. Nevertheless, the overall currency composition of borrowed funds changed little during the financial year: on 31st March 1998 the US dollar accounted for 62.1% of the total (expressed in gold francs), compared with 61.6% a year earlier. Similarly, the share of deposits in Deutsche marks remained stable at 20.7% against 20.5% at the end of the previous financial year.

Central bank deposits amounted to 50,468 million gold francs, which represented 93.4% of total borrowed funds at end-March 1998 against 94.0% one year previously. Funds placed by other depositors (mainly international financial institutions) amounted to 3,555 million gold francs (or 6.6% of the total), compared with 3,425 million (or 6.0%) on 31st March 1997.

Assets

The BIS conducts its operations in a highly prudent manner to ensure the safety and liquidity of the deposits entrusted to it; credit risk, maturity transformation and exchange rate risk are rigorously monitored and controlled.

With a year-on-year decrease of 4,056 million gold francs, assets in currencies stood at 58,032 million on 31st March 1998, compared with 62,088 million gold francs at end-March 1997. These assets represent deposits with first-class financial institutions of international standing as well as short-term negotiable securities, including Treasury bills. The Bank also makes short-term advances to central banks on a collateralised as well as an uncollateralised basis; at end-March 1998, however, the total of such advances outstanding amounted only to 52 million gold francs. The Bank's own funds are largely held in gold or investments in sovereign securities issued by the major industrial countries.

The Bank's assets in gold declined from 4,504 million to 4,159 million gold francs during the financial year 1997/98, primarily reflecting the decrease in gold deposits received.

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 7a to the Balance Sheet).

6. Net profits and their distribution

The accounts for the 68th financial year ended 31st March 1998 show a net operating surplus of 259,160,599 gold francs, compared with 203,289,449 gold francs for the preceding financial year. Higher income from borrowed funds operations as well as from own funds investments contributed to the growth in profits. The latter component was entirely attributable to a higher average volume of own funds, following the issue of new shares in the second half of the previous financial year. In the case of borrowed funds, both a modest increase in the average level throughout the year and some improvement in the total margin earned on deposit intermediation led to the rise in income from these operations. An additional factor contributing to the increase in the operating surplus was the decision of the Bank's Board of Directors to reduce further the amount allocated to the provision for banking risks and other eventualities.

The year's result is shown after deduction of 55,701,805 gold francs in respect of costs of administration, an 8% decrease compared with the previous year's figure of 60,530,595 gold francs. This decrease was due entirely to valuation changes resulting from a significant depreciation of the Swiss franc against the gold franc during the year. In terms of Swiss francs, the currency in which most of the Bank's expenditure is incurred, total administrative costs increased by 3%.

In view of the forthcoming change of accounting policy under which the Bank's land, buildings and equipment are to be capitalised and depreciated as from the financial year 1998/99, the Board of Directors has decided to discontinue the practice of making transfers to the provision for building purposes and the provision for modernisation of premises and renewal of equipment. The unspent balances on these provisions will be transferred to the provision for exceptional costs of administration in the new financial year. For this reason no allocations from the profit for 1997/98 have been made to the latter provision.

On the basis of Article 51 of the Statutes, the Board of Directors recommends that the net profit of 259,160,599 gold francs be applied by the General Meeting in the following manner:

(i) an amount of 52,549,459 gold francs in payment of a dividend of 300 Swiss francs per share (the dividend payable in respect of the 40 new shares which were issued during the financial year 1997/98 being settled on a pro rata basis according to the relevant date of subscription);

(ii) an amount of 41,322,228 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 162,288,912 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.

If the above proposals are accepted, the dividend will be paid on 1st July 1998 to the shareholders whose names are contained in the Bank's share register on 20th June 1998.

The Balance Sheet, the Profit and Loss Account and summary statements showing the movements during the financial year in the Bank's capital and reserves will be found at the end of this Report. The Bank's accounts have been audited by Price Waterhouse, who have confirmed that the Balance Sheet and Profit and Loss Account, together with the Notes on pages 190–195, give a true and fair view of the Bank's financial position at 31st March 1998 and of the results of its operations for the year ended on that date. Their report is to be found immediately following the accounts.

7. Increase in the number of shareholding central banks

Following the invitation to nine additional central banks to become members of the BIS during the previous financial year, a further four central banks – the Central Bank of Bosnia and Herzegovina, the National Bank of Croatia (subsequently renamed the Croatian National Bank), the National Bank of the Republic of Macedonia and the Bank of Slovenia – were invited by the Board of Directors in May 1997 to subscribe shares of the third tranche of the capital of the BIS. All four took up the Board's offer by the end of 1997 and thereby became members of the BIS.

8. Changes in the Board of Directors

In June 1997 the Board elected Nout H. E. M. Wellink, President of the Netherlands Bank, as a member of the Board under Article 27(3) of the Statutes. In September 1997 the Board extended for a further period of three years the mandates of Gordon G. Thiessen, Governor of the Bank of Canada, and Yasuo Matsushita, Governor of the Bank of Japan, as members of the Board of Directors, also under Article 27(3) of the Statutes. At the same time Alan Greenspan, Chairman of the Board of Governors of the Federal Reserve System, renewed the appointment of William J. McDonough as a member of the Board under Article 27(2) of the Statutes. The appointment of Hervé Hannoun was similarly renewed by Jean-Claude Trichet, Governor of the Bank of France, in November 1997. Hans Meyer's term as a member of the Board of Directors under Article 27(3) of the Statutes expired in March 1998 and he was elected for a further three years. Yasuo Matsushita resigned as Governor of the Bank of Japan on 20th March 1998 and in April the Board of Directors elected his successor, Masaru Hayami, as a member of the Board for the unexpired period of his term of office. There were three changes amongst the second Alternates of ex officio Directors. In July 1997 Alfons Verplaetse, Governor of the National Bank of Belgium, appointed Marcia De Wachter. In November 1997 Jean-Claude Trichet replaced Armand Pujal with Marc-Olivier Strauss-Kahn and in April 1998 Eddie George, Governor of the Bank of England, replaced Terry Smeeton with Clifford Smout.

The Bank learned with deep regret of the deaths of two former members of the Board of Directors. Robert Vandeputte died on 18th November 1997 at the age of 89. Mr. Vandeputte, Governor of the National Bank of Belgium from 1971 to 1975, had been a member of the Board of Directors between January 1971 and February 1975. Markus Lusser, Chairman of the Governing Board of the Swiss National Bank and member of the Board of Directors from May 1988 to April 1996, died on 21st April 1998 at the age of 67.

The Bank was also saddened to hear of the death of Horst Bockelmann on 12th April 1998 at the age of 67. Mr. Bockelmann retired from the Bank at the end of April 1995 after ten years as Economic Adviser and Head of the Monetary and Economic Department.

Balance Sheet and Profit and Loss Account

at 31st March 1998

Balance Sheet at 31st March 1998

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

1997	Assets	1998
	Gold	
3 547 261 289	Held in bars	*3 037 168 543*
956 662 444	Time deposits and advances	*1 122 386 712*
4 503 923 733		4 159 555 255
384 413 644	Cash on hand and on sight account with banks	7 776 756
2 813 409 132	Treasury bills	1 863 872 732
	Time deposits and advances in currencies	
34 201 692 134	Not exceeding 3 months	*25 267 793 274*
8 153 458 323	Over 3 months	*9 594 385 217*
42 355 150 457		34 862 178 491
	Securities purchased under resale agreements	
884 172 425	Not exceeding 3 months	*2 696 998 195*
–	Over 3 months	*83 973 665*
884 172 425		2 780 971 860
	Government and other securities at term	
2 557 365 140	Not exceeding 3 months	*3 024 906 378*
13 093 749 660	Over 3 months	*15 492 166 080*
15 651 114 800		18 517 072 458
200 780 130	Miscellaneous	258 747 077
1	Land, buildings and equipment	1
66 792 964 322		62 450 174 630

1997 After allocation of the year's net profit	Liabilities	1998 Before allocation of the year's net profit	1998 After allocation of the year's net profit
323 203 125	Paid-up capital	323 228 125	323 228 125
2 061 783 924	Reserves	2 061 913 884	2 268 525 024
351 129 995	Valuation difference account	247 188 455	247 188 455
	Deposits (gold)		
3 471 145 991	Sight	*3 010 120 795*	*3 010 120 795*
186 971 696	Not exceeding 3 months	*309 454 649*	*309 454 649*
178 283 536	Over 3 months	*154 169 729*	*154 169 729*
3 836 401 223		3 473 745 173	3 473 745 173
	Deposits (currencies)		
2 166 693 892	Sight	*3 388 447 478*	*3 388 447 478*
54 399 781 897	Not exceeding 3 months	*48 774 372 346*	*48 774 372 346*
1 019 098 838	Over 3 months	*1 860 721 733*	*1 860 721 733*
57 585 574 627		54 023 541 557	54 023 541 557
	Securities sold under repurchase agreements		
674 774 848	Not exceeding 3 months	30 730 705	30 730 705
252 630 204	Staff pension scheme	256 984 348	256 984 348
1 658 685 453	Miscellaneous	1 773 681 784	1 773 681 784
	Profit and Loss Account	259 160 599	
48 780 923	Dividend payable on 1st July		52 549 459
66 792 964 322		62 450 174 630	62 450 174 630

Profit and Loss Account

for the financial year ended 31st March 1998
(in gold francs)

	1997	1998
Interest and discount, and other operating income	3 524 961 970	3 823 693 826
Less: interest and discount expense	3 261 141 926	3 508 831 422
Net interest and other operating income	263 820 044	314 862 404
Less: costs of administration		
Board of Directors	*1 328 950*	*1 244 034*
Management and staff	*42 944 303*	*39 425 067*
Office and other expenses	*16 257 342*	*15 032 704*
	60 530 595	55 701 805
Net operating surplus	203 289 449	259 160 599
Less: amounts transferred to		
Provision for exceptional costs of administration	*3 000 000*	—
Provision for modernisation of premises and renewal of equipment	*6 000 000*	—
	9 000 000	—
Net profit for the financial year	194 289 449	259 160 599
The Board of Directors recommends to the Annual General Meeting that the net profit for the year ended 31st March 1998 be allocated in accordance with Article 51 of the Statutes as follows:		
Dividend: 300 Swiss francs per share on 517 125 shares (1997: 280 Swiss francs)	*48 780 923*	*52 546 623*
on 40 newly issued shares (pro rata as from the value date of share subscription)	—	*2 836*
	48 780 923	52 549 459
	145 508 526	206 611 140
Transfer to general reserve fund	41 018 778	41 322 228
	104 489 748	165 288 912
Transfer to special dividend reserve fund	3 000 000	3 000 000
	101 489 748	162 288 912
Transfer to free reserve fund	101 489 748	162 288 912
	—	—

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

during the financial year ended 31st March 1998
(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 1st April 1997	517 125	323 203 125
Shares issued during the financial year 1997/98	40	25 000
Balances at 31st March 1998 as per Balance Sheet	517 165	323 228 125

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 1st April 1997, after allocation of net profit for the financial year 1996/97	32 320 313	974 876 936	59 530 055	995 056 620	2 061 783 924
Add: allocations of the premium received on the issue of 40 new shares	2 500	127 460	—	—	129 960
Balances at 31st March 1998 before allocation of net profit	32 322 813	975 004 396	59 530 055	995 056 620	2 061 913 884
Add: allocations of net profit for the financial year 1997/98	—	41 322 228	3 000 000	162 288 912	206 611 140
Balances at 31st March 1998 as per Balance Sheet	32 322 813	1 016 326 624	62 530 055	1 157 345 532	2 268 525 024

III. Paid-up capital and reserve funds at 31st March 1998 (after allocation) were represented by:

	Paid-up capital	Reserve funds	Total of capital and reserves
Net assets in			
Gold	323 228 125	338 732 750	661 960 875
Currencies	—	1 929 792 274	1 929 792 274
Balances at 31st March 1998 as per Balance Sheet	323 228 125	2 268 525 024	2 591 753 149

Notes to the Accounts

for the financial year ended 31st March 1998

1. Introduction

The Bank for International Settlements (BIS) is an international financial institution which was established pursuant to the Hague Agreements of 20th January 1930. The headquarters of the Bank are in Basle, 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-five 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 1997/98 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$ 1.941 49... . Article 4 of the Bank's Statutes defines the gold franc (abbreviated to GF) as representing 0.290 322 58... grammes 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 1 gold franc = US$ 1.941 49...). 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. In previous years, such securities were included under the headings Treasury bills and Government and other securities at term. The 1997 figures have been re-stated accordingly.

(g) Land, buildings and equipment

These are stated at the value of 1 gold franc. Hitherto capital expenditure on land, buildings and equipment has been charged to the provision for building purposes or to the provision for modernisation of premises and renewal of equipment. With effect from the financial year 1998/99, the Bank's land, buildings and equipment will be shown at cost less depreciation. This forthcoming change is explained in further detail under item (m) below.

(h) Valuation difference account

The valuation difference account records the effect of exchange differences as described under (a); 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. In previous years, such securities were included under the heading Deposits (currencies). The 1997 figures have been re-stated accordingly.

(k) Staff pension scheme

The staff pension scheme represents the Bank's liability in respect of current staff members and pensioners, based on annual actuarial advice.

(l) Provisions

(i) General
The Board of Directors sets aside an amount each year to a provision for banking risks and other eventualities; this provision is incorporated in miscellaneous liabilities.

(ii) Specific
In previous years amounts have been allocated from the Bank's net operating surplus by the Board of Directors for the following purposes:

1. Provision for exceptional costs of administration
2. Provision for building purposes
3. Provision for modernisation of premises and renewal of equipment.

No transfers to the specific provisions have been made for the financial year 1997/98 in view of the forthcoming change of accounting policy for land, buildings and equipment (see (m) below).

(m) Change of accounting policy in the financial year 1998/99

In the coming financial year, the Bank's land, buildings and equipment will be incorporated in the Balance Sheet at their historical cost less accumulated depreciation for the years during which the assets have been held. The effect of this change will be to increase the value of land, buildings and equipment in the Bank's Balance Sheet by approximately 90 million gold francs; this amount will be added to the Bank's reserves. In addition, from the financial year 1998/99 onwards the Bank's Profit and Loss Account will contain a depreciation charge instead of the transfers to the specific provisions.

The unspent balances on the provisions for building purposes and modernisation of premises and renewal of equipment will be credited in 1998/99 to the provision for exceptional costs of administration.

Notes to the Balance Sheet

for the financial year ended 31st March 1998

1. Gold holdings

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

Assets	*1997*	1998
Gold bars held at central banks	*3 547 261 289*	3 037 168 543
Gold time deposits:		
Not exceeding 3 months	*450 480 089*	438 825 618
Over 3 months	*506 182 355*	683 561 094
	4 503 923 733	4 159 555 255

The Bank's own gold holdings at 31st March 1998 amounted to GF 662.0 million, equivalent to 192 tonnes of fine gold (1997: GF 661.9 million; 192 tonnes).

2. Treasury bills

The Bank's holdings were as follows:

	1997	1998
Book value	*2 813 409 132*	1 863 872 732

The market value of Treasury bills at 31st March 1998 was GF 1 863.6 million (1997: GF 2 812.7 million).

3. Government and other securities at term

The Bank's holdings were as follows:

	1997	1998
Book value	*15 651 114 800*	18 517 072 458

The market value of Government and other securities at term at 31st March 1998 was GF 18 623.8 million (1997: GF 15 720.1 million).

4. Capital

The Bank's share capital consists of:

	1997	1998
Authorised capital:		
600 000 shares,		
each of 2 500 gold francs	*1 500 000 000*	1 500 000 000
Issued capital: 517 125 shares	*1 292 812 500*	
517 165 shares		1 292 912 500
of which 25% paid up	*323 203 125*	323 228 125

During the financial year 1997/98, 40 shares were issued at GF 3 874 per share. The paid-up portion of GF 625 per share has been credited to share capital, and the balance – representing the premium of GF 3 249 per share – to reserves (see also the tables entitled "Movements in the Bank's paid-up capital and reserves").

5. Reserves

The Bank's reserves consist of:

	1997	1998
Legal reserve fund	*32 320 313*	32 322 813
General reserve fund	*974 876 936*	1 016 326 624
Special dividend reserve fund	*59 530 055*	62 530 055
Free reserve fund	*995 056 620*	1 157 345 532
	2 061 783 924	2 268 525 024

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

6. Deposits

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

	1997	1998
Central banks		
Sight	*2 107 217 697*	3 323 820 195
Not exceeding 3 months	*51 394 694 652*	45 283 968 982
Over 3 months	*658 294 838*	1 860 469 306
Other depositors		
Sight	*59 476 195*	64 627 283
Not exceeding 3 months	*3 005 087 245*	3 490 403 364
Over 3 months	*360 804 000*	252 427
	57 585 574 627	54 023 541 557

7. 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)	*1997*	1998
Exchange rate contracts:		
Foreign exchange swaps and forwards	*9 917.3*	12 040.5
Currency swaps	*1 263.7*	2 054.4
Interest rate contracts:		
Interest rate swaps	*8 338.2*	5 689.5
Forward rate agreements and futures	*3 391.8*	4 928.4

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 31st March 1998 was GF 499.7 million (1997: GF 565.0 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)	*1997*	1998
Nominal value of securities held in safe custody	*12 281.4*	7 660.2
Gold held under earmark	*972.0*	930.8

Report of the Auditors

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

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 31st March 1998 and the results of its operations for the year then ended so as to comply with the Statutes of the Bank.

Price Waterhouse AG

Ralph R. Reinertsen John K. Fletcher

Auditors in charge

Basle, 24th April 1998

Five-year summary of the Balance Sheet
(in millions of gold francs)

Financial year ended 31st March	1994	1995	1996	1997	1998
Gold					
Held in bars	*4 338.3*	*4 373.4*	*4 364.2*	*3 547.3*	*3 037.1*
Time deposits and advances	*579.8*	*541.8*	*637.3*	*956.7*	*1 122.4*
	4 918.1	4 915.2	5 001.5	4 504.0	4 159.5
Cash on hand and on sight account with banks	12.0	9.8	9.8	384.4	7.8
Treasury bills	2 891.7	5 483.1	4 105.7	2 813.4	1 863.9
Time deposits and advances in currencies	41 370.4	42 478.7	37 328.1	42 355.1	34 862.2
Securities purchased under resale agreements	7 457.0	2 988.7	1 652.2	884.2	2 781.0
Government and other securities at term	8 249.9	9 332.8	10 488.1	15 651.1	18 517.1
Miscellaneous assets	76.6	19.2	32.8	200.8	258.7
Land, buildings and equipment	–	–	–	–	–
Total assets	64 975.7	65 227.5	58 618.2	66 793.0	62 450.2
Paid-up capital	295.7	295.7	295.7	323.2	323.2
Reserves *(after allocation of the net profit for the year)*					
Legal reserve fund	*30.1*	*30.1*	*30.1*	*32.3*	*32.3*
General reserve fund	*732.2*	*764.9*	*803.3*	*974.9*	*1 016.3*
Special dividend reserve fund	*50.5*	*53.5*	*56.5*	*59.5*	*62.5*
Free reserve fund	*733.7*	*807.0*	*893.6*	*995.1*	*1 157.4*
	1 546.5	1 655.5	1 783.5	2 061.8	2 268.5
Valuation difference account	273.1	449.5	373.5	351.1	247.2
Deposits					
Gold	*4 061.1*	*4 157.0*	*4 245.0*	*3 836.4*	*3 473.7*
Currencies	*57 164.9*	*56 549.0*	*49 649.2*	*57 585.6*	*54 023.6*
	61 226.0	60 706.0	53 894.2	61 422.0	57 497.3
Securities sold under repurchase agreements	–	385.4	376.6	674.8	30.7
Staff pension scheme	200.2	271.0	283.1	252.6	257.0
Miscellaneous liabilities	1 393.1	1 411.0	1 558.3	1 658.7	1 773.7
Dividend	41.1	53.4	53.3	48.8	52.6
Total liabilities	64 975.7	65 227.5	58 618.2	66 793.0	62 450.2

Five-year summary of the Profit and Loss Account

(in millions of gold francs)

Financial year ended 31st March	1994	1995	1996	1997	1998
Net interest and other operating income	195.7	229.3	254.3	263.8	314.9
Less: costs of administration					
Board of Directors	*0.8*	*1.2*	*1.5*	*1.3*	*1.3*
Management and staff	*34.1*	*40.2*	*46.6*	*42.9*	*39.4*
Office and other expenses	*15.5*	*17.4*	*18.3*	*16.3*	*15.0*
	50.4	58.8	66.4	60.5	55.7
Net operating surplus	145.3	170.5	187.9	203.3	259.2
Less: amounts transferred to					
Provision for exceptional costs of administration	*3.3*	*3.4*	*3.5*	*3.0*	–
Provision for building purposes	–	–	–	–	–
Provision for modernisation of premises and renewal of equipment	*3.9*	*4.7*	*3.1*	*6.0*	–
	7.2	8.1	6.6	9.0	–
Net profit for the financial year	138.1	162.4	181.3	194.3	259.2
Dividend	41.1	53.4	53.3	48.8	52.6
	97.0	109.0	128.0	145.5	206.6
Transfer to general reserve fund	29.1	32.7	38.4	41.0	41.3
	67.9	76.3	89.6	104.5	165.3
Transfer to special dividend reserve fund	3.0	3.0	3.0	3.0	3.0
	64.9	73.3	86.6	101.5	162.3
Transfer to free reserve fund	64.9	73.3	86.6	101.5	162.3
	–	–	–	–	–

Board of Directors

Alfons Verplaetse, Brussels
Chairman of the Board of Directors,
President of the Bank

Lord Kingsdown, London
Vice-Chairman

Urban Bäckström, Stockholm
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
Helmut Schlesinger, Frankfurt a/M.
Gordon G. Thiessen, Ottawa
Hans Tietmeyer, Frankfurt a/M.
Jean-Claude Trichet, Paris
Nout H. E. M. Wellink, Amsterdam
Philippe Wilmès, Brussels

Alternates

Jean-Pierre Patat or
Marc-Olivier Strauss-Kahn, Paris
Ian Plenderleith or
Clifford Smout, London
Jean-Jacques Rey or
Marcia De Wachter, Brussels
Alice M. Rivlin or
Edwin M. Truman, Washington
Carlo Santini or
Stefano Lo Faso, Rome
Helmut Schieber or
Bernd Goos, Frankfurt a/M.

Senior Officials of the Bank

Andrew Crockett	General Manager
André Icard	Assistant General Manager
Gunter D. Baer	Secretary General, Head of Department
Malcolm Gill	Head of the Banking Department
William R. White	Economic Adviser, Head of the Monetary and Economic Department
Marten de Boer	Manager, Accounting, Budgeting and ECU Clearing
Renato Filosa	Manager, Monetary and Economic Department
Mario Giovanoli	General Counsel, Manager
Guy Noppen	Manager, General Secretariat
Günter Pleines	Deputy Head of the Banking Department